

# HITACHI

HEAT PUMPS

thinking of you

## Residential Heat Pumps

Wall & Floor Mounted Inverter Heat Pumps



6 Year  
Warranty

Air  
Purifying  
Filters

Quiet

Heat  
and  
Cool

Energy  
Efficient



## Hitachi Heat Pumps

Hitachi were thinking of you when they developed their heat pumps to provide exceptional heating and cooling comfort, easy operation, substantial power savings and full control for homes, apartments, shops, offices and small buildings.

The latest range of heat pumps demonstrate Hitachi's technological leadership, with quiet operation, high efficiency and simple controls all wrapped up in smart, compact units.





thinking of you

# HITACHI

## HEAT PUMPS

*thinking of you*

### Thinking Of You

Hitachi were thinking of you when they developed their latest line of Hitachi Heat Pumps. You can rest assured with an Hitachi Heat Pump your family's comfort and health as well as your own peace of mind have been taken into full consideration.

6 Year  
Warranty

#### 6 Year Warranty

Temperzone Ltd, established in 1956, distributes Hitachi Heat Pumps throughout NZ and is NZ's largest air conditioning manufacturer and exporter. Hitachi Heat Pumps from temperzone have a 6 year warranty on all parts and labour - NZ's longest. It's a comfort to know this Kiwi company confidently guarantee's the quality of their products.

Heat  
and  
Cool

#### Heats and Cools

Hitachi Heat Pumps have been designed to keep you comfortable all year round. They provide both heating and cooling so you get cosy comfortable heating in Winter, and refreshing cooling in Summer allowing you to escape from the heat of the day or sleep peacefully at night.

#### Dehumidify

Using cooling or 'Dry Mode' Hitachi Heat Pumps are designed to reduce the humidity in the air keeping your house dry and comfortable.

#### Comfort Control

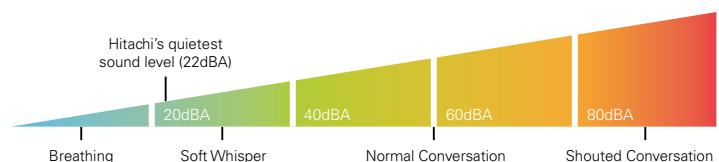
At the touch of a button Hitachi Heat Pumps are designed to ensure you maintain an exact temperature with an even temperature distribution right throughout the room.



## Quiet

### Whisper Quiet

Hitachi Heat Pumps are quiet. The quietest in our range has a sound level of only 22dBA in it's lowest mode (that's quieter than a soft whisper). Your heat pump will operate between low and medium fan speed most of the time. This is where it's very important to be quiet and where Hitachi Heat Pumps excel.



## Air Purifying Filters

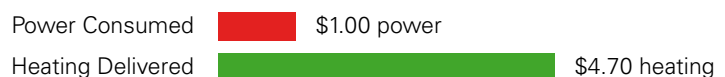
### Air Filtration

Hitachi's durable stainless steel pre-filter removes larger dust particles, followed by a cutting edge Nano Titanium air purifying filter with anti-bacterial Silver agents which catch and neutralise germs, bacteria, allergens, mould and odour molecules.

## Energy Efficient

### Energy Efficient

Hitachi heat pumps maintain low running costs by providing more heating or cooling energy than they use. For every 1.0kW of electricity used, as much as 4.7kW heating and 4.5kW cooling can be delivered. So for every \$1.00 you spend on power you can receive as much as \$4.70 heating in return.





## Hitachi Inverter Split Systems

In a climate as diverse as New Zealand's you need a reliable temperature control system that responds to the environment quickly and efficiently. The Hitachi Inverter Wall and Floor Split System heat pumps have been designed to offer the best possible efficient and effective comfort at the touch of a button, even under extreme outside temperatures.

Selecting a suitable system is key to maximising performance, optimising comfort and minimising energy consumption. Hitachi's range of heat pumps offer superior filtration and effective distribution of clean air – maintaining comfortable temperature throughout the room.

## Energy Star

This voluntary, international endorsement mark enables consumers to identify which models are the most energy efficient.

Because some heat pumps struggle to work effectively when the weather is very cold, winter performance of heat pumps has recently been included in the Energy Star requirements. This means that a heat pump has been tested and works well at 2°C.

Hitachi Heat Pumps are designed to meet NZ's stringent Energy Star performance criteria.

Refer pages 12 and 13 for specification tables

\*RAS-60YHA3 not Energy Star



RAF-35NXA1 RAF-50NXA1



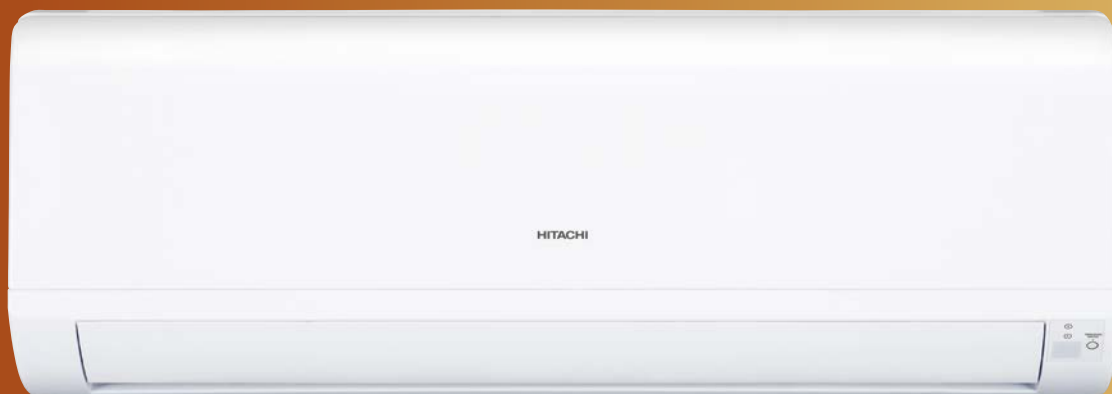
RAS-25YHA4 RAS-35YHA5



RAS-50YHA3 RAS-60YHA3\*



RAS-70YHA3 RAS-80YHA3



## You'll find an Hitachi to suit your home



Room Size (m<sup>2</sup>)    Average NZ Room Type

<b>10</b>	Single Bedroom	RAS-25	RAS-25	RAS-25
<b>15</b>	Double Bedroom	RAS-25	RAS-25	RAS-25
<b>20</b>	Large Double Bedroom	RAS-25	RAS-25	RAS/RAF-35
<b>25</b>	Small Lounge / Family	RAS/RAF-35	RAS/RAF-35	RAS/RAF-35
<b>30</b>	Average Lounge	RAS/RAF-35	RAS/RAF-35	RAS/RAF-50
<b>35</b>	Average Lounge	RAS/RAF-50	RAS/RAF-50	RAS-60
<b>40</b>	Large Lounge	RAS/RAF-50	RAS-60	RAS-60
<b>45</b>	Large Lounge	RAS-60	RAS-60	RAS-70
<b>50</b>	Open Plan Space	RAS-60	RAS-70	RAS-80
<b>55</b>	Open Plan Space	RAS-70	RAS-80	RAS-80
<b>60</b>	Large Open Plan Space	RAS-70	RAS-80	
<b>65</b>	Large Open Plan Space	RAS-80		
<b>70</b>	Large Open Plan Space	RAS-80		

Sizes are a guide only and based on a moderate to well insulated house with an average percentage of window area for the room type and a ceiling height of 2.7m max. The final selection must be verified by the installation contractor.

RAC-25YHA4  
RAC-35YHA5  
RAF-35NXA1



RAC-50YHA3  
RAC-60YHA3  
RAF-50NXA1



RAC-70YHA3  
RAC-80YHA3



# Clean air for your family

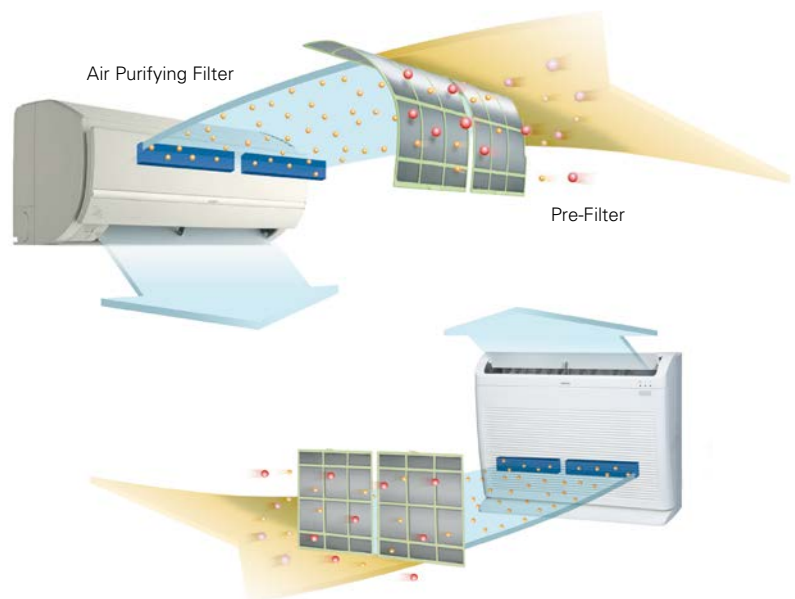
thinking of **you**

## Nano Titanium Air Purifying Filter

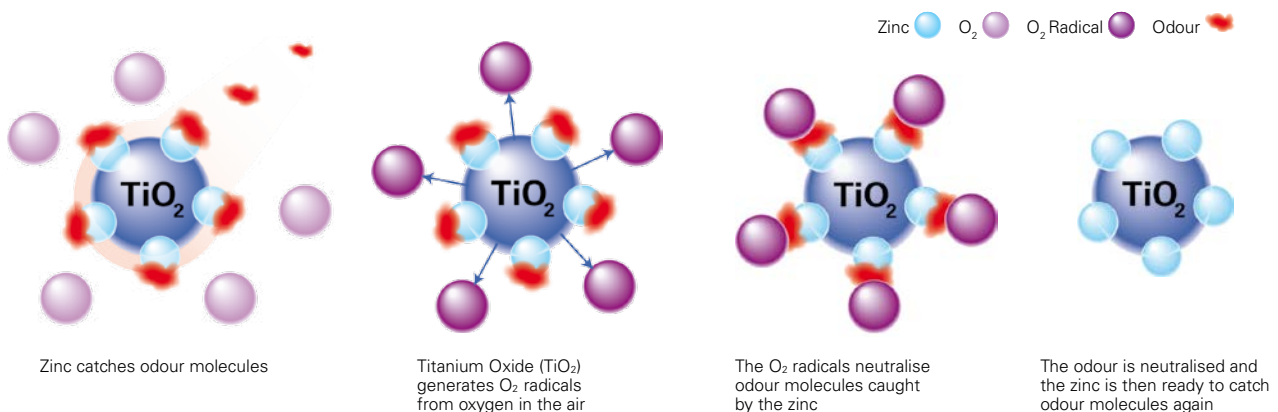
### Shuts out germs, bacteria and allergens.

Nano Titanium particles are minute particles that catch and neutralise bacteria, mould and odour molecules which are approximately 1,000 times larger.

The Air Purifying Filter uses both these incredibly small nano titanium particles and anti-bacterial Silver Agents to trap and eliminate microbes as well as neutralise allergens and remove harmful substances such as formaldehyde.



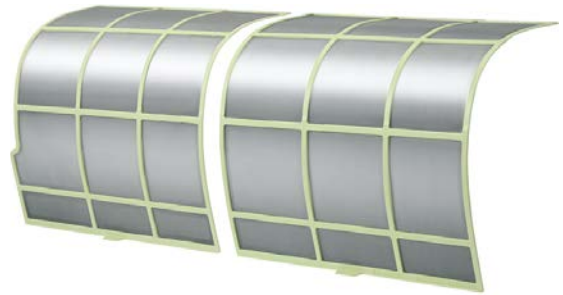
## Principle of Nano Titanium's Action



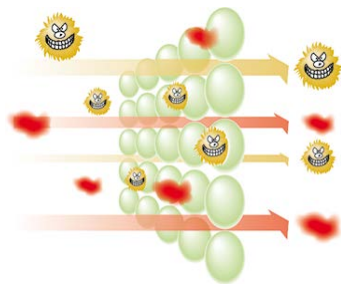
## Nano Titanium Pre-Filter

The durable stainless steel pre-filter which covers the entire air inlet to stop dust and other particles from entering is also coated with nano titanium.

The two-stage action of nano titanium in both the pre-filter and the purifying filter ensures that bacteria and odours are removed from the air.



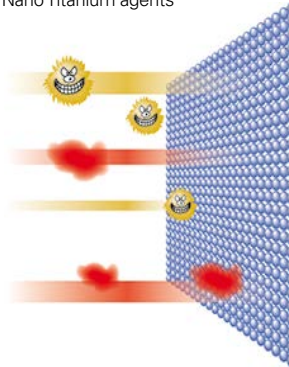
Conventional antibacterial agents



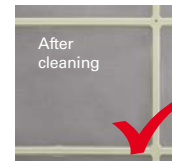
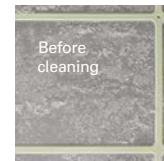
Bacteria  Odours 

High density Nano Titanium particles prevent microbes from getting through and eliminate them efficiently.

Nano Titanium agents

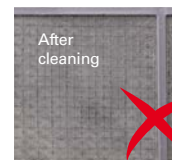
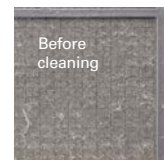


Hitachi Nano Titanium Stainless filter



A single wipe removes dust

Conventional filter



Dust remains trapped in the mesh

## Deactivation Effect

### Sample: Escherichia coli.

Bacteria (sample Escherichia coli) is **deactivated by 99%** in 24 hours.

(Tested by SIRIM QAS International Sdn, Bhd. Report No: 2004KLO100).



Before deactivation



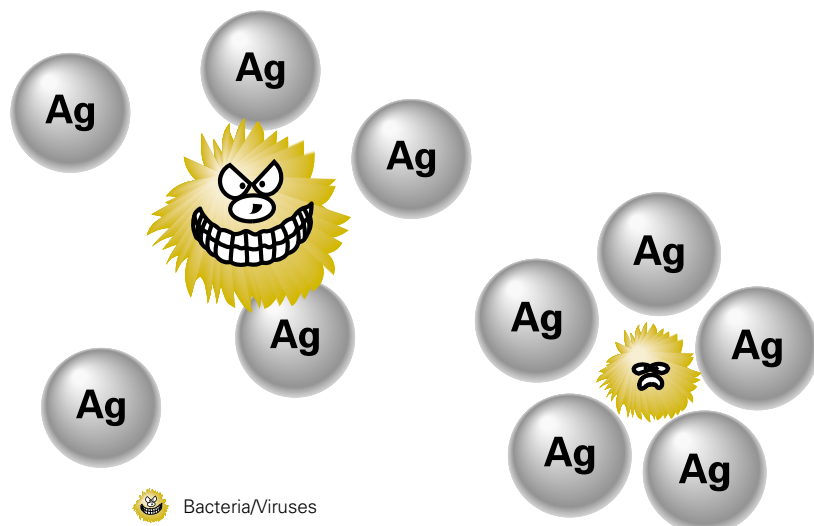
After 24 hours

## Silver Action

### Silver Agents.

Silver agents are also included in the air purifying filter to efficiently catch and deactivate bacteria.

Using the action of the nano titanium catalyst which is 1/200 the size of regular antibacterial and silver agents, the Nano Titanium Air Purifying Filter effectively captures and neutralises microbes to provide powerful room deodorising.



# Comfort in your home

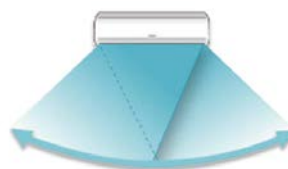
thinking of you

## Totally Safe...

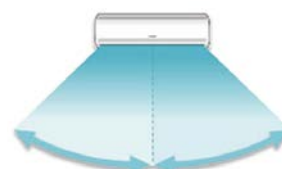
Even when you are not at home. There are no ugly electric cords on the floor to trip over, no flammable fluids, no fumes and no dangerous hot elements that can harm your family or pets.

## Wall to Wall Comfort

Hitachi models have a two-way air flow system for efficient air distribution. The louvres not only move up and down automatically, but also left and right\*. This action and the design of the directional air flow flap, minimises air resistance and ensures the air is dispersed evenly to maintain the temperature throughout the whole room.



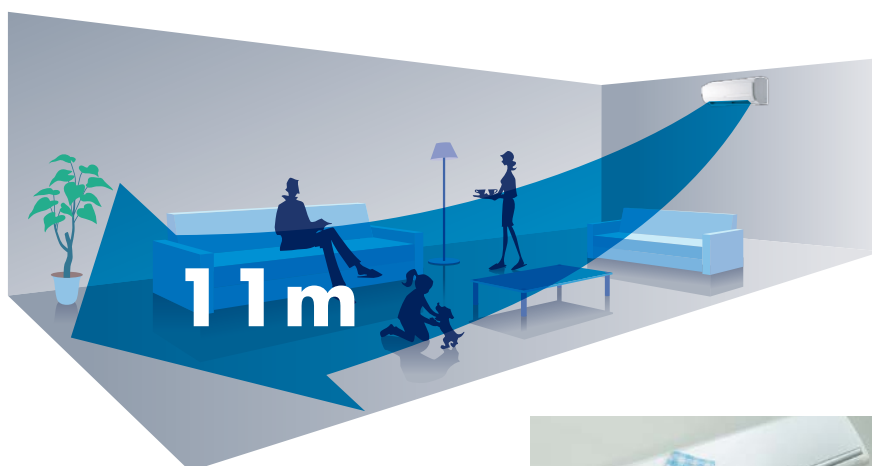
Parallel Swing\*



Symmetry Swing\*

## Long Air Flow Reach\*

The Parallel and Symmetry Auto Swing modes maximise air flow. This means a comfortable room temperature is reached more quickly.



## Easy to Clean

The front panel on all Hitachi air conditioning units can be cleaned with a single wipe or detached for a complete wash.



\*Auto applicable to RAS-70YHA3 and RAS-80YHA3 models

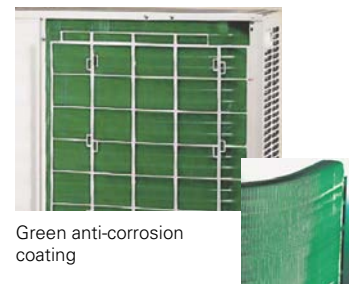
## Fuzzy Logic Control

The built in microcomputer takes account of previous and current conditions and sets the advanced activation timer to provide the optimum temperature. This control system automatically provides optimal cooling or heating operation by using a combination of indoor/outdoor sensors and room temperature settings, to adjust the room temperature quickly and efficiently.

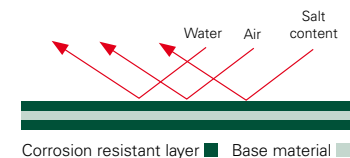
## Outdoor Durability

With its special anti-corrosion “green” coating, the Green Fin Condenser lasts up to three times as long as standard types. This coating on the outdoor heat exchanger ensures better performance and improves durability even in tough conditions such as coastal areas.

Models RAS-25YHA4 and RAS-35YHA5 have a transparent anti-corrosion treatment applied.



Green anti-corrosion coating



## Low Starting Current and Auto Restart

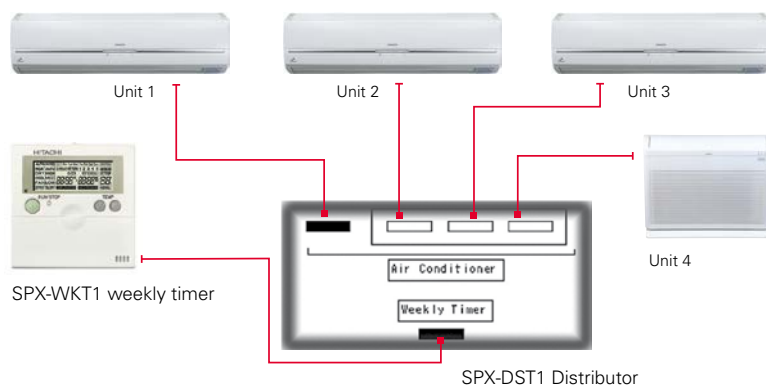
Hitachi Inverter technology uses a low starting current, to minimise power usage at start up. For convenience, Hitachi heat pumps are able to memorise the precise operation mode, air flow, temperature and timing settings. If there is a power cut, settings will automatically reset to the original operating mode once power is restored.

## LCD Remote System Controllers

The handy infrared remote control allows you to accurately select the desired room temperature from the comfort of your armchair. All commands are shown clearly on the LCD display. A smart system of one touch buttons can create the perfect environment with ease.

The new SPX-WKT1 Weekly Timer is an optional extra. It is particularly useful in offices with several units. It offers 5 different programs for each calendar day with start and end times and temperature control. You can customise settings for “Weekly Program,” say to turn off in the weekend but override with the “Temporary Operation Mode” if necessary.

There is a choice of 5 fan settings: Auto/High/Medium/Low/Ultra Low (Sleep)



SPX-WKT1 Weekly Timer – featuring remote functions

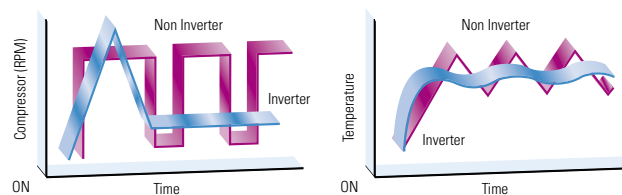
Optional multiple units control using single Weekly Timer with Distributor

# Efficient and Green

thinking of you

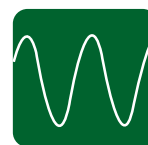
## Power Saving

Inverter technology allows a room to reach the required temperature more rapidly, offering up to 30% more efficiency and also eliminates the stop-start operation used by constant speed systems. Hitachi Inverters adjust (increase/decrease) the speed of the compressor to an energy saving mode in order to maintain the desired temperature.

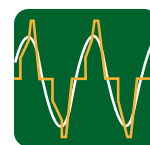


## PAM System

The Hitachi Power Active Model (PAM) Inverter System suppresses electrical distortion to minimise power losses to less than 1%. Heating performance is particularly improved to ensure efficient performance even when the ambient temperature is -15°C.



PAM Inverter



Conventional Converter

These performances are based on RAS/RAC-X18CX

## High Efficiency Fan

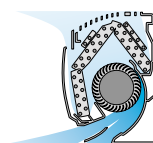
The elegant, compact "Full Flat" fascia panel draws air through the top of the unit and diagonally across the heat exchanger, this combined with the simple yet highly efficient conical shape fan, using tangential blade design, means that air is carried through the panel more efficiently, covering a wider area and in near silence.



Anti-bacterial treated tangential fan

## High Efficiency Heat Exchanger

The advanced design of the multi-dimensional Heat Exchanger allows for a wider air inlet path across the heat exchanger to optimise heat transfer.



## Multiple Rooms, One Outdoor Unit

### Multizone

An Hitachi Multizone system is a heat pump that combines one outdoor unit with multiple indoor units and is an effective and economical way of air conditioning up to six rooms.

Multizone is ideal if you would like to provide heating and cooling to your living room and a number of the bedrooms.

### Multizone Flexibility

Different types of indoor units (wall mounts, cassettes and concealed bulkheads) of varying heating and cooling capacity allow you to customise your system to suit each room's size and shape.

One outdoor unit combines with multiple indoor units and saves outside space.



Download the brochure at  
[www.hitachiheatpumps.co.nz](http://www.hitachiheatpumps.co.nz)

## Desirable Concealed Air Conditioning

### DuctEZY

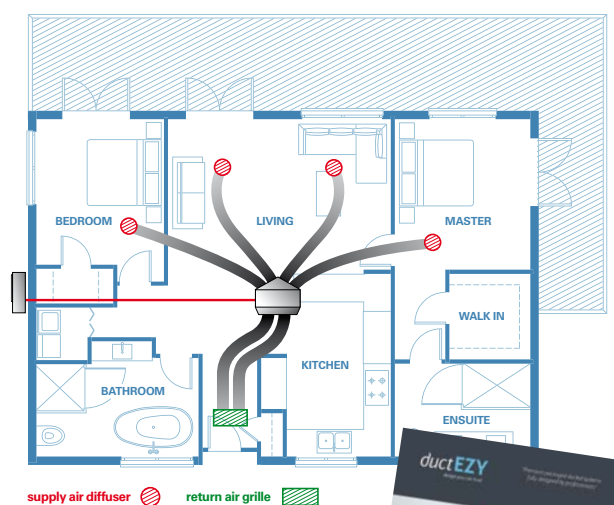
DuctEZY is a ready designed, premium ducted air conditioning package. Now you can afford quality home or office ducted air conditioning without the additional cost of a custom designed system.

DuctEZY is luxury air conditioning that is neither seen or heard with air diffusers discreetly situated within your home and installed sound levels better than equivalent capacity wall mounted heat pumps.

### Design You Can Trust

Designing a ducted system is a specialised and very technical process. DuctEZY takes away the need for this by providing a pre-designed package complete with a specifically engineered duct kit designed to achieve optimum performance.

**ductEZY**  
design you can trust



Download the brochure at  
[www.hitachiheatpumps.co.nz](http://www.hitachiheatpumps.co.nz)



## Wall Mounted Specification Table

Note: Features and technical specifications indicative only



Model: Indoor Unit	RAS-25YHA4	RAS-35YHA5	RAS-50YHA3	RAS-60YHA3	RAS-70YHA3	RAS-80YHA3
Model: Outdoor Unit	RAC-25YHA4	RAC-35YHA5	RAC-50YHA3	RAC-60YHA3	RAC-70YHA3	RAC-80YHA3

### General Specifications

#### Capacity

Cooling Capacity (kW)	2.5	3.5	5.0	6.0	7.0	8.0
Cooling Range (kW)	1.0 ~ 3.2	1.1 ~ 4.2	0.9 ~ 5.8	0.9 ~ 6.8	1.5 ~ 8.3	1.5 ~ 8.5
Sensible Cooling (kW)	2.47	3.09	3.86	4.40	5.50	6.15
Heating Capacity (kW)	3.2	4.5	6.1	7.0	8.3	9.0
Heating Range (kW)	1.0 ~ 4.2	1.1 ~ 5.6	0.9 ~ 6.8	0.9 ~ 7.5	1.5 ~ 9.7	1.5 ~ 9.7
Dehumidifying Capacity (l/h)	1.4	1.6	2.8	2.8	4.8	4.8

#### Efficiency

Power Input kW (Cooling)	0.55	0.91	1.48	1.80	2.05	2.45
Power Input kW (Heating)	0.68	1.06	1.66	1.99	2.36	2.75
EER / AEER (Cooling)	4.55 / 4.44	3.85 / 3.73	3.38 / 3.31	3.33 / 3.28	3.41 / 3.36	3.27 / 3.22
COP / ACOP (Heating)	4.71 / 4.54	4.25 / 4.11	3.67 / 3.60	3.52 / 3.46	3.52 / 3.47	3.27 / 3.23
Star Rating Cool / Heat						

#### ENERGY STAR®



#### Air flow

Fan Speeds	4	4	4	4	4	4
Air Flow (l/s) Hi / Med / Low / UltraLow (Sleep)	153 / 112 / 83 / 55	158 / 147 / 92 / 55	227 / 173 / 117 / 87	250 / 183 / 133 / 121	292 / 242 / 167 / 142	350 / 242 / 225 / 203
Compressor Type	Rotary	Rotary	Twin Rotary	Twin Rotary	Twin Rotary	Twin Rotary

#### Dimensions & weights

Dimensions IU (H x W x D mm)	280 / 780 / 218	280 / 780 / 218	295 / 1030 / 207	295 / 1030 / 207	333 / 1150 / 245	333 / 1150 / 245
Weight IU (kg)	7.5	7.5	11	11	16	16
Dimensions OU (H x W x D mm)	548 / 750 / 288	548 / 750 / 288	650 / 850 / 298	750 / 850 / 298	800 / 850 / 298	800 / 850 / 298
Weight OU (kg)	33	38	45	50	52	52

#### Noise levels

Sound Pressure Level IU dB(A) (Hi / Med / Low / Sleep)	39 / 32 / 28 / 22	41 / 35 / 28 / 22	47 / 39 / 28 / 24	49 / 41 / 32 / 29	47 / 42 / 33 / 30	49 / 45 / 40 / 36
Sound Pressure Level OU (dB) Cool / Heat	47 / 48	47 / 48	50 / 52	50 / 51	51 / 53	55 / 55

#### Working range

Outdoor Operating Temp. (Cooling) °C db	43 to -10	43 to -10	46 to -10	46 to -10	46 to -10	46 to -10
Outdoor Operating Temp. (Heating) °C wb	21 to -15	21 to -15	21 to -15	21 to -15	21 to -15	21 to -15

#### Features

Nano Titanium Air Purifying Filter	Yes	Yes	Yes	Yes	Yes	Yes
Nano Titanium Pre-Filter - Stainless	Yes	Yes	Yes	Yes	Yes	Yes
Anti Corrosion Fin (O/U Coil)	Transparent	Transparent	Green	Green	Green	Green
Indoor Fan – Anti-Bacterial Coating	Yes	Yes	Yes	Yes	Yes	Yes
Multi-Directional Air Flow	–	–	–	–	Yes	Yes
PAM Control	–	–	Yes	Yes	Yes	Yes
All DC Inverter Control Indoor/Outdoor	Yes	Yes	Yes	Yes	Yes	Yes
Weekly Timer SPX-WKT1	Optional	Optional	Optional	Optional	Optional	Optional
Weekly Timer Distributor SPX-DST1	Optional	Optional	Optional	Optional	Optional	Optional

### Installer Specifications

#### Electrical

Power Supply	240 / 1	240/1	240/1	240/1	240/1	240/1
Phase / Hz	50	50	50	50	50	50
Mains Power Connection	OU	OU	OU	OU	OU	OU
Interconnecting Wires	2 + E, 1.5 mm	2 + E, 1.5 mm	2 + E, 1.5 mm	4 + E, 1.5 mm	4 + E, 1.5 mm	4 + E, 1.5 mm
Running Current (Cooling)	2.9	4.2	6.2	7.7	8.6	11.2
Running Current (Heating)	3.3	4.9	7.0	8.6	10.1	12.6
Recommended External Protection (Amps)	16	16	16	16	20	20

#### Installation

Refrigerant Type	R410A	R410A	R410A	R410A	R410A	R410A
Pipe Connection Sizes: Gas (mm) (in)	9.5 (3/8)	9.5 (3/8)	12.7 (1/2)	12.7 (1/2)	15.9 (5/8)	15.9 (5/8)
Pipe Connection Sizes: Liquid (mm) (in)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)
Max. Pipe Length (m) (min./max.)	3 / 20	3 / 20	3 / 30	3 / 30	3 / 30	3 / 30
Max. Height Difference (m)	10	10	10	20	20	20
Refrigerant Pipe Charge Length (m)	20	20	30	20	30	30
Pipe Connection Method	Flare	Flare	Flare	Flare	Flare	Flare

## Floor Mounted Specification Table

Note: Features and technical specifications indicative only







<b>Model: Indoor Unit</b>	<b>RAF-35NXA1</b>	<b>RAF-50NXA1</b>
<b>Model: Outdoor Unit</b>	<b>RAC-35NXA1</b>	<b>RAC-50NXA1</b>

### General Specifications

#### Capacity

Cooling Capacity (kW)	3.5	5.0
Cooling Range (kW)	1.1 ~ 4.2	1.1 ~ 5.2
Sensible Cooling (kW)	3.14	3.78
Heating Capacity (kW)	4.2	6.0
Heating Range (kW)	1.1 ~ 5.2	2.2 ~ 7.3
Dehumidifying Capacity (l/h)	1.6	2.0

#### Efficiency

Power Input kW (Cooling)	0.94	1.51
Power Input kW (Heating)	1.05	1.66
EER / AEER (Cooling)	3.72 / 3.74	3.31 / 3.29
COP / ACOP (Heating)	4.00 / 3.89	3.61 / 3.83
Star Rating Cool / Heat		
ENERGY STAR®		

#### Air flow

Fan Speeds	4	4
Air Flow (l/s) Hi / Med / Low / UltraLow (Sleep)	167 / 138 / 111 / 92	180 / 147 / 120 / 103
Compressor Type	Rotary	Rotary

#### Dimensions & weights

Dimensions IU (H x W x D mm)	600 / 760 / 235	600 / 760 / 235
Weight IU (kg)	14	14
Dimensions OU (H x W x D mm)	548 / 750 / 288	600 / 792 / 299
Weight OU (kg)	36	40

#### Noise levels

Sound Pressure Level IU dB(A) (Hi / Med / Low / Sleep)	42 / 35 / 29 / 25	46 / 37 / 30 / 25
Sound Pressure Level OU (dB) Cool / Heat	47 / 49	52 / 52

#### Working range

Outdoor Operating Temp. (Cooling) °C db	43 to -10	43 to -10
Outdoor Operating Temp. (Heating) °C wb	21 to -15	21 to -15

#### Features

Nano Titanium Air Purifying Filter	Yes	Yes
Anti Corrosion Fin (O/U Coil)	Transparent	Transparent
Indoor Fan – Anti-Bacterial Coating	Yes	Yes
Directional Air Flow	Yes	Yes
PAM Control	–	Yes
All DC Inverter Control Indoor/Outdoor	Yes	Yes
Weekly Timer SPX-WKT1	Optional	Optional
Weekly Timer Distributor SPX-DST1	Optional	Optional

### Installer Specifications

#### Electrical

Power Supply	240/1	240/1
Phase / Hz	50	50
Mains Power Connection	OU	OU
Interconnecting Wires	2C + E, 1.5 mm	2C + E, 1.5 mm
Running Current (Cooling)	4.8	6.2
Running Current (Heating)	4.9	7.0
Recommended External Protection (Amps)	16	16

#### Installation

Refrigerant Type	R410A	R410A
Pipe Connection Sizes: Gas (mm) (in)	9.5 (3/8)	12.7 (1/2)
Pipe Connection Sizes: Liquid (mm) (in)	6.35 (1/4)	6.35 (1/4)
Max. Pipe Length (m) (min./max.)	3 / 20	3 / 20
Max. Height Difference (m)	10	10
Refrigerant Pipe Charge Length (m)	20	20
Pipe Connection Method	Flare	Flare

NOTES: Cooling. Indoor: Rated at 27°C DB/19.0°C WB entering air; ambient: rated at 35°C DB.

Heating. Indoor: Rated at 20°C DB entering air; ambient: rated at 7°C DB/ 6°C WB. Mains power source AC 240V 50Hz.



thinking of you



Temperzone Ltd, a Kiwi company established in 1956, distributes Hitachi Heat Pumps throughout New Zealand and is the largest air conditioning manufacturer and exporter in Australasia. Hitachi Heat Pumps from temperzone have a 6 year warranty on all parts and labour\* - New Zealand's longest. It's a comfort to know temperzone confidently guarantee's the quality of these products.

\*Refer to Hitachi Warranty for full details

Your local Hitachi dealer: