03
VENTILATION & HEATING

Securimax is committed to growing and developing their Home Ventilation range.

Securimax are continuing to introduce to the market high quality products, whilst providing a service level that's second to none.

Condensation is a major issue for homeowners in New Zealand, due in part to our home design. As we strive to keep our homes warm and cosy, we end up keeping all the stale, damp air trapped within our homes. This leads to condensation, mould and mildew, which can detrimentally affect the health of your family. Everyday an average family of four releases over 12 litres of moisture into the home! This damp environment contributes to New Zealand's high rates of asthma and other respiratory illnesses. However there is something you can do about it. A Smart-Vent home ventilation solution let's you distribute fresher, drier air around your home improving the air quality and creating a healthier environment for your family.

There are two proven methods for achieving this. Firstly a Smart-Vent positive pressure system draws air into your home from either the roof space or from outside your home. The high efficiency filter will remove up to 90% of pollens, dust and allergens, providing fresher air for your family. This filtered air is then distributed into each room via acoustic insulated ducting, making your system whisper quiet. The moist air is then forced out around windows and doors, making your home drier, which is easier to heat and saves you money on your heating bills. This system will work automatically, simply enter your preferred temperature range on your Smart-Vent controller and sit back and enjoy your healthier home.

Smart-Vent Synergy encompasses all the benefits of a Smart-Vent positive pressure system, plus Synergy also has air extraction and heat recovery for a truly balanced system. It extracts the stale, moist air from inside your home while introducing fresher, drier air, and best of all its heat recovery makes it extremely energy efficient.

The 'smart' heat exchanger recovers up to 90% of the heat extracted from your moist air and transfers it to the incoming air. This is TRUE heat recovery and will enable you to keep the heat you have already paid for. For the ultimate in home ventilation Smart-Vent Integra integrates any ducted heat pump with Smart-Vent Synergy to achieve healthy air ventilation.

…so step into your fresher, drier, healthier home today.

SmartVent
NZ's Home Ventilation Specialists

HeatTrans
Heat Transfer Specialists

SmartVent POSITIVE **SmartVent SYNERGY** **SmartVent INTEGRA**

VENTILATION CONTENTS

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SMART-VENT INTRODUCTION

SMART-VENT IS:

- ✓ A home ventilation system designed to introduce fresh, filtered air into the home.
- ✓ Smart-Vent is designed to reduce condensation, moisture and provide high filtration to assist asthma & allergy sufferers.
- ✓ Able to recover heat and ventilate the home.
- ✓ A complete range with both Positive Pressure and True Heat Recovery systems.

SMART-VENT IS NOT:

- ✗ A heating system. It will not replace the need for a main heat source.
- ✗ Just for older homes. Homes that are built today are more airtight than ever & will benefit from the circulation of fresher, drier air.
- ✗ A one-size-fits all system.

WHY VENTILATE?

BRANZ Bulletin 508. February 2009.

1.0.1 Daily household activities such as cooking, washing and even breathing release moisture and pollutants into the air. Air needs to be regularly refreshed to maintain its purity.

Houses of the past were cold & draughty, but provided adequate ventilation through leakage around window & doors.

1.0.2 Modern homes are more insulated and airtight. While this makes them more energy efficient it also results in reduced airflow in and out. If polluted air and moisture remain trapped inside, indoor air quality is reduced.

New Zealand has a comparatively high rate of asthma and moisture can cause both cosmetic & structural damage to the building.

1.0.3 New Zealand Building Code clause G4 Ventilation requires that 'spaces within buildings shall have a means of ventilation with outdoor air that will provide an adequate number of air changes to maintain air purity'.

1.0.4 The minimum number of air changes per hour (ACH) deemed to be adequate for living areas is 0.35, which means approximately one-third of the total volume of air must be changed every hour.

1.0.5 Opening windows provides passive ventilation (acceptable under G4), but heat can be lost and security can be compromised.

"The average New Zealand family produces over eight litres of moisture while carrying out normal everyday activities"

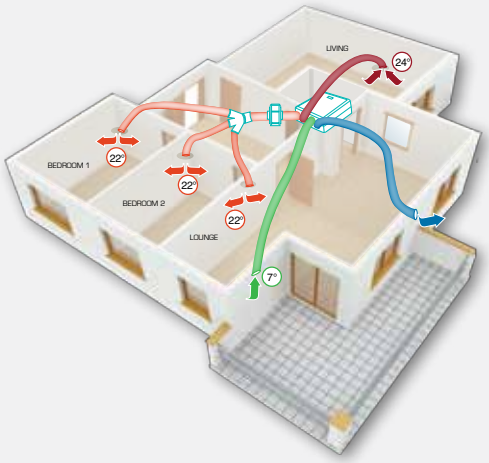
"Condensation on windows, water pooling on window sills, damp furnishings or mould appearing throughout the home are all clear signs of excess moisture"

VENTILATION OPTIONS
EXPLAINED

SmartVent SYNERGY

Smart-Vent Synergy is a completely balanced ventilation system, capable of extracting stale, moisture-laden air from inside your home and bringing in fresh, drier air simultaneously.

Synergy is a True Heat Recovery system that recovers and re-uses up to 90% of the heat from the warm air extracted from within your home. An extremely energy efficient way to re-use heat you have already paid for.



SmartVent POSITIVE

Smart-Vent Positive Pressure ventilation systems draws drier, fresher air into your home from either the roof cavity or outside.

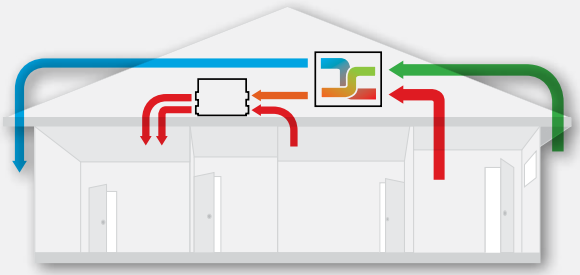
This air is then passed through a high efficiency filter and introduced into your home.

This air circulation forces out the moist, stale air that causes condensation, mould, mildew and pollen.

SmartVent INTEGRA

Smart-Vent Integra integrates any ducted heat pump with Smart-Vent Synergy, to achieve healthy home ventilation with up to 90% heat recovery combined with energy efficient heating.

This is the ultimate home ventilation and heating solution.

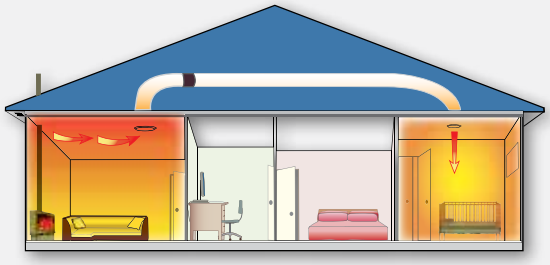


HeatTrans
Heat Transfer Specialists

Heat Trans systems utilise your excess heat by transferring it from your lounge, and distributing it to other rooms in your home.

This enables you to ‘take the chill off’ your bedrooms and create a warm comfortable environment for your family.

Heat Trans systems include acoustic insulated ducting to achieve maximum heat transfer with minimum noise.



SMART-VENT SYNERGY
EXPLAINED

Smart-Vent Synergy is very different from most other home ventilation systems. It is a completely balanced home ventilation system, that extracts stale, damp air from inside your home and brings in fresh, drier air simultaneously and best of all, Synergy is an extremely energy efficient true heat recovery system that re-uses heat you have already paid for.

Synergy is specifically designed to recover the wasted heat produced from everyday activities.

It achieves this by using the warmth from the extracted air to warm the incoming air. The heart of Synergy is the heat exchange core where the two airflows pass-by each other but never actually meet, and up to 90% of the heat from the extracted air is recovered.

Synergy makes the most of your existing heat source to recover the heat you've already paid for, while continuously ventilating your home.

Open fires, gas fires*, wood burners, heat pumps and most other heating appliances are all suitable for use with Synergy.

Heat pumps are one of the most common heat sources used in New Zealand. Nearly all heat pumps only re-circulate the existing moist air in a home, but do not bring in fresh dry air.

This results in a build-up of moisture in the home. For this reason the combination of a heat pump and Synergy is a very effective total home heating and ventilation system. Synergy can also re-use cold air from air conditioners for a cool recovery solution in hot summer months.

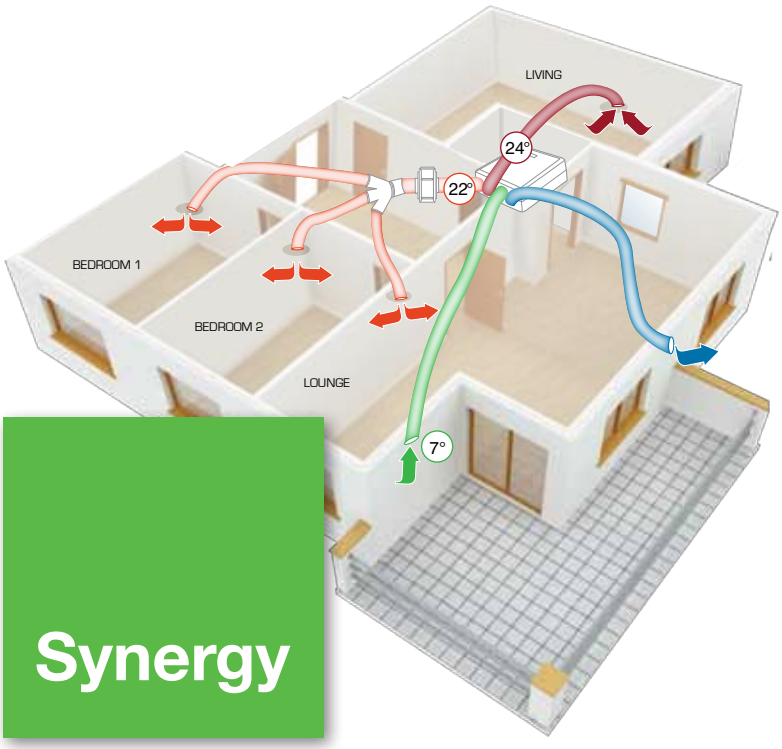
*Where gas appliances are used for the main heat source, please refer to the installation company for advice.

The results speak for themselves. In an actual New Zealand installation the following results have been achieved. The air inside the home was 24° and heated by an open fire. The air outside was 7°.

Normally you would have to continuously heat the incoming air by 17° to replace the lost heat. Using Synergy, the fresh incoming air is already being warmed to 22°. Therefore the incoming air only needs to be heated by a further 2° to maintain a comfortable and healthy temperature.

As a result this home is continuously ventilated with minimal heat loss.

Note: Results can vary from this example due to a number of factors. Your Smart-Vent Consultant can give further details.



ICON KEY

- Fresh air is supplied from outside.
- Moist, stale air is extracted from inside the home.
- Warm, dry air is supplied into your home.
- Moist, stale air is expelled out of the home.

SMART-VENT SYNERGY MODELS

MODEL	SUITABLE FOR HOMES	Extract	Supply	Order Codes
190	Up to 150m^2	1	3	FAN2177
190S*	Up to 150m^2	1	3	FAN2176
250	150 - 210m^2	1	3	FAN2175
250S*	150 - 210m^2	1	3	FAN2174
405PLUS	210 - 330m^2	2	5	FAN2191

*The capital 'S' represents the Source Function - see page 175.

PLUS represents extra features included as standard - Second Air Source, Heat Boost, and the energy saving information available on the controller.

SELECTION GUIDE

What is the square metre size of the home?	Where do you want to select the air source?	How many rooms do you wish to supply to?	How many rooms do you wish to extract from?	Recommended Smart-Vent Synergy System	Order Codes
up to 150m²	Outside	3	1	SYNERGY 190	FAN2177
		3	2	Extract Extension Kit	DCT2289
		4	1	Supply Extension Kit	DCT2276
		4	2	Supply & Extract Extension Kits	DCT2276 + DCT2289
	Outside & Roof Cavity	3	1	SYNERGY 190S	FAN2176
		3	2	Extract Extension Kit	DCT2289
		4	1	Supply Extension Kit	DCT2276
		4	2	Supply & Extract Extension Kits	DCT2276 + DCT2289
150m² to 210m²	Outside	3	1	SYNERGY 250	FAN2175
		3	2	Extract Extension Kit	DCT2290
		4	1	Supply Extension Kit	DCT2276
		4	2	Supply & Extract Extension Kits	DCT2276 + DCT2290
	Outside & Roof Cavity	3	1	SYNERGY 250S	FAN2174
		3	2	Extract Extension Kit	DCT2290
		4	1	Supply Extension Kit	DCT2276
		4	2	Supply & Extract Extension Kits	DCT2276 + DCT2290
Up to 330m²	Outside & Roof Cavity	5	2	Synergy 405PLUS	FAN2191
		5	3	Extract Extension Kit	DCT2335
		6	2	Supply Extension Kit	DCT2334
		6	3	Supply & Extract Extension Kits	DCT2334 + DCT2335

ADDITIONAL INFORMATION

- 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. For example 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. This selection guide assumes that there is sufficient ceiling space to install all componentry.
- By adding additional outlets to the system you are simply dividing the available air amongst more rooms. Extra duct may be required depending on the size & layout of the home.
- For larger homes please contact Smart-Vent for technical advice.
- A Smart-Vent Synergy system is not intended to be, and is no substitute for an effective heating system in the home.

KIT CONTENTS

Kit Contents	Synergy 190	Synergy 190S	Synergy 250	Synergy 250S	Synergy 405PLUS
Order Codes	**FAN2177**	**FAN2176**	**FAN2175**	**FAN2174**	**FAN2191**
Colour Touch Screen Controller	Included	Included	Included	Included	Included
150mm Supply Diffuser	3	3	3	3	5
150mm Extract Diffuser	1	1			2
200mm Extract Diffuser			1	1	
150mm Fixed Grille	2	3			
200mm Fixed Grille			2	3	4
F7 Filter	1	1	1	1	1
150mm Multi-Speed Fan	2	2			Built-In
200mm Multi-Speed Fan			2	2	
150mm Motorised Damper		1			
200mm Motorised Damper				1	1
150mm x 3m Acoustic Insulated Ducting			1	1	
150mm x 6m Acoustic Insulated Ducting	2	2	1	1	3
200mm x 3m Acoustic Insulated Ducting			1	1	
150mm x 3m Insulated Ducting	1	1			
150mm x 6m Insulated Ducting	1	1			1
200mm x 3m Insulated Ducting			1	1	
200mm x 6m Insulated Ducting			1	1	3
3m x 150mm Unilok Ducting	1				
6m x 150mm Unilok Ducting		1			
3m x 200mm Unilok Ducting			1		1
6m x 200mm Unilok Ducting				1	
150/150/150mm Y-Branch	2	2			
200/150/150mm Y-Branch					2
200/200/200mm Y-Branch					1
200/150/150/150mm Double-Branch			1	1	1
150mm Barrel Damper					1
150mm Duct Joiner	1	1			1
200mm Duct Joiner			1	1	1
Condensation Drain	3m x 19mm	3m x 19mm	3m x 19mm	3m x 19mm	3m x 19mm
Fixings and Fixtures	Included	Included	Included	Included	Included

OPTIONAL EXTRAS	**190/190S**	**250/250S**	**405PLUS**
Core By-Pass Kit	FAN2172	FAN2173	Included
Heat Boost Kit	FAN2183	FAN2184	Included
1kW Tempering Heater	DCT1226	DCT1483	DCT1483
Supply Extension Kit	DCT2276	DCT2276	DCT2334
Extract Extension Kit	DCT2289	DCT2290	DCT2335
Remote Sensor			FAN2047

SECOND AIR SOURCE
OVERVIEW

What is Second Air Source for Synergy?

Second Air Source enables you to draw air from either outside or the roof cavity.

Second Air Source is included in Synergy 190S, 250S and 405PLUS models.

How does this differ from Synergy 190 and 250?

Synergy 190 and 250 only have a single air source that usually draws air from outside.

What is the 'S' model for Synergy Heat Recovery?

The 'S' (190S, 250S) models in the Synergy range mean the kit has a Second Air Source, however as the standard (190, 250) intake for Synergy is from under the eave/at the gable end the 'S' stands for Second Air Source and this usually means an intake from the roof cavity.

How does Second Air Source operate?

More than one operation assists Synergy to use Second Air Source to provide optimal efficiency from your Heat Exchanger.

Fan Seasons – Fan Seasons, set on the controller, is only functional for systems with a Second Air Source installed.

Setting the Summer and Winter seasons help the Synergy system to determine where to source the incoming air.

During the summer months air is primarily sourced from outside and during the winter months, primarily from the roof cavity.

Summer and Winter months vary throughout the country and therefore are adjustable via the controller.

Comfort Level – Comfort Level is a key function in all Synergy systems.

With a Second Air Source there are more options for the system to choose the best air source to reach the desired comfort level chosen by the customer on their controller.

The customer chooses their personal comfort level (cooler to warmer) and the system makes choices automatically based on that setting.

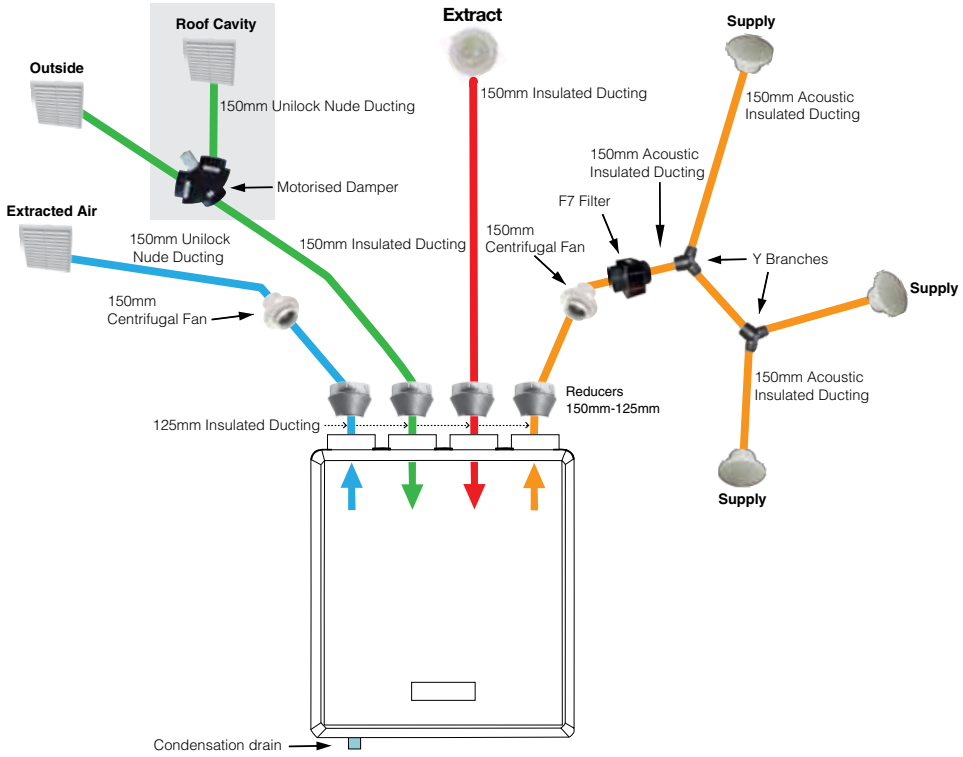
If Fan Seasons are disabled the Comfort Level becomes the primary factor when the system selects the best air source.

When should I specify a Second Air Source for Synergy?

When you believe the customer's home would benefit from some heat gain from the roof cavity.

SECOND AIR SOURCE

SYNERGY 190S

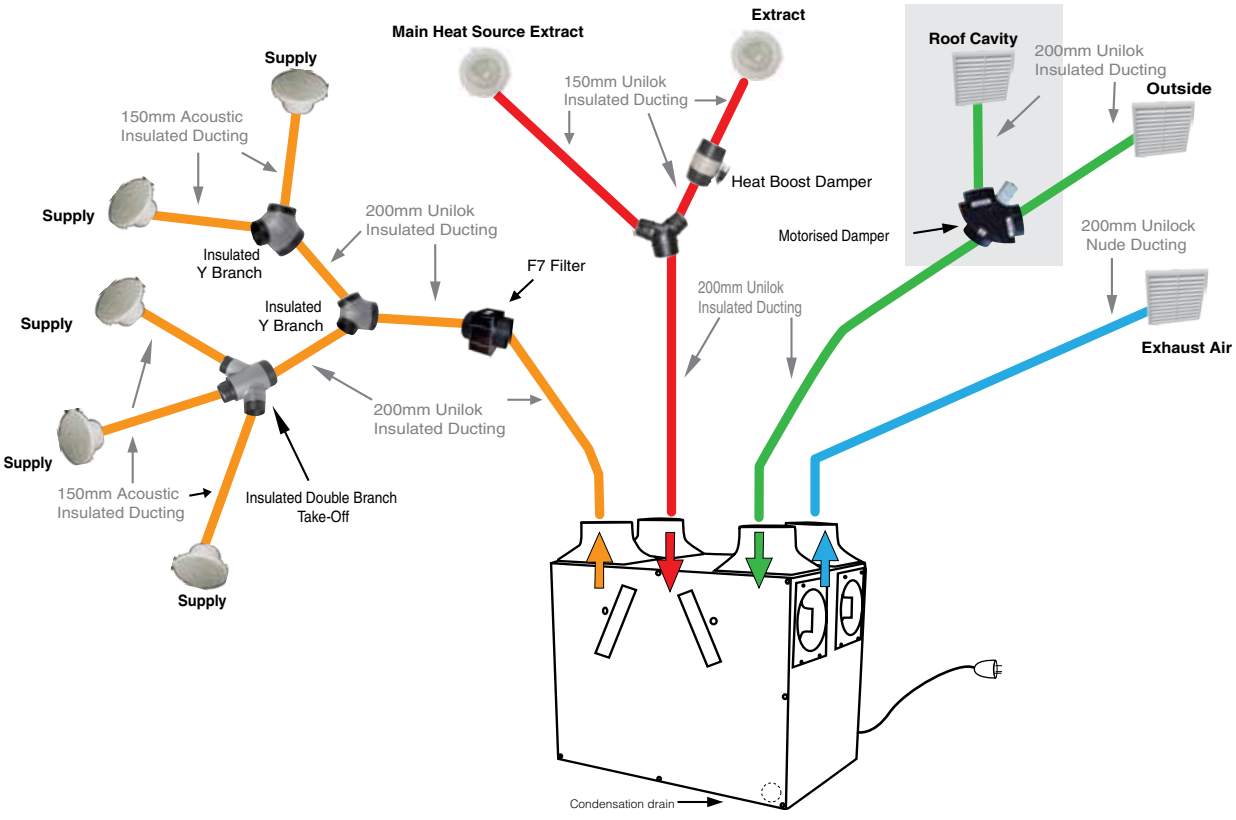


Second Air Source Highlighted in Grey

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

SECOND AIR SOURCE

SYNERGY 405PLUS



CORE BYPASS
OVERVIEW

What is Core Bypass for Synergy?

This feature diverts fresh filtered air around the heat exchange process. This is useful in summer when the outside temperature is 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 Synergy 405PLUS, it is built into the body of the heat exchanger.

What are the functions of the Core bypass?

Core Bypass has two functions.

The most common use is 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.

The second and least used function - dependent on your location - is the ability to bypass the core when the temperature falls below minus 5° to protect the core against potentially icing up, but still have continuous ventilation.

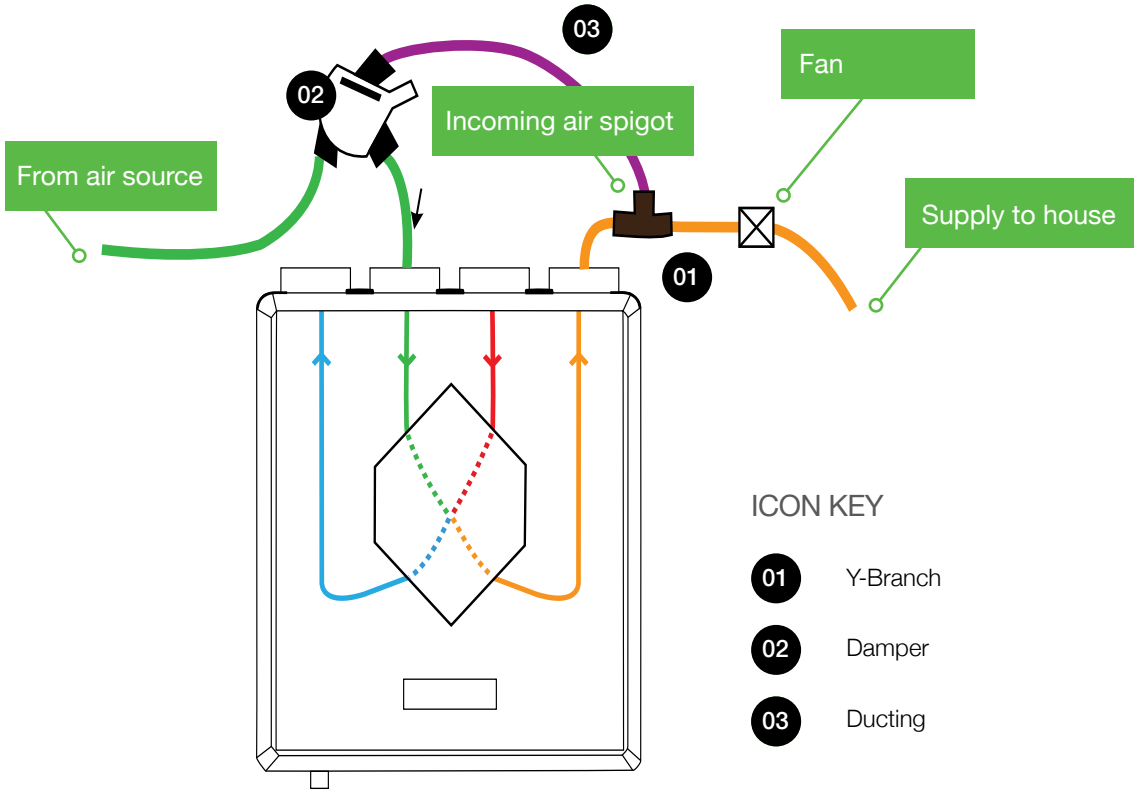
This is used If you are in a cold area and want Core Bypass for Summer but you do not want it to activate at minus 5° you can set Fan Minimum to OFF.

How does Core Bypass operate?

The Core Bypass, once enabled on the Touch Screen Controller, opens and closes the damper automatically based on the temperature in the home, i.e. when the temperature in the home rises significantly above the Comfort Level the damper closes and the incoming air bypasses the Heat Exchange Core.

This feature is optional in the 190 and 250 ranges (optional upgrade picture below).

CORE BYPASS KIT FOR SYNERGY 190/250



HEAT BOOST
OVERVIEW

What is Heat Boost for Synergy?

Heat Boost consists of a barrel damper controlled by the room temperature in the Heat Source Room (where the Touch Screen Controller should be located).

Heat Boost is optional for Synergy 190/S and Synergy 250/S and included as standard in the Synergy 405PLUS.

Heat Boost is for Synergy only and allows the customer to make even better use of their heat source in the winter.

Heat Boost requires two installed extracts where one of the extracts is in a heat source room and the other is not (e.g. in a hallway).

Heat Boost shuts off one extract which may be extracting cooler air to ensure only the warmest airstream is going through the Heat Exchange Core, therefore ensuring the optimum heating efficiency.

What options do I get to operate Heat Boost?

There are three operations available with Heat Boost.

To operate the Heat Boost in winter the customer needs to enable Heat Boost, by setting the 'Boost Temperature'. Once this temperature is exceeded in the heat source room (usually a living room) the barrel damper closes and the three operations of Heat Boost come into play - they are:

Normal mode – The Heat Boost operates when the temperature in the room exceeds the boost temperature.

Timer mode – The Heat Boost operates when the temperature in the room exceeds the boost temperature at preset times only (two time periods available).

Override – Regardless of the temperature of the room or which mode it is in you can force the system into Heat Boost for 1, 2, 4 or 6 hours.

Heat Boost is optional for Synergy 190/S and Synergy 250/S and included as standard in the Synergy 405PLUS.

TEMPERING HEATER
OVERVIEW

What is a Tempering Heater for True Heat Recovery?

The Tempering Heater is a 1kw or 2kw element in line heater designed to temper the incoming air. The Tempering Heater is an optional upgrade for both Smart-Vent Positive Pressure and Synergy.

Will a Tempering Heater heat a home?

No, with Smart-Vent Synergy it will take the chill off the air being introduced when the temperature inside the home is below the minimum temperature. They are not recommended as a complete home heating solution.

What will the Tempering Heater increase the temperature by?

It is tested to increase the temperature of the introduced air by approximately 8 – 10°. It will not increase the temperature of the entire home by this much; it will ensure the air being introduced into the home is a more comfortable temperature.

When should I specify a Tempering Heater?

It should be specified when the customer wants the 24 hour a day ventilation Smart-Vent delivers, but wants the ability to heat the air delivered to a more comfortable temperature.

What options do I get to operate a Tempering Heater?

Tempering Heaters are available for both Positive Pressure and Synergy True Heat Recovery.

There are three operations available with the Tempering Heater upgrade.

Normal mode – The Tempering Heater operates with Synergy True Heat Recovery when the temperature in the home falls below the minimum temperature.

Timer mode – The Tempering Heater operates in Synergy when the temperature in the home falls below the minimum temperature at preset times only (two time periods available).

Override – regardless of the temperature in the home or which mode it is in you can force the heater on for 1, 2, 4 or 6 hours.

Tempering Heater

Where in the system is the Tempering Heater located?

The tempering heater is always located AFTER the filter on the supply side of the heat recovery system so the air is “pushed” across the element.

REMOTE SENSOR PANEL

What is the Remote Sensor Panel?

Remote Sensor is an optional upgrade available for Synergy 405PLUS only.

It extends the functionality of the system because sensing of the home environment can be location specific i.e. build-up of humidity level can be sensed in wet areas, increased temperature level can be used to trigger the heat boost feature.

Using the Remote Sensor Panel you can instruct the Synergy system to respond to the temperature or relative humidity in the control room (where the Touch Screen Controller is located), or where the Remote Sensor is located, or the average of the two.

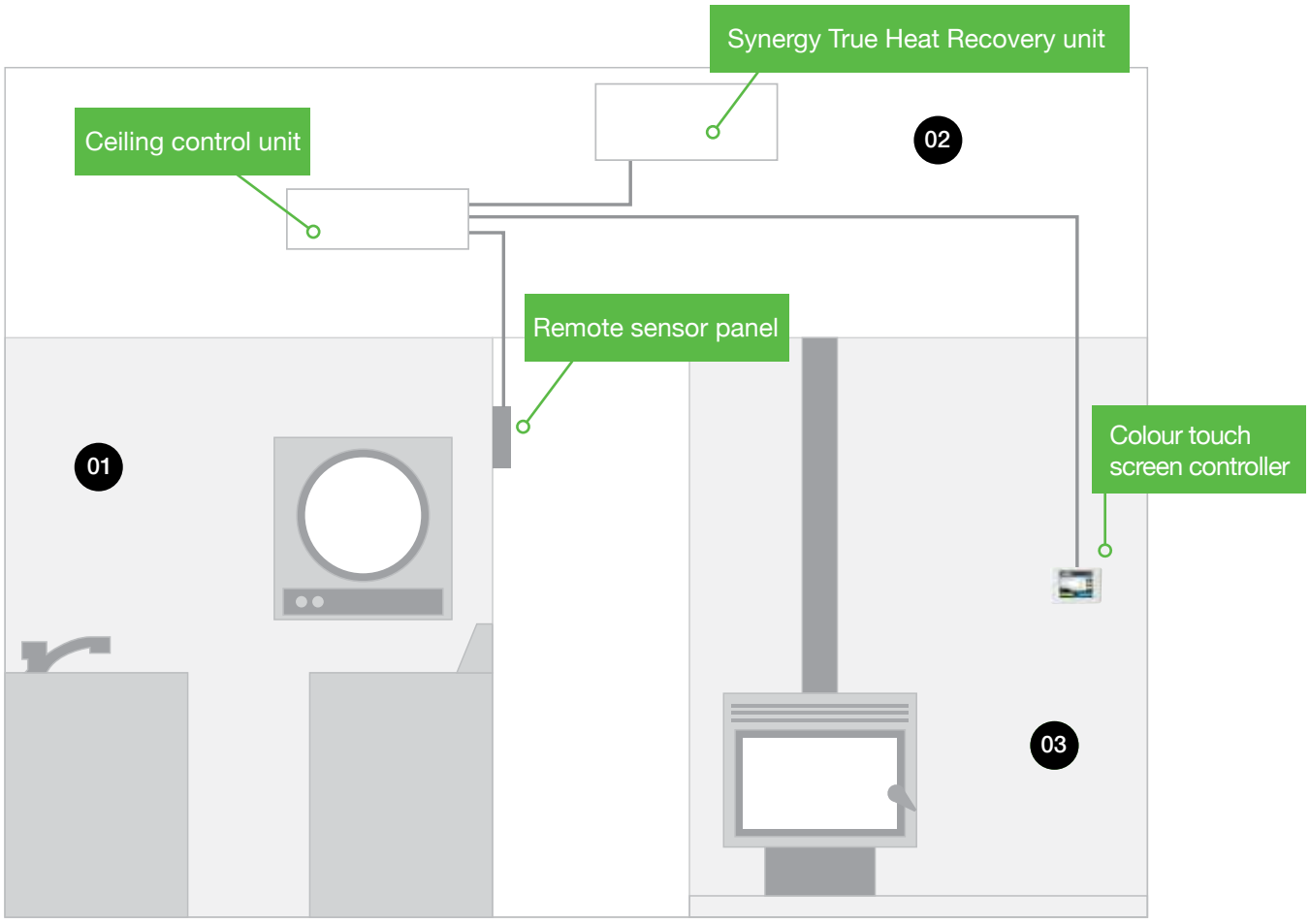
TYPICAL INSTALLATION SETUP

ICON KEY

01 Laundry

02 Roof Space

03 Lounge



SYNERGY TECHNICAL
SPECIFICATIONS

SYNERGY HEAT RECOVERY consists of a balanced ventilation system incorporating both extract and supply airflows to rid the home of moist, stale air and introduce fresher, drier filtered air into the home.

These two air paths flow through the Heat Exchanger and as they pass each other, up to 90% of heat from the extracted air is recovered and transferred to the incoming air which is delivered back into the home via diffusers in the ceiling.

The two airflows never meet, therefore preventing cross contamination while also recovering the heat from the extracted air. The Heat Exchanger recovers otherwise wasted heat produced from everyday household activities and paid heating.

GENERAL SPECIFICATIONS

	190	250	405PLUS
Balanced ventilation system with no cross-contamination of inlet and exhaust air	Yes	Yes	Yes
Counter Flow Heat Exchanger	Yes	Yes	Yes
Heat Exchanger Efficiency	up to 90%	up to 90%	up to 90%
Ventilation Speeds	3	3	9
Core By Pass	Optional	Optional	Included
Filters Included	F7	F7	F7 and 2x G3
Colour Touch Screen	Yes	Yes	Yes
Maximum Operating Temperature	60°C	60°C	60°C
Max Power Consumption	175 W	175 W	230 W
Electrical Supply (must be mains earthed)	230VAC 50 Hz	230VAC 50 Hz	230VAC 50 Hz
Communications Interface connecting ceiling unit to touch screen	10m RJ45 (supplied)	10m RJ45 (supplied)	10m RJ45 (supplied)

190/250 Heat Exchanger

405PLUS Heat Exchanger

Touch Screen Controller

Z136
AS/NZS 3100 :2009: 10

SMART-VENT POSITIVE
EXPLAINED

Smart-Vent will draw fresher, drier air from the roof cavity or from outside and filter it before gently distributing it around your home.

Superior, medical grade F7 filtration traps up to 90% of pollens, dust and allergens. This filtered air is distributed into each room via unique acoustic insulated ducting, which reduces fan and airflow noise. Moist air is forced out around windows and doors, making your home drier, which makes it is easier to heat.

Simply enter your preferred temperature range into the Smart-Vent controller, then sit back and enjoy your healthier home. With the ability to sense the temperature of the air in the room the controller is in and the roof cavity, Smart-Vent will automatically select the best air intake option for your home.

Drawing air from the roof cavity, outside or even from your lounge in Heat Transfer mode (if installed), Smart-Vent will choose the warmest air in winter and the coolest air in summer providing a complete year round ventilation solution.

Smart-Vent Positive is fully future proofed so any of our upgrades can be added simply and easily into your existing system.

ICON KEY

01 Fresh air is taken from outside or warmer, drier air is taken from the roof cavity (with similar feature installed).

02 The air is passed through a high efficiency F7 filter.

03 The air is pushed into the home using a high quality fan.

04 The air is gently distributed into your home via ceiling diffusers.

05 The moisture laden air is forced out around doors and windows.

The end result is a fresher, drier, healthier home that is less prone to condensation and airborne contaminants.

SMART-VENT POSITIVE MODELS

MODEL	Summer Feature	Controller	Fan Speeds	Supply Outlets	Order Codes
SV01	No	-	2	1	FAN1056
SV01C	No	Digital	2	1	FAN2023
SV02	No	Digital	3	2	FAN0939
SV02-TSC	No	Touch Screen	3	2	FAN2113
SV02S	Yes	Digital	3	2	FAN0850
SV02S-TSC	Yes	Touch Screen	3	2	FAN2114
SV04	No	Digital	3	4	FAN1057
SV04-TSC	No	Touch Screen	3	4	FAN2115
SV04S	Yes	Digital	3	4	FAN1058
SV04S-TSC	Yes	Touch Screen	3	4	FAN2116
SV06S	No	Digital	3	6	FAN1064
SV06-TSC	No	Touch Screen	3	6	FAN2117
SV06S	Yes	Digital	3	6	FAN1065
SV06S-TSC	Yes	Touch Screen	3	6	FAN2118

SELECTION GUIDE

What is the square metre size of the home?	Would you like the Summer Feature included?	Would you like a Colour Touch screen controller?	How many rooms do you wish to distribute to?	Recommended Smart-Vent Positive System	Order Codes
up to 130m²	No	No	1	SV01*	FAN1056
			1	SV01C	FAN2023
	No	No	2	SV02	FAN0939
			3 - 4	Extension Kit/s	DCT2276
		Yes	2	SV02-TSC	FAN2113
			3 - 4	Extension Kit/s	DCT2276
	Yes	No	2	SV02S	FAN0850
			3 - 4	Extension Kit/s	DCT2276
		Yes	2	SV02S-TSC	FAN2114
			3 - 4	Extension Kit/s	DCT2276
130m² to 280m²	No	No	4	SV04	FAN1057
			5 - 6	Extension Kit/s	DCT2276
		Yes	4	SV04-TSC	FAN2115
			5 - 6	Extension Kit/s	DCT2276
	Yes	No	4	SV04S	FAN1058
			5 - 6	Extension Kit/s	DCT2276
		Yes	4	SV04S-TSC	FAN2116
			5 - 6	Extension Kit/s	DCT2276
280m² to 560m²	No	No	6	SV06	FAN1064
			7 - 10	Extension Kit/s	DCT2276
		Yes	6	SV06-TSC	FAN2117
			7 - 10	Extension Kit/s	DCT2276
	Yes	No	6	SV06S	FAN1065
			7 - 10	Extension Kit/s	DCT2276
		Yes	6	SV06S-TSC	FAN2118
			7 - 10	Extension Kit/s	DCT2276

*** The SV01 model does not include any controller capability**

Additional Information

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 of additional stud height.

For example for a 2.8m stud height, increase your house size by 16%.

This selection guide assumes that there is sufficient ceiling space to install all componentry. If you choose to exceed the number of rooms listed in the selection guide above, the performance of the system will be affected.

For the SV06 systems, a total of 4 extension kits can be added but please do not exceed 2 extension kits per branch of the system.

KIT CONTENTS

KITS	SV01/SV01C	SV02	SV02S	SV04	SV04S	SV06	SV06S
No Controller (SV01)	FAN1056						
Digital Controller (SV01C)	FAN2023	FAN0939	FAN0850	FAN1057	FAN1058	FAN1064	FAN1065
Colour Touch Screen Controller		FAN2113	FAN2114	FAN2115	FAN2116	FAN2117	FAN2118

KIT CONTENT	SV01/SV01C	SV02	SV02S	SV04	SV04S	SV06	SV06S
150mm Supply Diffuser	1	2	2	4	4	6	6
150mm Fixed Grille		1	3	1	1		
200mm Fixed Grille				1	2	3	5
F7 Filter	1	1	1	1	1	2	2
150mm 3 Speed Fan	1	1	1				
200mm 3 Speed Fan				1	1	2	2
150mm Motorised Damper			1				
200mm Motorised Damper					1		2
150mm x 3m Acoustic Insulated Ducting	1						
150mm x 6m Acoustic Insulated Ducting		1	1	3	3	4	4
150mm x 3m Insulated Ducting		1	1				
150mm x 6m Insulated Ducting			1				
200mm x 6m Insulated Ducting					2	1	3
200mm x 3m Insulated Ducting				1			
150mm x 3m Unilok Ducting			1				
200mm x 6m Unilok Ducting						1	1
200mm x 3m Unilok Ducting				1	1		
150/150/150mm Y-Branch		1	1	1	1		
200/150/150/150mm Double-Branch				1	1	2	2
150mm Duct Joiner				1	1	2	2
Fixings and Fixtures	Included	Included	Included	Included	Included	Included	Included

KIT CONTENTS
OPTIONAL EXTRAS

OPTIONAL EXTRAS	SV01/SV01C	SV02/SV02S	SV04/SV04S	SV06/SV06S
Additional Extension Kit	DCT2276	DCT2276	DCT2276	DCT2276
Tempering Heater	DCT2123* DCT1226	DCT1226	DCT1483	DCT1491
Heat Transfer Kit	N/A	FAN2027	FAN2028	FAN2028*

* DCT2123 is the tempering heater for FAN1056 only

ADDITIONAL INFORMATION

- By adding additional outlets to the system you are simply dividing the available air amongst more rooms.
- Extra duct may be required depending on the size & layout of the home. See accessories on the page 197.
- For larger homes please contact Smart-Vent for technical advice.
- A Smart-Vent Positive Pressure system is not intended to be, and is no substitute for an effective heating system in the home.

SUMMER FEATURE
EXPLAINED

What is the Summer Feature for Positive Pressure?

Summer Feature is an optional upgrade for Positive Pressure systems only. Summer Feature ensures the coolest possible air is used to ventilate the home.

What is the 'S' model for Positive Pressure?

The 'S' (SV02S, SV04S, SV06S…) models for Positive Pressure mean the kits have the summer feature included.

Summer Feature is a second air intake under the eave/at the gable end of the home bringing in an outdoor air supply when the roof cavity temperature exceeds the maximum temperature.

Installing the intake on the coolest side of the house ensures the best possible result.

Summer Feature allows your customer to get the most out of the their system 24 hours a day, 365 days a year.

HEAT TRANSFER
POSITIVE PRESSURE

What is 'Heat Transfer' for Positive Pressure?

Heat Transfer moves excess warm air from your lounge (heat source room) to other areas of the home. Heat Transfer closes the damper drawing air from either the outside or roof space and instead draws air from the room where there is a heat source – usually a living room. It is important to point out that when Heat Transfer is activated, the system is not bringing in fresh air – however the home is getting the benefit of transferring heat around the house (e.g. cold winter nights).

When should I specify a Heat Transfer for Positive Pressure?

Heat transfer is an optional upgrade for Positive Pressure systems only. It should only be specified when the customer has a heat source that creates excess heat i.e. fireplace or similar. A heat pump sized for the room it occupies is not suitable for heat transfer. However if the heat pump has excess capacity a heat transfer system can certainly transfer any excess heat.

What options do I get to operate Heat Transfer?

There are three operations available with Heat transfer upgrade. To operate the Heat Transfer in winter the customer needs to enable the Heat Transfer option on the controller and set the 'Comfort Temperature' - once it exceeds this temperature in the heat source room (usually lounge) the three operations of Heat Transfer come into play.

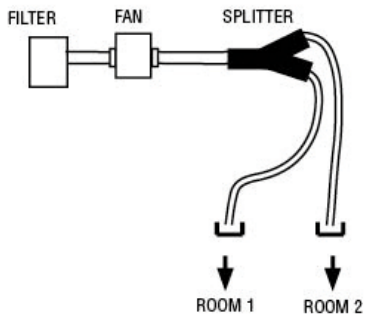
Normal mode – The Heat Transfer operates when the temperature in the room exceeds the comfort temperature.

Timer mode – The Heat Transfer operates when the temperature in the room exceeds the comfort temperature at preset times only (two time periods available).

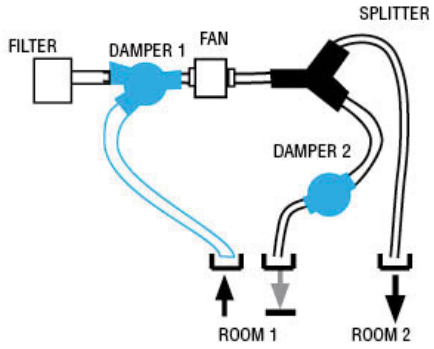
Override – regardless of the temperature of the room or which mode it is in you can force the system into Heat Transfer for 1, 2 , 4 or 6 hours.

SV02 system pictured with a Heat Transfer upgrade

SV02 configuration prior to Heat Transfer Upgrade

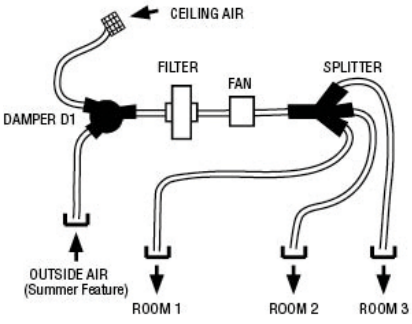


SV02 configuration with Heat Transfer Upgrade

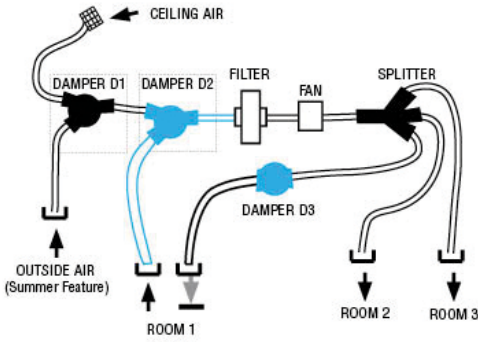


SV04S or one leg of a SV06S system pictured with a Heat Transfer upgrade

SV04 configuration prior to Heat Transfer Upgrade



SV04 configuration with Heat Transfer Upgrade



TEMPERING HEATER

What is a Tempering Heater for Positive Pressure?

Tempering Heater is an optional upgrade for both Smart-Vent Positive Pressure and Synergy.
A Tempering Heater is a 1kW or 2kW element in line heater designed to temper the incoming air.

When should I specify a Tempering Heater?

It should be specified when the customer wants the 24 hour a day ventilation Smart-Vent delivers, but wants the ability to heat the air delivered to a more comfortable temperature.

Will a Tempering Heater heat a home?

No, with Smart-Vent Positive Pressure it will take the chill off the air introduced from the roof cavity when it is below the minimum temperature set on the controller. They are not recommended as a complete home heating solution.

What will the Tempering Heater increase the temperature by?

It is tested to increase the temperature of the introduced air by approximately 8 – 10°.
It will not increase the temperature of the entire home by this much; it will ensure the air being introduced into the home is a more comfortable temperature.

What options do I get to operate a Tempering Heater?

There are three operations available with the Tempering Heater upgrade.

Normal mode – The Tempering Heater operates in Positive Pressure when the temperature in the roof cavity falls below the minimum temperature.

Timer mode – The Tempering Heater operates in Positive Pressure when the temperature in the roof cavity falls below the minimum temperature at preset times only (two time periods available).

Override – regardless of the temperature in the roof cavity or which mode it is in you can force the heater on for 1, 2, 4 or 6 hours.

Tempering Heaters are available for both Positive Pressure and Synergy True Heat Recovery.

Tempering Heater

Where in the system is the Tempering Heater located?

The tempering heater is always located AFTER the fan in positive pressure so the air is “pushed” across the element.

TECHNICAL INFORMATION
POSITIVE PRESSURE

Controller and ceiling box

Wall mounted (standard electricians switch plated) digital controller with LCD Matrix display and keypad.

2 x Temperature sensors, 1 in wall panel and one in ceiling control box.

3 speed fan.

Automatic switching of air source from outside or roof space (if summer function purchased).

Heat transfer optional upgrade; automatically transfer excess heat from living areas to bedrooms.

Tempering Heater

Optional tempering heater, 1kW or 2kW.

Automatically switches Tempering heater on if temperature drops below threshold, or operate via heater timer.

Colour touch screen controller upgrade option available.

Filter

High quality cartridge F7 filter in all Smart-Vent Positive Pressure systems. Hepa and Carbon filters also available. Wall panel gives a warning light when filter needs replacing.

Maximum operating temperature	50°C
Minimum threshold setting	0°C
Maximum threshold setting	35°C
Operating hysteresis temperature	2°C
Minimum threshold differential	5°C
Temperature accuracy	+/-1°C (at source)
Temperature resolution	0.065°C
Display resolution	1°C
Operating voltage	240VAC RMS (50Hz)
Maximum operating current	10 AC RMS
AS/NZS CISPR	14:2002W

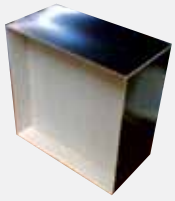
Z136

AS/NZS 3100 :2009: 10

Digital Controller

Colour touch screen controller

F7 Filter



Replacement filter cartridge

Acoustic Ducting

Tempering Heater

Acoustic insulated ducting

Whisper quiet airflow.

Prevents heat loss.

Fully adjustable cone diffusers enable system balancing.

Automatic summer feature

A Summer Feature is highly recommended during the hot summer months when hot, muggy evenings disturb your sleep. `When the temperature in the roof space rises above your comfort level, the Smart-Vent system will switch to supply cool air drawn from outside.

You will never have to come home to a hot, stuffy house as the cool air is filtered before being gently distributed around the home.

Pro Series Extension Kit

The Pro-Series Extension Kit allows you to add additional outlets to any of the Smart-Vent systems.

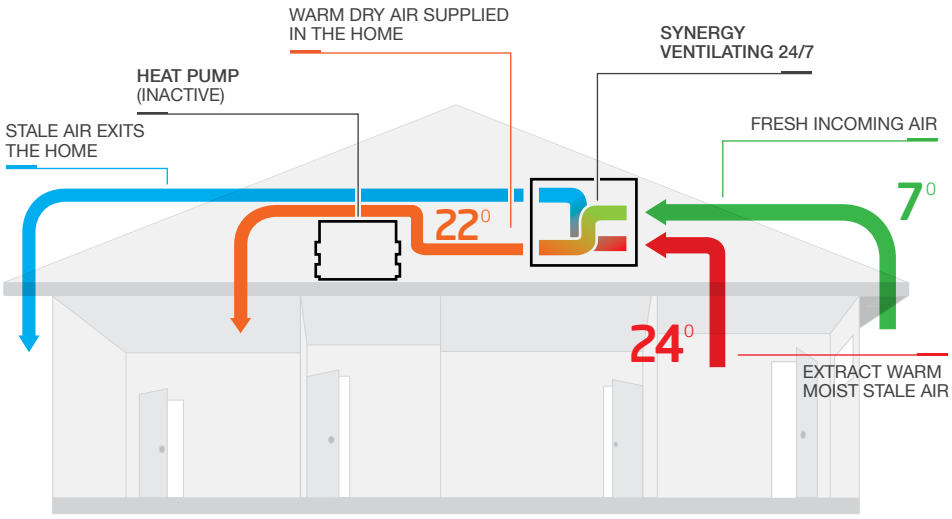
Please note: that adding additional outlets to your system does not mean you need a bigger system, it simply means the total air requirement is divided amongst more rooms.

SMART-VENT INTEGRA SYSTEMS
EXPLAINED

Smart-Vent Integra integrates any ducted heat pump with Smart-Vent Synergy to achieve healthy home ventilation with up to 90% heat recovery combined with energy efficient heating. This is the ultimate home ventilation and heating solution.

The Ultimate Ventilation and Heating solution, Integra not only recovers heat from inside your home (as with Synergy) it also **passes the air through a ducted heat pump which actually HEATS the air** to your desired temperature, delivering fresh filtered air that is heated.

SMART-VENT INTEGRA AT WORK

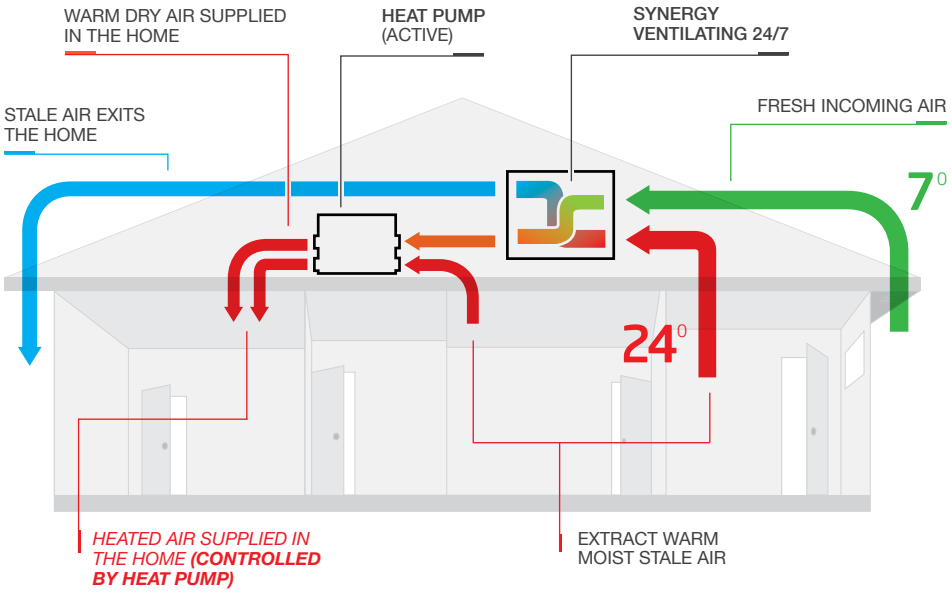


HEATPUMP
NOT IN USE

Removes condensation.

Supplies fresh filtered air from outside.

Up to 90% heat recovery.



HEATPUMP
IN USE

Energy efficient heating using fresh filtered air

Smart-Vent Integra is the ultimate in True Heat Recovery ventilation with the advantage of being connected to a ducted heat pump for energy efficient heating

SMART-VENT INTEGRA
FEATURES

Smart-Vent Integra provides a home ventilation system WITH heating and cooling.

Combining the benefits of True Heat Recovery with any ducted heat pump.

ENERGY EFFICIENT HEATING

The Integra system is connected to a ducted heat pump providing energy efficient heating throughout your home.

Ducted Heat Pump

HEAT EXCHANGE CORE

Unlike paper cores, our polymer core is better suited to New Zealand climatic conditions. With no moisture transfer between incoming and outgoing air, humidity is reduced.

These cores are tested at 90% efficiency to European Standard EN308.

Heat Exchange Core

WHISPER QUIET

The unique acoustic insulated ducting used in all Smart-Vent Synergy systems ensures ‘whisper quiet’ air transfer and better air temperature retention.

Acoustic Duct

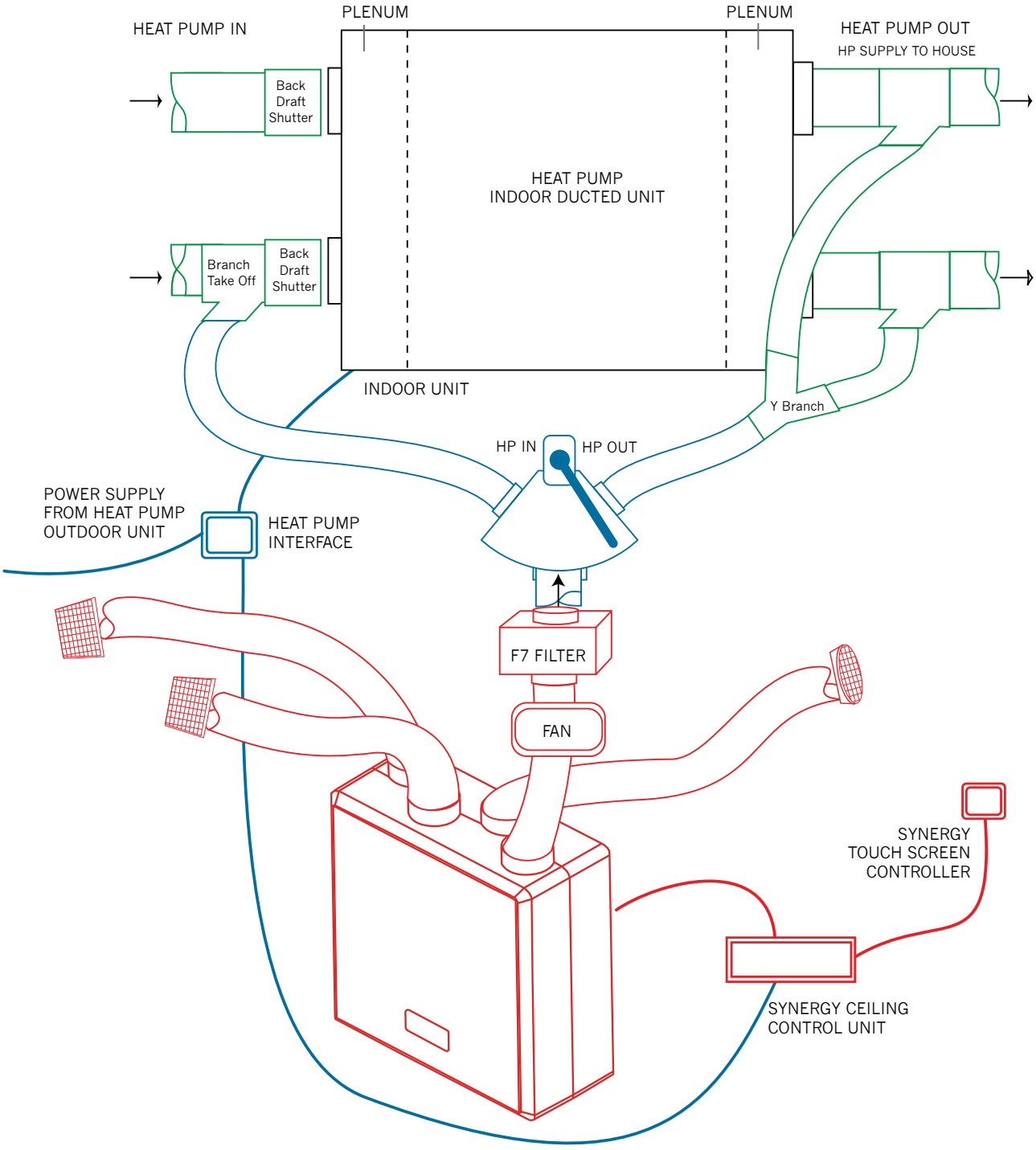
SUPERIOR FILTRATION

The high quality F7 filter will captures 80 - 90% of 0.4 micron particles including dust, pollens, allergens and mould spores.

F7 Fliter

SMART-VENT INTEGRA 190/250

TECHNICAL INFORMATION

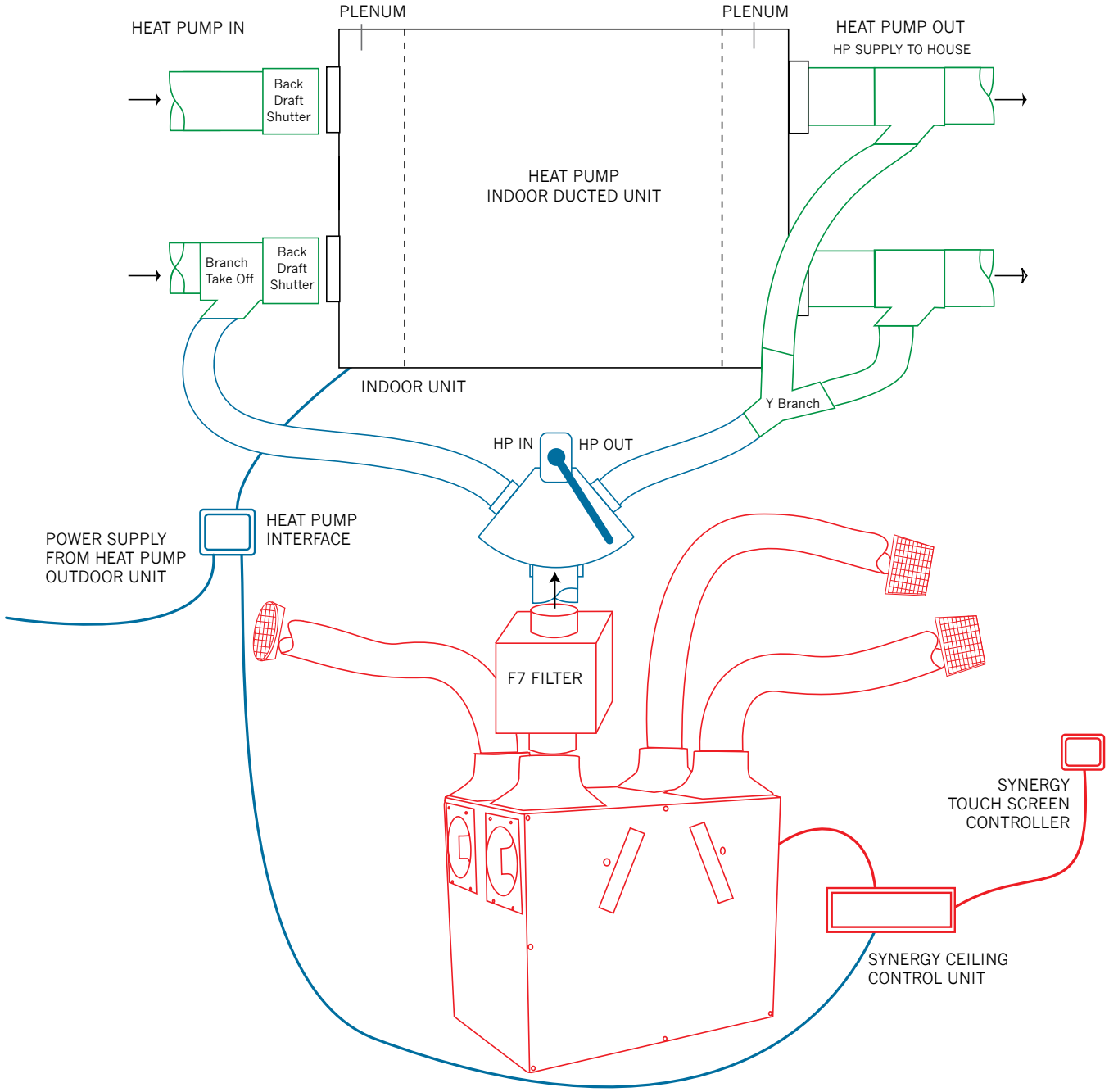


KEY

- Synergy 190/250 True Heat Recovery Unit
- Standard Synergy Heat Pump Upgrade Kit
- Separate Ducted Heat Pump Unit

SMART-VENT INTEGRA 405PLUS

TECHNICAL INFORMATION



KEY

- Synergy 405PLUS True Heat Recovery Unit
- Standard Synergy Heat Pump Upgrade Kit
- Separate Ducted Heat Pump Unit

HEAT TRANS
SYSTEMS

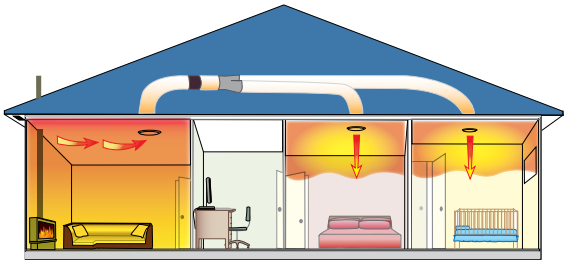
HEAT TRANS uses excess heat to warm other areas of the home by transferring it from one room to multiple rooms. Heat Trans is the professional brand in heat transfer systems and is the brand of choice for electrical contractors.

Leading the market for over 15 years, Heat Trans is at the forefront of product development and innovation and are the only heat transfer systems using acoustic insulated ducting and digital controllers.

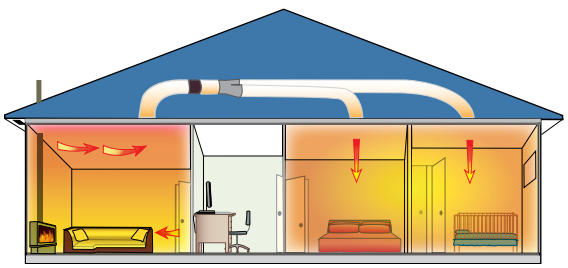
HOW DOES HEAT TRANS WORK

01 Excess heat from your heat source will rise to ceiling level where it is trapped. This excess heat can reach temperatures of 30-35°C.

02 This excess heat can be effectively transferred to other rooms using a high quality fan and acoustic insulated ducting.



03 Air moves from the bedrooms back to the lounge creating a natural recirculation of warm air throughout the home. This will also make your home healthier by helping to reduce mould and mildew.



MODELS

MODEL	Order Code
Heat Trans One Room Kit	FAN0325
Heat Trans Two Room Kit	FAN0337
Heat Trans Three Room Kit	FAN0338
Pro-Series One Outlet Extension Kit	DCT2101
Heat Trans Summer-Vent Extension Kit	DCT1481
Heat Trans Thru Wall Kit	FAN0005

Heat Trans systems utilise excess heat throughout the home and cost as little as a light bulb to run.

HEAT TRANS
FEATURES

The Ultecon digital thermostat controller measures and displays the temperature of your lounge and lets you preset your preferred room temperature.

When your lounge temperature exceeds your preferred room temperature the system will automatically start to transfer the excess heat to other rooms in your home.

The 2 and 3 room systems also offer fan speed control, which allows you to set your preferred fan speed giving you ultimate control over the volume of heated air being transferred.

SUPERIOR FANS

High quality multi-speed fans for optimum airflow ventilation in the home that cost as little as a light bulb (between 70W and 120W) to run. These high quality fans have been specifically selected to ensure correct airflow and pressure levels are achieved.

One Room Controller

WHISPER QUIET

The unique acoustic insulated ducting reduces air transfer noise to a 'whisper quiet' level. Better temperature retention is achieved, ensuring optimal heat transfer of excess warm air.

Two/Three Room Controller

ADJUSTABLE DIFFUSERS

Easily adjustable to allow balancing of the airflow into each room. Simply twist the centre section of the diffuser to allow more or less air into each room. Or simply close any diffuser when the room is not in use.

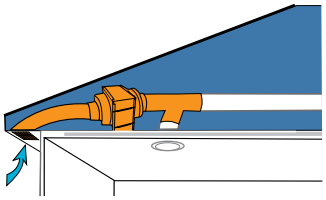
OPTIONAL EXTRAS

SUMMER FEATURE

Introduce fresher cooler air into your home in summer with the Summer-Vent Extension Kit, to enable year round use of your system.

With the inlet grille installed under your soffit, fresher cooler air is filtered using a high efficiency F7 filter and is distributed throughout your home via your Heat Trans outlets. The system is controlled via a standard wall switch which operates the motorised damper to start drawing air from outside.

Note: When the summer feature is working the lounge warmed room inlet is switched off via the damper and will not receive the cooled air directly from outside, however due to air pressure a natural re-circulation occurs throughout the home.



Summer Feature Extension Kit

EXTENSION KIT

The Pro-Series One Outlet Extension Kit is designed to extend your standard three room Heat Trans system so you can distribute warm air to an extra room within your home.

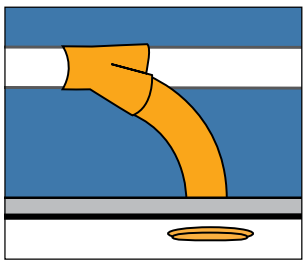
The extension kit gives you the flexibility to add additional outlet/s to your Heat Trans system. By adding additional outlet/s to your system you are simply dividing the available heated air amongst more rooms.

Note: All Heat Trans kits can be extended.

1 Room kits can be extended to a max length of 12 metres (6 metres supplied in kit).

2 Room kits can be extended to a max length of 21 metres (12 metres supplied in kit).

3 Room kits can be extended to a max length of 24 metres (15 metres supplied in kit).



Pro-Series One Outlet Extension Kit

SMART-VENT
FILTERS & ACCESSORIES

Acoustic Insulated Ducting

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

Unilok Nude Ducting

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

Noise Reduction Fan Housing

150/200 Centrifugal Fan	DCT2297
150/200 Mix Flow Fan	DCT2298

Replacement Filters

G4 Sock	DCT1411
G4 Filter	DCT2221
F7 Filter	DCT2093
F7 with Carbon Filter	DCT2277
HEPA with Carbon Filter	DCT2278
EU7	DCT2093

Extension Leads

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

Y Branch

150-150-150	DCT1233
200-150-150	DCT0379

Insulated Ducting

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

Duct Fasteners

Hanging Strap	DCT2299
Duct Tape 48mm x 5m	DCT0173
Duct Tape 48mm x 30m	DCT0807
Duct Tape 48mm x 60m	DCT1132*

Duct Connectors

150mm metal	DCT0723
200mm metal	DCT0724

Fixed Louvre Grilles

125mm white	DCT0041
150mm white	DCT0063
200mm white	DCT0340

Connection Accessories

RJ45 to RJ45 Connecter	FAN2408

Controller Software Up-Grade

Positive Pressure Digital Up-grade to (Software V2.09)	FAN2065
Synergy Touch Screen Controller (Software V1.3)	FAN2178

*AS4254 Duct Tape - Temperature range -37°C - 127°C