

OmniCOREduo

Multi Room + Hot Water



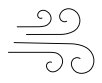
HEATING



COOLING



HOT WATER

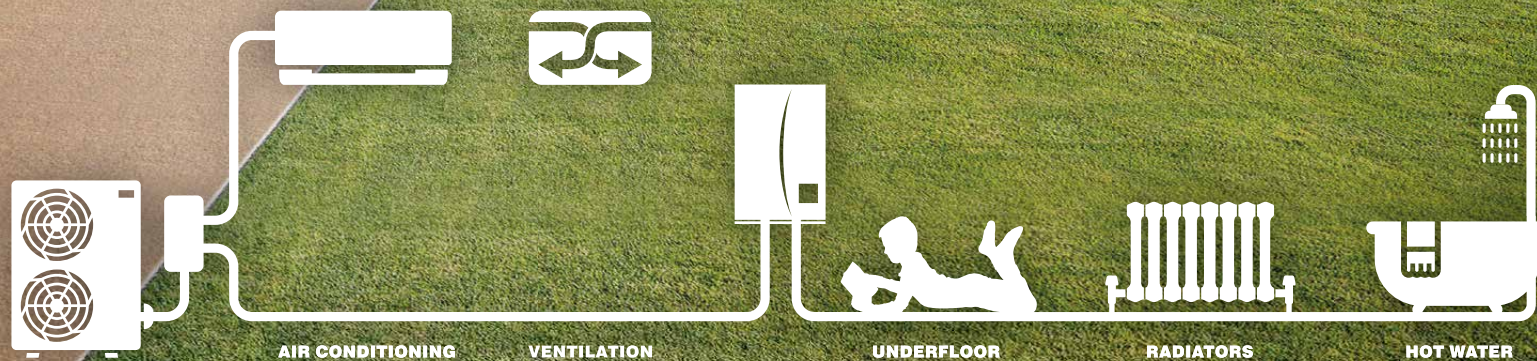


VENTILATION



Whole Home Heating, Cooling,
Water Heating and Ventilation

**“Home heating, cooling,
hot water and ventilation –
it’s the ultimate in
total home comfort.”**



OmniCore Duo – the Evolution of Total Home Comfort

The next generation in Multi Room Technology is here.

Now you can experience year-round comfort of space heating in winter and energy efficient cooling in summer, whilst enjoying cost-effective hot water heating. This is done by combining a Mitsubishi Electric OmniCore Multi Room System and a Mitsubishi Electric Ecodan Hot Water System. This all-in-one-solution shares the same outdoor unit, minimising external clutter and reducing your carbon footprint.

Applications can include potable water heating, underfloor and radiator heating. Furthermore, with a full range of indoor air conditioning models to choose from, there is a style and capacity to fit any room.

It well and truly is the ultimate in total home comfort.



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One Combined Outdoor Unit Minimises External Clutter

Because the Ecodan Cylinder/Hydrobox is able to join to the same branch box, domestic hot water, underfloor heating and radiators or a combination of all, can be part of the same Multi Room System. As a result, outdoor space is maximised as there are no additional bulky outdoor units to worry about.

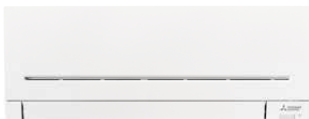


Add Optional Lossnay Energy Recovery Ventilation

New Zealand homes are getting more airtight than ever. In addition to the need for adequate heating and cooling, fresh air is also key to overall better health and well-being.

Lossnay Fresh Air Home Ventilation is the ideal solution to bring fresh filtered air in, with the added benefit of energy recovery. The range includes a whole home solution as well as single room options.





What are the Key Components?

The Outdoor Unit

The outdoor unit uses electricity to absorb freely available heat energy from the surrounding air and then transfers it to your home so it can provide energy efficient hot water heating, radiator and underfloor heating, as well as space heating or cooling.

The Branch Box

The outdoor unit is connected to a specially designed Branch Box. This Branch Box is the technological heart of the Mitsubishi Electric OmniCore Duo Multi Room with Hot Water System. It intelligently draws energy from the outdoor unit and distributes it amongst individual branch ports to the different connected indoor components.

The Indoor Air Conditioning Units

Just like a traditional multi room combination almost any indoor model from the Mitsubishi Electric OmniCore Multi Room Range can be connected to the system. This includes high walls, floor consoles, ceiling mounted and even ducted concealed styles. The OmniCore Multi Room System can heat or cool multiple areas with individual temperature control for each room. This means you can adjust the temperature to suit your comfort levels and ensure individual rooms are only operating when needed, maximising energy efficiencies.*

The Ecodan Hot Water System

Designed with flexibility in mind, the system allows for various configurations to suit different applications. It can include potable hot water, underfloor and radiator heating throughout the whole home.

Either an all-in-one Mitsubishi Electric Ecodan Cylinder System or Mitsubishi Electric Ecodan Hydrobox with a 3rd party cylinder, can be connected to the branch box to satisfy the potable hot water requirements.

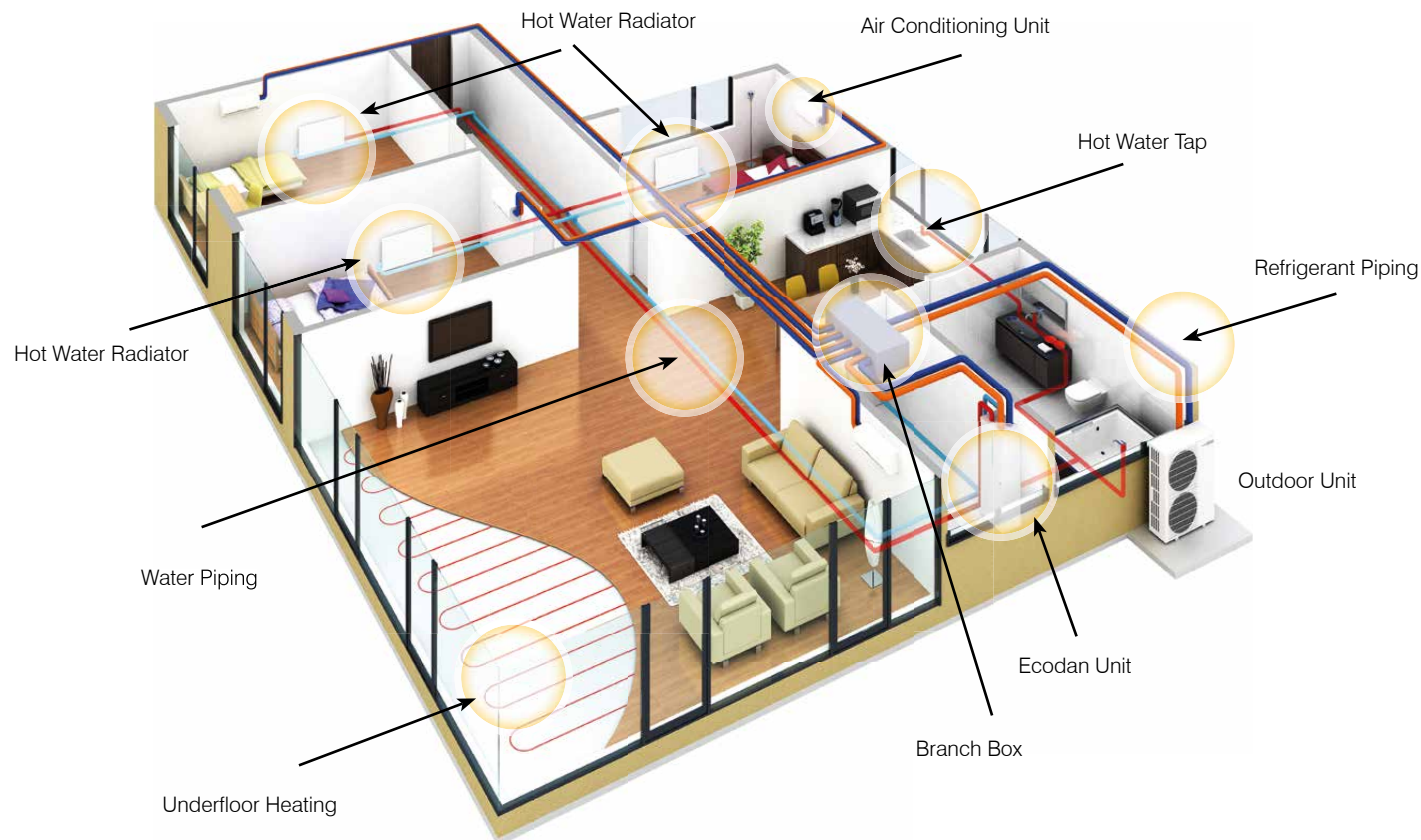
The Optional Lossnay Energy Recovery Ventilation Unit

The Lossnay Heat Exchanger Core recovers energy from the extracted stale air, to pre-warm or pre-cool the incoming fresh air.

*Note: The OmniCore Multi Room Range is not simultaneous heating and cooling.

The OmniCore Duo System – Component Overview

The illustration below shows a combined Mitsubishi Electric OmniCore Duo Multi Room with Hot Water System that features hydronic underfloor and radiator heating in the winter season, and air-to-air cooling for the summer – whilst producing domestic hot water all year round.



FTC6 Controller



Smart Energy Controls

Daily and weekly timers enable you to maximise system performance, and save even more on your power bills.

Zone Control* can be used to set different temperatures for different rooms, or turned off completely. This is the ultimate in customised temperature control.

*Multiple zones available with Ecodan 2-Zone kit.

Sample Indoor Units



High Wall Mounted



Ceiling Mounted



Ducted/Concealed



Floor Console

OmniCore Duo Multi Room With Hot Water Configurations

Three Outdoor Capacities to Choose From

The range utilises the Mitsubishi Electric OmniCore Duo PUMY-P (twin fan) outdoor unit and is available in three sizes including a 14kW, 16kW and 18kW (nominal heating capacity) model.

Two Branch Box Options

The Mitsubishi Electric Branch Box is unique to the OmniCore Multi Room Systems, with a 3-port or 5-port option available. Simplifying installation, the branch box enables a more flexible and cost-effective installation approach. Up to two branch boxes can be connected to the PUMY-P outdoor, enabling a wide range of configurations to meet all needs.

What Indoor Units Can I Connect to My OmniCore Duo Multi Room With Hot Water Heating System?

Most Mitsubishi Electric indoor units are compatible with a Mitsubishi Electric OmniCore Multi Room outdoor unit. Whether it's a small capacity whisper quiet high wall for the bedroom, a compact floor console for the office or a discreet ducted model for the lounge, there is a style and capacity to fit any room – no matter the size or interior aesthetic.

Individual Temperature Control for Each Room

An OmniCore System allows individual control of every air conditioner in your home. With individual room control, you can adjust the temperature to suit your comfort levels and ensure each air conditioner is only operating when needed; maximising energy savings.*

*Note: The OmniCore Multi Room Range is not simultaneous heating and cooling.





How Does it Cool in Summer and Provide Hot Water?

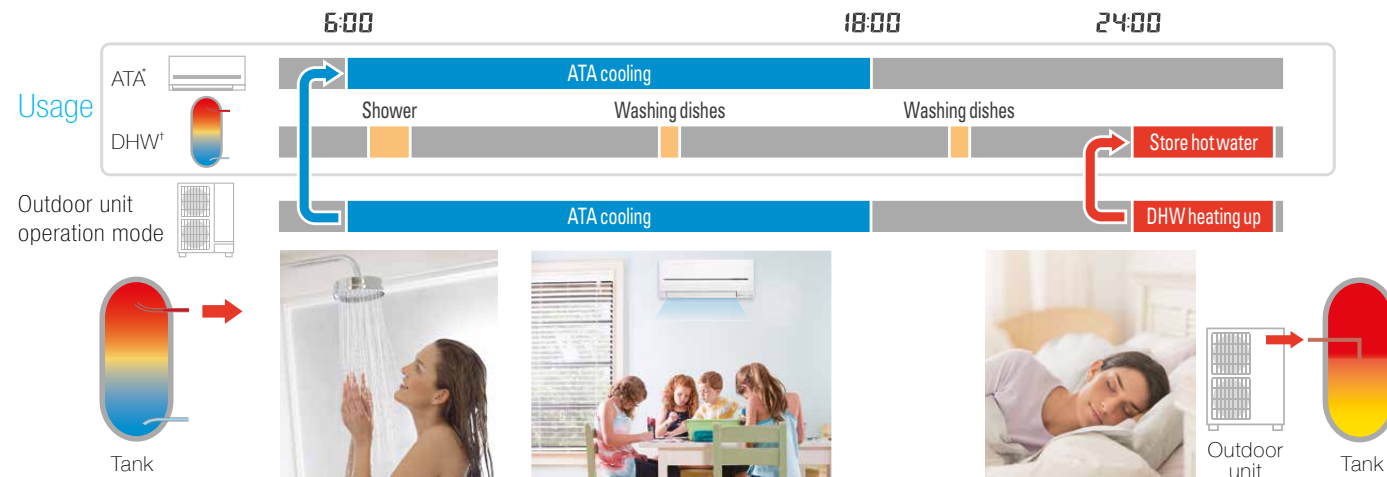
To ensure the whole system is working as efficiently as possible, hot water demand is always prioritised.

When indoor units are cooling and there is demand on the cylinder for hot water, the system will prioritise hot water heating to heat the cylinder – this results in the cooling indoor units going into standby. Once the cylinder has reached the target temperature, the system will switch back to cooling and the indoor units will begin to cool again.

To minimise any interruption of air conditioning cooling, you can set a domestic hot water timer so that it only heats up the tank at specific times. For example, you can simply set the hot water heat up time for the early hours of the morning.

That way stored hot water can be used throughout the day without interrupting any cooling.

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* ATA = Air-to-Air Air Conditioning

† DHW = Domestic Hot Water



Hot Water Heat Pumps are Better for the Environment

Did you know a traditional electric hot water cylinder can produce up to three times the amount of greenhouse gas compared to a low emission alternative such as a hot water heat pump? Gas hot water systems are even greater greenhouse gas contributors, producing a staggering seven times more emissions compared to hot water heat pump technology.*¹

This makes water heating one of the largest single sources of greenhouse gas emissions from the average Kiwi home. As such, EECA has identified heat pumps as playing a key role in the ability to significantly reduce operating costs and greenhouse gas emissions from energy use. Currently an estimated 67% of New Zealand homes use a traditional electric hot water system in the home.*²

Substituting existing, less efficient technologies with more efficient systems such as a hot water heat pump, has the ability to make a significant reduction in overall greenhouse gas emissions. If you are looking for super energy efficient water heating that is kind to the environment, Mitsubishi Electric Ecodan Hot Water Heat Pumps are the natural choice.

Add Value to Your New Build With a Hot Water Heat Pump

If you are building a new home, integrating a Mitsubishi Electric OmniCore Duo Multi Room with Hot Water System is a future proof decision that will add long term value.

Choosing an Ecodan Hot Water Heat Pump System is therefore an investment that not only rewards you instantly with lower electricity bills every month, but is sure to make a real impression with potential home buyers in the future.

*¹ Based on gas boiler efficiency of 0.85:1 & gas emissions factor of 0.195kg CO₂-e/kWh & heat pump efficiency of 3.6:1 & electricity emissions factor of 0.1014kg CO₂-e/kWh.

*² Based on E3 Policy Framework data for New Zealand.







Optional Lossnay Energy Recovery Ventilation

For a Healthier, Drier and Warmer Home

Ventilating your home is vital as it maintains air quality and helps control moisture build-up, creating a healthier and more comfortable environment all year round.

The Mitsubishi Electric Lossnay System is a patented balanced pressure energy recovery ventilation solution that uses fresh air (not attic air) to ventilate your home.

The system works by extracting stale air from inside your house and replacing it with allergen-reduced fresh air from outside.

Maximise Energy Efficiency

What makes the Balanced Pressure Lossnay Heat Recovery Home Ventilation System from Mitsubishi Electric so different from other systems is our advanced Lossnay Core at the heart of the heat exchanger.

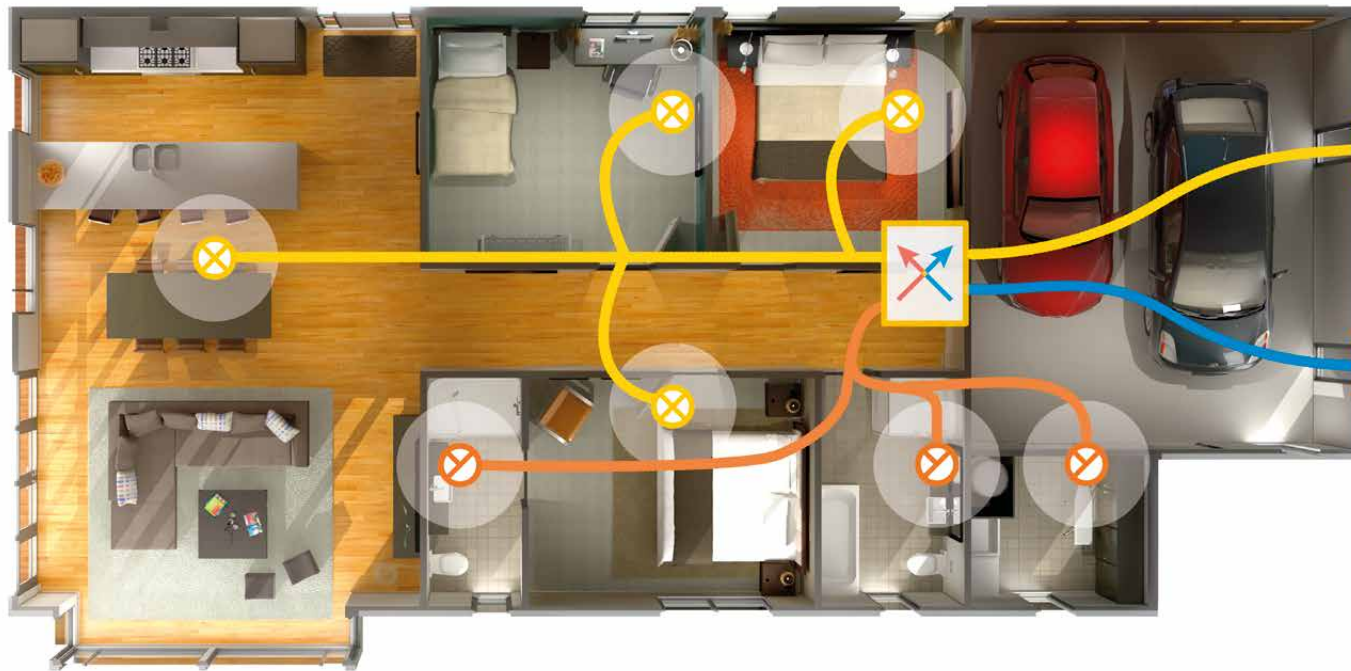
The Lossnay Core recovers energy from the extracted stale air, to pre-warm or pre-cool the incoming air.

As a result, an existing heating appliance in the room does not have to work as hard to reach desired temperatures, maximising energy efficiency and reducing your energy bill.

Winter Mode



Whole Home In-Ceiling Ducted Energy Recovery Ventilation Example



Extracts Stale Air

Extracts stale air removing toxins and reducing humidity.



Supplies Fresh Air

Supplies fresh air increasing the oxygen levels in the home and assists with managing the build-up of moisture.



Lossnay Heat Recovery Unit

Recovers up to 92%* of the heat energy from the outgoing air to preheat the incoming air, saving you money.

*Applicable to VL-500CZPVU on a low fan speed (30%).

Note: Wet area extract using non-permeable core only.

Multiple Solutions

Lossnay has a solution to suit most New Zealand homes, from whole home ducted to single room applications.



In-Ceiling Solutions



Vertical Solutions



Ducted Single Room Solutions



Wall-Mounted Single Room Solutions

Specifications

OMNICORE DUO OUTDOOR UNIT					PUMY-P112VKM5	PUMY-P125VKM5	PUMY-P140VKM5	
Heating	Capacity ^{*1}				[kW]	14.0	16.0	18.0
	Power Input				[kW]	3.04	3.74	4.47
	COP					4.61	4.28	4.03
	Temperature Range Outdoor				[°C]	-20 to 15		
Cooling	Capacity ^{*2}				[kW]	12.5	14.0	15.5
	Power Input				[kW]	2.79	3.46	4.52
	COP					4.48	4.05	3.43
	Temperature Range Outdoor				[°C]	-5 to 52 ^{*3*4}		
Refrigerant						R410A		
Power Supply						230 V 50Hz		
Indoor Unit Connectable	Total Capacity					50 to 130% of Outdoor Unit Capacity		
	Model/Quantity	City Multi				P10–P140 / 9	P10–P140 / 10	P10–P140 / 12
		Branch Box ^{*6}				P15–P100 / 8	P15–P100 / 8	P15–P100 / 8
		Mixed Systems	Branch Box 1 unit ^{*6}	City Multi		P15–P140 / 5	P15–P140 / 5	P15–P140 / 5
				Branch Box ^{*6}		P15–P100 / 5	P15–P100 / 5	P15–P100 / 5
			Branch Box 2 unit ^{*6}	City Multi		P15–P140 / 3 or 2 ^{*5}	P15–P140 / 3	P15–P140 / 3
				Branch Box ^{*6}		P15–P100 / 7 or 8 ^{*5}	P15–P100 / 8	P15–P100 / 8
Sound Pressure Level (SPL) at 1 metre measured in anechoic chamber					[dB(A)]	49/51	50/52	51/53
Dimensions (Width x Depth x Height)					[mm]	1050 x 330 + (40 ^{*7})x1338		
Weight					[kg]	123		

*1 Under normal heating conditions at outdoor temp: 7°CDB / 6°CWB, indoor temp: 20°CDB, pipe length: 7.5m, level difference: 0m.

*2 Under normal cooling conditions at outdoor temp: 35°CDB, indoor temp: 27°CDB / 19°CWB, pipe length: 7.5m, level difference: 0m.

*3 10 to 52°C D.B., when connecting following models: PKFY-P10/15/20/25/32VLM, PFFY-P20/25/32VLEM, PFFY-P20/25/32VLRM(M), PFFY-P20/25/32VKM, PFFY-P20/25/32VCM, PFFY-P25/32/40VMA3; and M Series, S Series, and P Series type indoor unit.

*4 -15 to 52°C D.B., when using an optional air protect guide [PAC-SH95AG-E]. However, this condition does not apply to the indoor unit listed in *3.

*5 When connecting 7 indoor units via branch box, connectable CITY MULTI indoor units are 3; connecting 8 indoor units via branch box, connectable CITY MULTI indoor units are 2.

*6 At least two indoor units must be connected when using branch box.

*7 Grille.

BRANCH BOX				PAC-MK54BC	PAC-MK34BC
Connectable number of indoor units				Maximum 5	Maximum 3
Power Supply (from outdoor unit)				230 V 50Hz	230 V 50Hz
Input				[kW]	0.003
Running Current				[A]	0.05 (Max 6)
Dimensions (Width x Depth x Height)				[mm]	450 x 280 x 170
Weight				[kg]	7.4
Piping Connection Flare	Branch (Indoor Side)*	Liquid Gas	[mm]	ø6.35 x 5 ø9.52 x 4 ø12.7 x 1	ø6.35 x 3 ø9.52 x 3
	Main (Outdoor Side)	Liquid Gas	[mm]	ø9.52 ø15.88	

* The piping connection size differs according to the type and capacity of outdoor/indoor units.

Match the piping connection size of branch box with outdoor/indoor unit. If the piping connection size of the branch box does not match the piping connection size of the outdoor/indoor unit, use optional different-diameter (deformed) joints to the branch box side. (Connect deformed joint directly to the branch box side.)

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Outdoor Unit



Branch Boxes

			ECODAN HYDROBOX ^{*1}	ECODAN CYLINDER ^{*2}
			EHSC-VM2D	EHST20C-VM2D
Nominal Water Volume		[L]	-	200
Heating Operating Range ^{*3}	Heating Flow Temperature	[°C]	20–55	20–55
	Domestic Hot Water	[°C]	-	40–55
Dimensions	Width	[mm]	530	595
	Depth	[mm]	360	680
	Height	[mm]	800	1600

ecodan
Advanced Heating Technology



**Ecodan
Hydrobox**



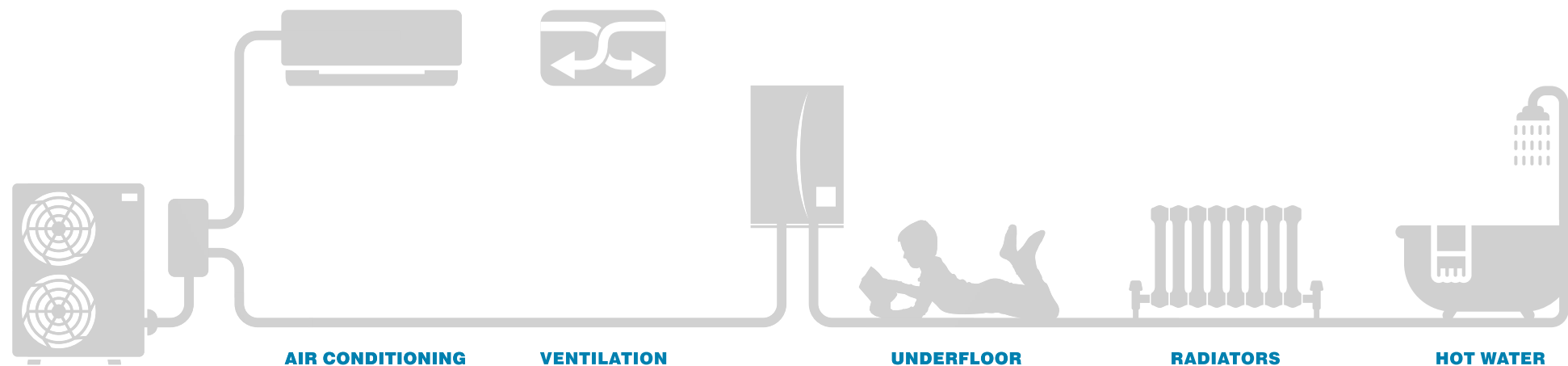
**Ecodan
Cylinder**

Please note that options for cooling applications are available, for more technical information please contact your local Ecodan dealer.

*1 Hydrobox includes: Flow Temperature Controller (FTC6) with Main Controller and Temperature Sensors, Water Circulation Pump, Flow Sensor, Booster Heater and Expansion Vessel.

*2 Cylinder includes: Flow Temperature Controller (FTC6) with Main Controller and Temperature Sensors, Pumps and 3-Way Valve for Zone 1 and DHW use, Flow Sensor, Plate Heat Exchanger, Scale Trap, Booster Heater and Expansion Vessel.

*3 Ecodan Maximum temperature 60°C. Limited to 55°C max. when used with PUMY-P outdoor unit.





Black Diamond Technologies and Mitsubishi Electric – an Exclusive Partnership Since 1981

The Mitsubishi Electric Product Range has been exclusively distributed by 100% locally Owned and Operated Black Diamond Technologies Limited for over 40 years in New Zealand.

The combination of an internationally trusted brand with the comfort of a locally owned and operated company means that you will always get the best products, the best local service and the best local support.

Based in Wellington with a further 4 support offices throughout New Zealand, Black Diamond Technologies Limited is here to help.

Our Vision – Creating New Zealand’s Sustainable Future

Black Diamond Technologies Limited in partnership with Mitsubishi Electric, strives to develop and introduce new technologies for New Zealanders that will make lives more comfortable while also creating a greener tomorrow.

Our Nationwide Trained Specialist Installation Network

Mitsubishi Electric Heat Pumps are installed through an extensive network of trained specialist dealers. This ensures you are supported with a superior level of product and installation quality.

Full 5 Year Warranty

Every Ecodan Air Source Heat Pump comes with a full 5 year warranty as standard, subject to the following conditions:

- The Ecodan purchase and installation is registered with BDT.
- The Ecodan must be installed and commissioned by a trained BDT installer.



For more information please visit our website
or call our Customer Service Team.
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PLEASE LOOK AFTER THE ENVIRONMENT AND RECYCLE



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