


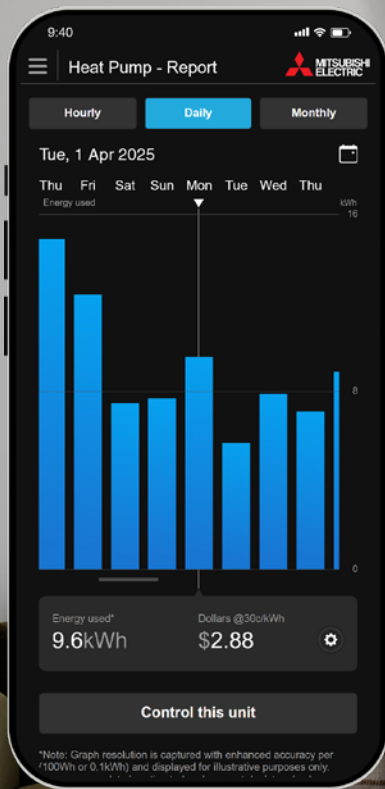
# LN Black Diamond Smart<sup>+</sup> Series

Personalised Comfort Redefined



Our most intelligent,  
energy-saving heat pump yet.

  
energy  
MONITORING



New Zealand's Most Trusted Heat Pump



# LN Black Diamond Smart Series



The LN Black Diamond Smart Series sets the new standard in personalised comfort and style. Available in three reflective colours, the range is packed with advanced features including Plasma Quad Plus Filtration ideal for allergy sufferers, the 3D i-See Sensor for customised heating or cooling and Built-in Wi-Fi Control Energy Monitoring!



## Reflect Your Design Personality

Featuring a striking flat panel design, the Black Diamond Smart Series is available in three unique reflective colour finishes – White Diamond, Red Diamond and Black Diamond, that change depending on the light in the room.

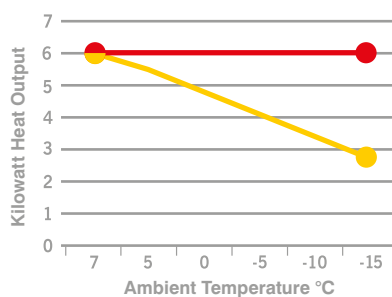
Now you can make a real interior design style statement with your heat pump colour choice.

## Optional HyperCore

The Black Diamond Smart Series are available with optional HyperCore Technology.

While ordinary heat pumps produce less heat below 7°C, Mitsubishi Electric HyperCore Technology guarantees to continue to deliver its full rated heating capacity right down to -15°C, so you stay warm when you need it most.

**Ambient Temperature vs Heat Delivery**



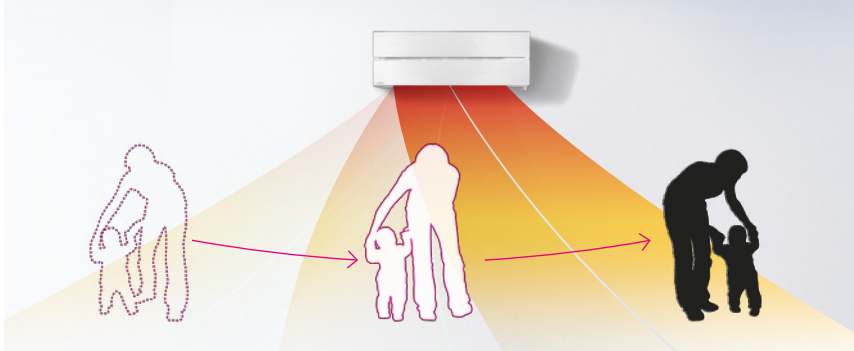
● MSZ-LN50 HyperCore® 6kW Heating High Wall Heat Pump
 ● STANDARD Inverter 6kW Heating High Wall Heat Pump



**HYPERCORE**

## 3D i-See Sensor

The 3D i-See Sensor detects the presence and position of people in the room using thermal heat recognition, adjusting the temperature and airflow pattern for optimal comfort. This helps the Black Diamond Smart Series do more than simply save energy, it also enables a new level of truly personalised comfort to be achieved.



You always feel warm and comfortable as the direct heat follows you as you move around the room.

### Thermal Scan Technology

The 3D i-See Sensor continually takes a thermal scan of the room, dividing it into 752 three-dimensional zones and measuring the temperature in each zone to detect exactly where people are in a room.

## Independently Controlled Dual Split Vane Airflow

### Intuitively Adjusts the Airflow Direction to Where it's Needed

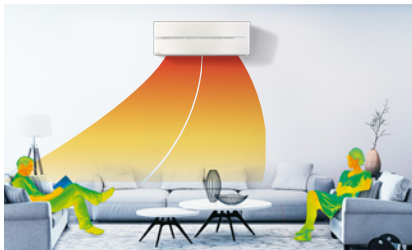
The 3D i-See Sensor works in conjunction with the Dual Split Vanes to provide heating or cooling to where it is needed most. As a result, it can save energy by not heating or cooling areas that don't require it. Whether you prefer direct, indirect or evenly distributed airflow, the 3D i-See Sensor and Dual Split Vanes provide the ultimate in customisable airflow.

### You'll Never Feel Cold

The 3D i-See Sensor can recognise movement of an individual in a room and subsequently direct the airflow with the Dual Split Vanes; so they continue feeling warm no matter where they have moved to in the room.

### Comfort for All With Multiple Airflow Directions

The 3D i-See Sensor can identify multiple people present in the room and adjust the Dual Split Vanes to direct heating or cooling evenly throughout; so everybody feels comfortable in the room.



Only one occupant feels direct heat.



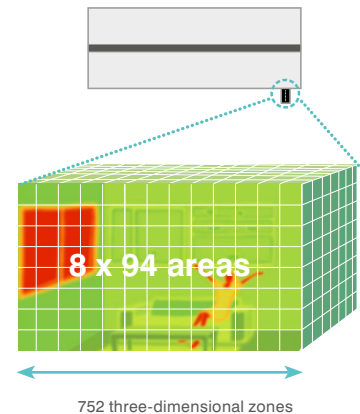
With Dual Split Vanes both occupants feel direct heat.

### Even Airflow – Airflow Only Where You Need It

With Even Airflow Mode, the 3D i-See Sensor memorises people's movements and furniture positions, efficiently distributing airflow only to where it is needed.

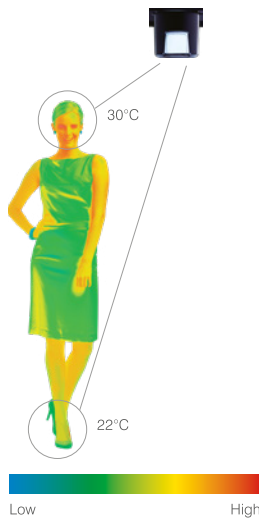


8 sensors measure while moving left to right



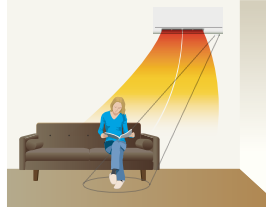
752 three-dimensional zones

# LN Black Diamond Smart Series

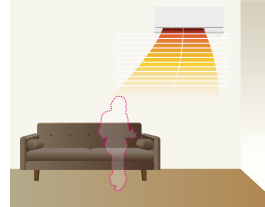


## Energy Saving No Occupancy Modes

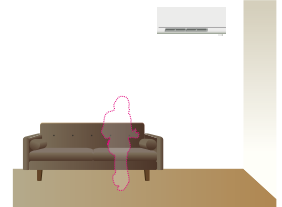
The 3D i-See Sensor detects whether or not there are people in the room, and automatically switches to one of the No Occupancy Modes, as set by the user.



The 3D i-See Sensor continuously scans the room for occupants.



In Energy Saving Mode – power is reduced when you leave the room.



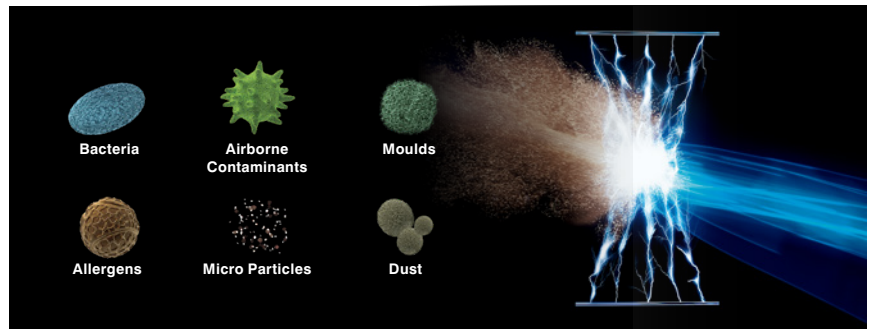
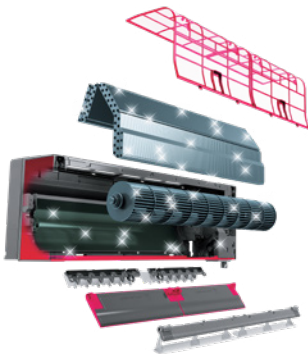
In Auto-Off Mode – unit switches off when you leave the room.

In No Occupancy Energy Saving Mode when no one is in the room, the unit automatically reduces power consumption by approximately 10% after 10 minutes, and 20% after 60 minutes. In No Occupancy Auto-Off Mode, when no one is in the room, the unit turns off automatically.

## Advanced Plasma Quad Plus Filtration

The advanced Plasma Quad Plus Filtration System, featuring high-performance two stage plasma technology, filters the air to clean away viruses such as Covid-19\* as well as smells, dust, moulds and other common household allergens.

The Two Stage Plasma Quad Plus Filter works like an electrical curtain, using an electrical discharge to catch and neutralise even microscopically small particles in the air. In fact, it can even capture PM2.5 particles (that's up to 30 times smaller than the width of a human hair!).



Independent test results confirm that the Plasma Quad Filtration System achieves extremely high reduction results in the removal of allergen, mould, bacteria and airborne contaminants in the room. Providing up to 98.8% effectiveness of removing airborne Covid-19\* particles too, it's the ultimate peace of mind for ensuring a healthier, cleaner living environment.



## Superior Energy Efficiency

Black Diamond Smart Series Heat Pumps are some of the most energy efficient heat pumps available in New Zealand.

This high energy efficiency is achieved by incorporating a large, high-density heat exchanger, an advanced high-efficiency fan motor and a next-generation compressor using the latest in super efficient R32 refrigerant.

\* PQC Electrode Collection Plate, Test Chamber Lab – Test No. 20KB070569, Microbial Testing Laboratory Kobe Testing Center Japan Textile Products Quality and Technology Center.

^ Such as Influenza A virus A/Aichi/2/68 (H3N2) - tested in a 25m<sup>2</sup> room by Virus Research Center, Sendai Medical Center, National Hospital Organisation according to JEM 1467.

# Black Diamond Smart

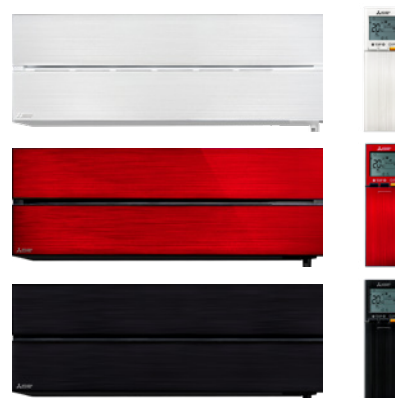
## Dual Barrier Coating Maximises Efficient Performance



The patented and world's first Dual Barrier Coating from Mitsubishi Electric prevents dust and dirt from accumulating on the inner surface of the indoor unit; keeping your heat pump clean year-round.

Keeping key internal components like the heat exchanger, fan and internal duct clean is important for both home comfort and efficiency. Not only does dust and dirt build-up typically create unpleasant odours, it also forces a heat pump to work harder, which can result in significantly impaired energy efficiency.

Dual Barrier Coating prevents dust and oil build-up on the interior of the heat pump for the ultimate in peace of mind, ease and comfort.



Dimensions (WxDxH): 890 x 233 x 307mm

### MSZ-LN25VGDV/B/R†

Heating Capacity: 3.2 kW | Cooling Capacity: 2.5 kW

### MSZ-LN35VGDV/B/R†

Heating Capacity: 4.0 kW | Cooling Capacity: 3.5 kW

### MSZ-LN50VGDV/B/R†

Heating Capacity: 6.0 kW | Cooling Capacity: 5.0 kW

### MSZ-LN60VGDV/B/R†

Heating Capacity: 6.8 kW | Cooling Capacity: 6.1 kW

† HyperCore option available.

## More Environmentally Friendly R32 Refrigerant



With a global warming potential that is 30% lower compared to older refrigerants such as R410A, next-generation R32 refrigerant has a much lower environmental impact. Furthermore, zero ozone depleting R32 is easier to reuse and recycle.

## Blue Fin Coating – Built to Withstand the Elements



The heat exchanger of the outdoor unit has been treated with Blue Fin Anti-Corrosion Treatment, slowing the corrosion process caused by salt and sulphur in the air especially in coastal and high sulphur areas.

## Quiet Operation



Black Diamond Smart indoor units feature Silent Mode – a fan speed setting that provides quiet operation as low as 19dBA\* so you will feel the warmth, not hear it.



## 7-Day Programmable Controller



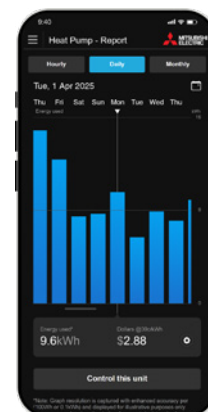
All Black Diamond Smart Series Heat Pumps feature a built-in weekly timer, allowing you to program up to four time and temperature settings for each day of the week. You can now return to comfort without having to manually adjust the temperature. Perfect for anyone with a busy lifestyle, the 7-Day Controller is a great way to regulate your energy usage without compromising on comfort.

## Built-in Wi-Fi Control Energy Monitoring



With Built-in Wi-Fi Control you can pre-heat or cool a room no matter where you are. On the way home, running late, coming home early, or even when you're in a different country, with Wi-Fi Control you'll always arrive home to total comfort.

The intuitive App also features Energy Monitoring, allowing you to track indicative energy use so you can make more energy efficient choices when heating and cooling your space.



\* LN 25/35 indoor sound level on the lowest fan setting.

# LN Black Diamond Smart Series Specifications

QUICK GLANCE	TYPE		High Wall System																			
	SERIES		LN Black Diamond Smart Series								LN Black Diamond Smart Series with HyperCore											
	MODEL		MSZ-LN25		MSZ-LN35		MSZ-LN50		MSZ-LN60		MSZ-LN25HZ		MSZ-LN35HZ		MSZ-LN50HZ		MSZ-LN60HZ					
	REFRIGERANT		R32																			
INDOOR UNIT		MSZ-LN25VGD		MSZ-LN35VGD		MSZ-LN50VGD		MSZ-LN60VGD		MSZ-LN25VGD		MSZ-LN35VGD		MSZ-LN50VGD		MSZ-LN60VGD						
OUTDOOR UNIT		MUZ-LN25VGD		MUZ-LN35VGD		MUZ-LN50VGD		MUZ-LN60VGD		MUZ-LN25VGHZ2		MUZ-LN35VGHZ2		MUZ-LN50VGHZ2		MUZ-LN60VGHZ2						
COOL		2.5kW 5.10 EER 19 dBA*		3.5kW 4.27 EER 19 dBA*		5.0kW 3.62 EER 27 dBA*		6.1kW 3.59 EER 29 dBA*		2.5kW 5.10 EER 19 dBA*		3.5kW 4.27 EER 19 dBA*		5.0kW 3.62 EER 27 dBA*		6.1kW 3.59 EER 29 dBA*						
HEAT		3.2kW 5.33 COP 19 dBA*		4.0kW 4.88 COP 19 dBA*		6.0kW 4.05 COP 25 dBA*		6.8kW 3.89 COP 29 dBA*		3.2kW 5.33 COP 19 dBA*		4.0kW 4.88 COP 19 dBA*		6.0kW 4.08 COP 25 dBA*		6.8kW 3.89 COP 29 dBA*						
ZERL STAR RATINGS		(NZ) Cold Area		5.0		3.0		4.5		3.0		3.5		2.0		3.0		2.0				
		Avg Area†		4.5		3.5		4.0		3.5		3.5		2.5		3.0		2.5				
		Hot Area‡		5.0		4.0		4.5		3.5		3.0		3.0		5.0		4.0				
COOL	Capacity	Rated	[kW]	2.5		3.5		5.0		6.1		2.5		3.5		5.0		6.1				
		Min-Max	[kW]	1.0 - 3.5		0.8 - 4.0		1.0 - 6.0		1.4 - 6.9		0.8 - 3.5		0.8 - 4.0		1.4 - 5.8		1.4 - 6.9				
	Total Input	Rated	[kW]	0.49		0.82		1.38		1.70		0.49		0.82		1.38		1.70				
		EER/AEER		5.10 / 5.07		4.27 / 4.25		3.62 / 3.61		3.59 / 3.58		5.10 / 5.07		4.27 / 4.25		3.62 / 3.61		3.59 / 3.58				
	Indoor Sound Level	Quiet	[dBA]	19		19		27		29		19		19		27		29				
		Low-SHi‡	[dBA]	23-29-36-42		24-29-36-43		31-35-39-46		37-41-45-49		23-29-36-42		24-29-36-43		31-35-39-46		37-41-45-49				
	Running Current (Rated)	[A]	2.7		3.8		6.3		7.8		2.5		3.8		6.3		7.8					
	Air Volume In (SHi†)	[L/s]	207		217		232		262		207		217		232		262					
HEAT	Capacity	Rated	[kW]	3.2		4.0		6.0		6.8		3.2		4.0		6.0		6.8				
		Min-Max	[kW]	0.7 - 5.4		0.9 - 6.3		1.0 - 8.2		1.8 - 10.0		0.8 - 6.3		0.9 - 7.0		1.8 - 9.0		1.8 - 10.0				
		@-15°C	[kW]	-		-		-		-		3.2		4.0		6.0		6.8				
	Total Input	Rated	[kW]	0.60		0.82		1.48		1.75		0.60		0.82		1.47		1.75				
		COP / ACOP		5.33 / 5.30		4.88 / 4.86		4.05 / 4.04		3.89 / 3.88		5.33 / 5.30		4.88 / 4.86		4.08 / 3.99		3.89 / 3.88				
	Indoor Sound Level	Quiet	[dBA]	19		19		25		29		19		19		25		29				
		Low-SHi‡	[dBA]	24-29-38-45		24-29-38-45		29-35-43-47		37-41-45-49		24-29-38-45		24-29-38-45		29-35-43-47		37-41-45-52				
	Running Current (Rated)	[A]	3.4		3.8		6.8		7.9		3.0		3.8		6.8		7.9					
Air Volume In (SHi†)	[L/s]	232		232		255		262		232		232		255		307						
Controller	Standard		Premium LN 7-Day Programmable Controller																			
	Optional Wired 7-Day Timer		Optional: PAR Controller (Interface Required)																			
Wi-Fi			Built-in with Energy Monitoring																			
Power Supply	(Powered From Outdoor Unit)		230 V / Single Phase / 50 Hz																			
	Maximum Current	[A]	7.1		9.9		13.8		15.2		9.9		10.5		15.1		15.2					
Indoor	Dimensions (WxDxH)		890 x 233 x 307																			
	Weight	[kg]	15.5				16.0				15.5				16.0							
Outdoor	Dimensions (WxDxH)		800 x 285 x 550				800 x 285 x 714				840 x 330 x 880				800 x 285 x 550				840 x 330 x 880			
	Weight	[kg]	33		34		40		53		34		53		33		34					
	Sound Level - SPL <sup>3</sup> /Power (Cooling-Heating)	[dBA]	46-49 / 60-61		49-50 / 61-62		51-54 / 64-66		55-55 / 65-69		46-49 / 60-61		49-50 / 61-62		51-54 / 64-66		55-55 / 65-69					
Piping	Diameter (Liquid/Gas)		6.35 / 9.52				6.35 / 12.7				6.35 / 9.52				6.35 / 12.7							
	Max. Length/Height†		20 / 12				30 / 12				30 / 15				20 / 12				30 / 15			
	Chargeless Piping Length		10				15				7				10				7			
Operation Range Outdoor	Cooling		[°C] -10 / +46																			
	Heating		[°C] -15 / +24																			
Indoor Unit Colour			Black Diamond / Red Diamond / White Diamond																			

ZERL = Zoned Energy Rating Label  
 EER = Energy Efficiency Ratio  
 COP = Coefficient of Performance  
 AEER = Annual Energy Efficiency Ratio  
 ACOP = Annual Coefficient of Performance  
 SPL = Sound Pressure Level  
 † SHi = Super High  
 ‡ Low-SHi = Low-Medium-High-Super High  
 § SPL measured under rated operating frequency

\* Indoor Sound Levels rated at lowest fan speed.  
 † Maximum length is inclusive of height differential i.e. (20/12) means the pipe can be 12m high and 8m across for a total length of 20m.  
 ‡ Avg/Hot are Australia only.  
 Rating Conditions (AS / NZS 3823).  
 Cooling: Indoor: 27°C DB, 19°C WB. Outdoor: 35°C DB.  
 Heating: Indoor: 20°C DB Outdoor: 7°C DB, 6°C WB.



Learn more about the Black Diamond Smart Series

For more information please visit our website or call our Customer Service Team.  
[www.mitsubishi-electric.co.nz](http://www.mitsubishi-electric.co.nz) | 0800 784 382

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PLEASE LOOK AFTER THE ENVIRONMENT AND RECYCLE



Black Diamond Technologies Limited



Exclusive New Zealand Partner Since 1981

