Cooling Capacity 2.5kW - 8.0kW

Heating Capacity 3.2kW - 9.0kW

# Hitachi Inverter Wall Split Air Conditioning

Giving you complete control









# The fast way to enjoy cool or warm, clean air

Imagine being able to cool or heat a room quickly, economically and effectively.

Then imagine being able to ensure that the air is virtually 100% free of allergens and bacteria.

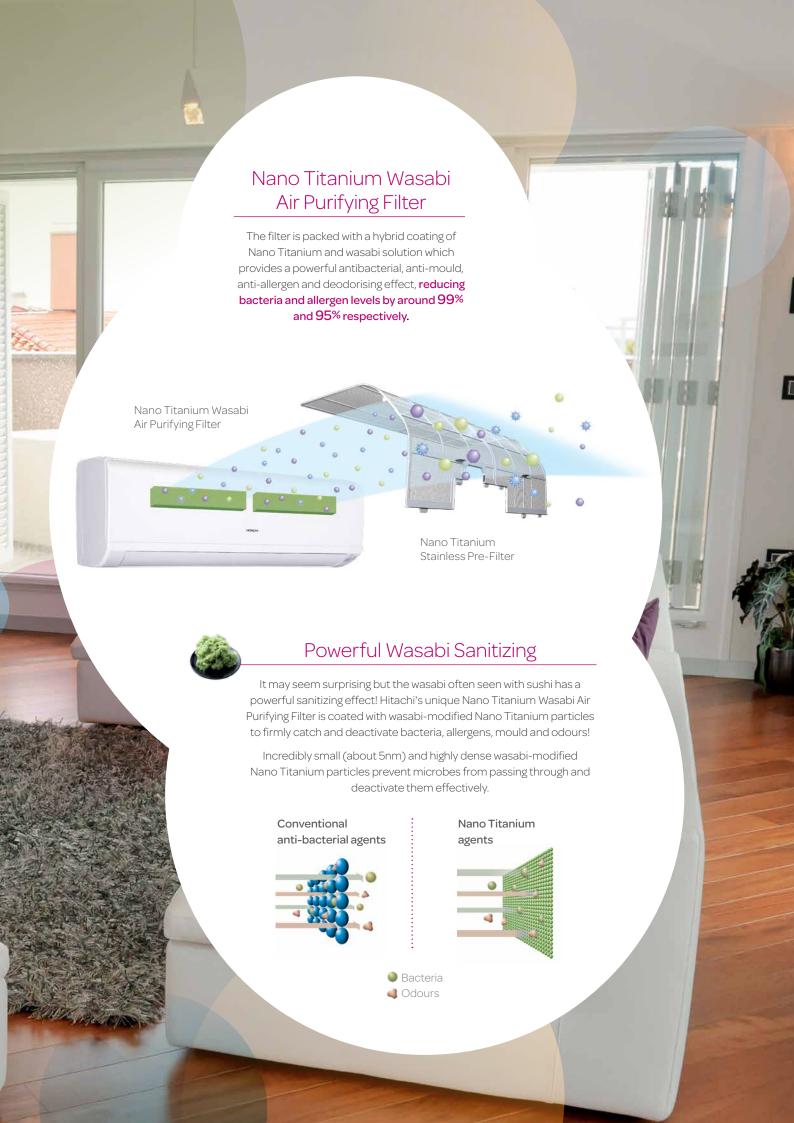
# Hitachi's innovative wall split range makes it all possible.

Boasting the ability to heat or chill a space 26% faster than any non-inverter alternative, this advanced system also enables precise temperature control and energy efficiency levels 50% greater than any conventional unit.

For those demanding only the purest air quality, Hitachi's wall splits feature a nano titanium stainless pre filter and a unique nano titanium wasabi air purifying filter which reduces bacteria and allergen levels by around 99% and 95% respectively.

Ranging in capacity from 2.5kW to 8kW, Hitachi's wall split range is the ideal choice for residential homes or commercial spaces.







# Why a Hitachi wall split is the quiet achiever

Hitachi wall split units can exert an almost instant effect in even the most challenging of summer or winter conditions.

While their high-speed cooling and heating capacity generates cool or warm air faster, a **multi-directional auto-swing** capacity makes it possible to simultaneously direct that air to the left and the right. With all corners covered, it's easy to see why they're so much more effective than systems that can only address one side of a room at a time.

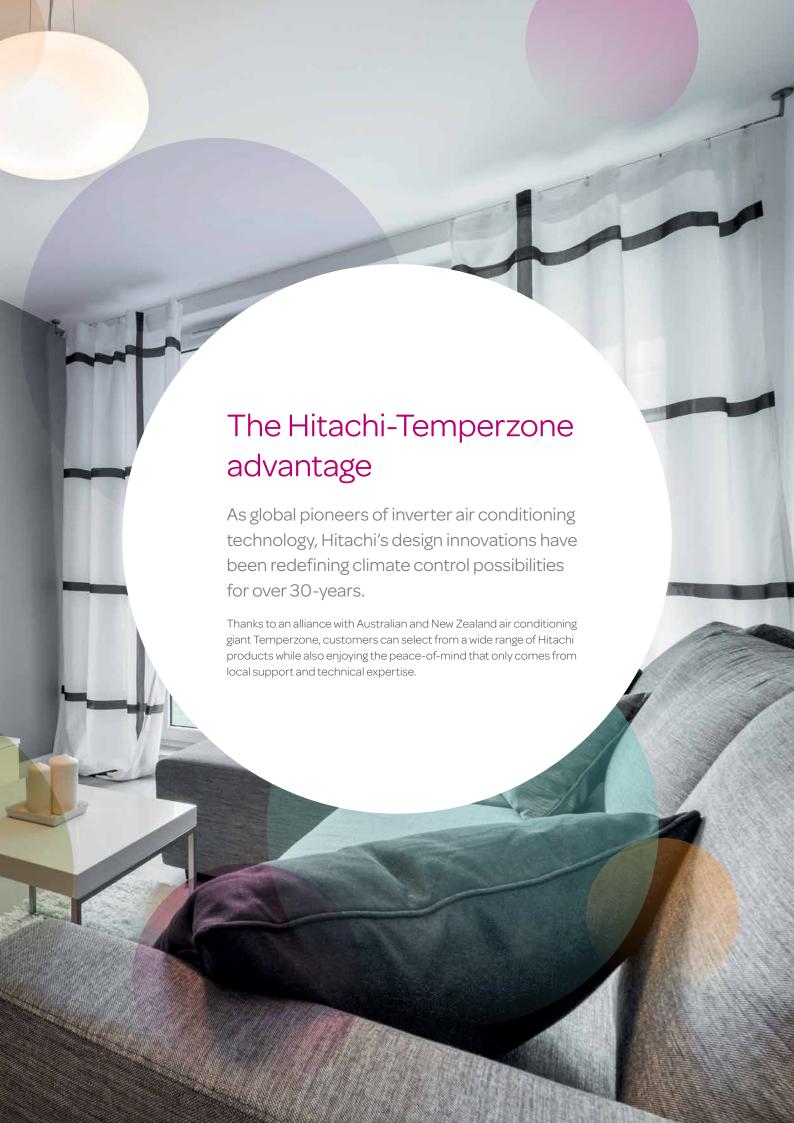
#### But cooling and heating speed and efficiency is only part of the story.

Thanks to the incorporation of DC fan technology within Hitachi wall split indoor units, modifications to airflow intensity are able to occur without any noticeable change in sound levels. The outdoor units are also **extremely quiet**, making them ideal for use in highly built-up areas or where neighbours are in close proximity.

#### Other benefits:

- A full array of super-efficient DC technology, including motor, compressor, and outer and inner fans.
- Ease of installation.
- Convenient and complete control via a user-friendly wireless controller.
- An ECO Mode setting that enables the user to achieve significant energy savings.
- Optional Remote alarm capacity, ensuring any problems can be monitored and diagnosed by an external controller.

- An optional card key 'on' and 'off' function that enables automatic deactivation once a room becomes unoccupied.
- A metal fireproof enclosure that houses all internal electrical components.
- High durability, made possible by anti-corrosion and anti-dust coatings on the outer heat exchanger.
- Comprehensive 5 year parts and labour warranty on Hitachi Wall Splits for the home.







#### DC Inverter Technology

A DC compressor offers improved performance during periods of extended operation. It also features a split rotor with displaced electrical poles, enabling the suppression of electromagnetic noise. Low-speed performance characteristics have also been improved, leading to significant reductions in annual running costs.

See figure 1

#### Precise Inverter Control

The operating speed of the compressor's DC motor can be adjusted continuously in 1Hz increments and in free relation to the variability of system capacity.

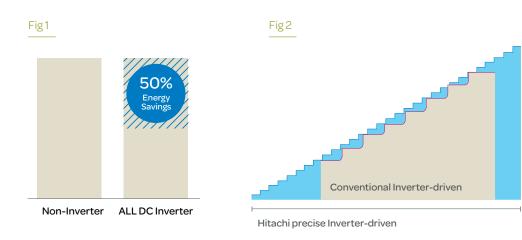
See figure 2

#### **Auto Restart**

For even greater convenience, the Auto Restart feature prompts the air conditioner to restart at it's previous setting right after a power failure.

#### Seamless fan speed control

With the newly improved seamless fan control system, Hitachi's air conditioners assure extremely quiet and smooth fan speed changes for even more comfort. No more annoying sound and surprises from sudden fan speed changes.



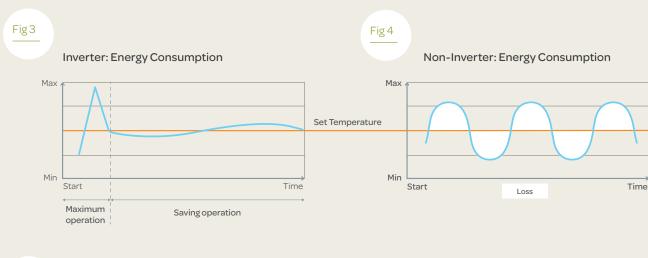
## Technological advancements

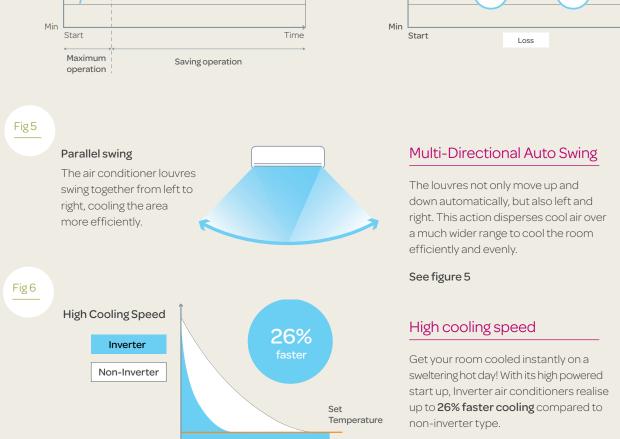
#### Energy savings

With intelligent inverter technology, an air conditioner will cool with maximum capacity at start up, then automatically slows down and operates at a minimum suitable capacity to maintain room temperature at a comfortable level.

Non-inverter can only operate a simple on-off control. It tries to maintain temperature by repeatedly switching power on and off, which consumes much more electricity with bigger temperature fluctuation.

#### See figures 3-4





See figure 6



#### Quiet, Efficient, Safe

Hitachi's inverter models feature DC motors in the indoor and outdoor unit fans, as well as the compressor.

DC motors are 10% more efficient than conventional AC motors, and are also very quiet. What's more, operating at low Voltage (35V), the indoor unit offers much safer maintenance.

See figures 7-8

Fig 7

#### Comparison of motor noises (compared by Hitachi)

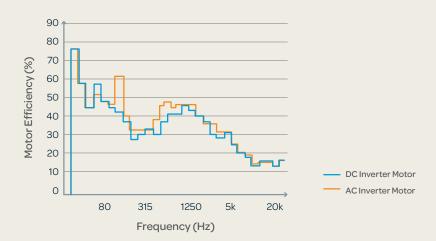
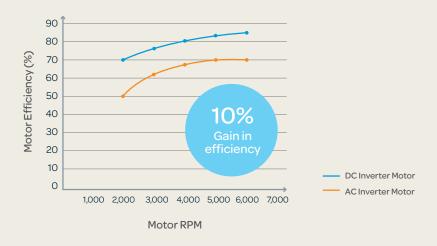


Fig8

#### Comparison of motor efficiency (compared by Hitachi)



### Convenient wireless control

#### Complete Control

Hitachi wall-mounted units come with a choice of two wireless remote controllers, ensuring complete control from the comfort of your armchair

As well as offering Standard Mode, louvre and fan speed control, Hitachi systems also incorporate an additional array of innovative features designed to make your life easier.



Std. Wireless Controller



Optional Wireless Controller

#### Eco Mode

Programmed to run your system at a slightly reduced rate, Eco Mode helps keep your power consumption to a minimum.

#### Sleep Mode

A function that adjusts fan speed and temperature to provide comfort conditioning while you're sleeping, Sleep Mode also prevents drafts that might disrupt a good night's sleep.

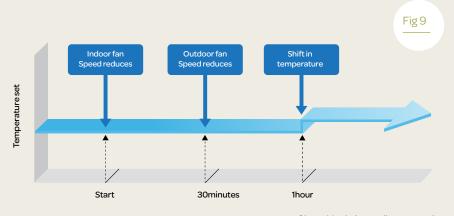
#### See figure 9



Running your system at maximum output for 20-minutes, Powerful Mode projects airflow further and faster to cool or heat a room rapidly.

#### Tracking Power Consumption\*

Unwelcome power bill surprises are now a thing of the past thanks to the ability to monitor your air conditioner's power usage directly from your wireless controller.



 ${\it Sleep\,Mode\,in\,cooling\,operation}$ 

 $<sup>\</sup>hbox{``Function only available through optional wireless remote'}\\$ 



#### Leave Home Function\*

Allowing you to preset your air conditioner to start automatically if the internal temperature drops to 10°C while you're not at home, Leave Home Function is ideal for use in locations that experience very cold conditions. It can even be instrumental in preventing formation of dampness and mould.

#### Weekly Timer Function\*

Completely eliminating the need to manually control your air conditioner, the Weekly Timer function enables you to preset your unit to automatically turn on and off or change temperature to suit your weekly schedule. The seven-day timer function allows you to set up to six on/off time and temperature settings for each day of the week. You can even preset two seven-day schedules (mode A and B) and choose the desired schedule as required.

See figure 10

Fig 10

		Mon	Tue	Wed	Thur	Fri		Sat	Sun
6:00	0	ON/23°C	ON/23°C	ON/23°C	ON/239C	ON/23°C	0	ON/23°C	
8:00	9	OFF	OFF	OFF	OFF	OFF			
10:00							0	OFF	
12:00	8	ON/20°C	ON/20°C	ON/20°C	ON/20°C	ON/20°C			
14:00	4	OFF	OFF	OFF	OFF	OFF			
16:00									
18:00	9	ON/20°C	ON/20°C	ON/20°C	ON/20°C	ON/20°C	8	ON/22ºC	
20:00									
22:00	6	OFF	OFF	OFF	OFF	OFF	4	OFF	

Example of a programmed seven day schedule over summer

<sup>\*</sup>Function only available through optional wireless remote

## Advanced commercial control

#### **Advanced Control Options**

The perfect solution for any commercial application, Hitachi Inverter wall splits can incorporate an array of optional features for advanced control capability.

#### Demand Response Module (DRED)

Hitachi offer an optional DRM module for instances where local requirements specify DRED compatibility.

#### Wired Controllers

Available as an option, a full dot LCD wired controller is ideal for use in commercial or large-scale applications where a wireless controller may not be applicable. It incorporates all standard as well as advanced features including:

- ECO Mode
- · Leave Home
- Powerful Mode
- One Touch Clean
- ECO Sleep Function Weekly Timer

#### Remote On/Off

Available as an option, remote On / Off switches the unit on or off via a remote device such as a hotel room card key.

#### Run Status & Alarm Signal

Available as an option, Run Status and Alarm Signal indicates when a unit is running, or if the unit has stopped due to an internal fault. This is beneficial for projects where multiple units have been installed.



RAS/RAC 25-35YHA LCD wired controller



RAS/RAC 50-80YHA LCD wired controller

## Long life durable system

#### Easy cleaning durable pre-filter

Hitachi's durable Nano Titanium Stainless Steel pre-filters are easily cleaned with a simple wipe under running water. With durability tests confirming the pre-filter's ability to bear up to 20kg of pressure, long life is guaranteed.

#### See figure 11



Nano Titanium Stainless Pre-Filter

#### Anti-Corrosion, Anti Rust

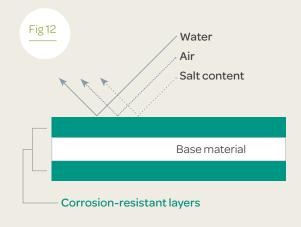
#### Green Fin Condenser

Utilising a special anti-corrosion "green" coating, the Green Fin Condenser lasts up to three-times longer than standard variants. This coating facilitates better performance, higher durability and bigger savings - even in the toughest of conditions.

#### See figure 12

#### Outdoor Anti-corrosion casing

Hitachi outdoor units are rustproof thanks to a full coating of anti-rust paint.





**Inverter Wall Split** 

# Comparison tables

Model						
Indoor Outdoor	RAS-25YHA5 RAC-25YHA5	RAS-35YHA6 RAC-35YHA6	RAS-50YHA4 RAC-50YHA4	RAS-60YHA4 RAC-60YHA4	RAS-70YHA4 RAC-70YHA4	RAS-80YHA4 RAC-80YHA4
Capacity kW						
Nominal Cooling Nominal Heating	2.5 3.2	3.5 4.0	5.0 6.0	6.0 7.0	7.0 8.0	8.0 9.0
Capacity (Range) kW						
Cooling Heating	1.0 - 3.2 1.0 - 4.4	1.1 - 4.2 1.1 - 5.5	1.2 - 5.8 1.2 - 6.8	1.2 - 6.8 1.2 - 7.5	1.5 - 8.3 1.5 - 9.0	1.5 - 8.5 1.5 - 9.7
Air Flow I/sec						
Hi/Med/Lo/Sleep	153/112/83/55	158/147/92/55	227/173/117/97	250/183/133/121	292/242/167/142	350/242/225/20
Energy Efficiency						
EER / AEER Cooling COP / ACOP Heating Star Rating Cooling Star Rating Heating	4.55 / 4.49 4.71 / 4.65 4.00 4.50	3.85/3.73 4.30/4.11 2.50 3.50	3.38/3.36 3.86/3.83 2.00 3.50	3.33/3.32 3.83/3.81 2.00 3.00	3.41/3.40 3.70/3.69 2.00 2.50	3.27/3.25 3.60/3.59 2.00 2.50
Noise Levels (dB(A))						
Indoor Unit Hi/Med/Lo/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
Outdoor Unit Cooling / Heating	47/48	47/48	50/52	50/52	51/53	55/55
Dimensions (mm)						
Indoor ( $W \times H \times D$ ) Outdoor ( $W \times H \times D$ )	780 x 280 x 218 750 x 548 x 288	780 x 280 x 218 750 x 548 x 288	900 x 300 x 230 850 x 650 x 298	900×300×230 850×750×298	1100 x 300 x 250 850 x 800 x 298	1100 x 300 x 250 850 x 800 x 298
Weights (kg)						
Indoor/Outdoor	7.5/33	7.5/38	10 / 45	11/50	15/52	15/52
Operating Range Outdoor Op. Temp. (Cooling) Outdoor Op. Temp. (Heating)	-10 to 46 °C -15 to 21 °C	-10 to 46 °C -15 to 21 °C	-10 to 46 °C -15 to 21 °C	-10 to 46 °C -15 to 21 °C	-10 to 46 °C -15 to 21 °C	-10 to 46 °C -15 to 21 °C
Refrigerant Type			R	410A		
Pipe Sizes (mm)	Ø9.5/Ø6.35	Ø9.5/Ø6.35	Ø12.7/Ø6.35	Ø12.7/Ø6.35	Ø15.88/Ø6.35	Ø15.88/Ø6.35
Refrig Pipe charge (m) Min / Max Pipe Lgth / Lift (m)	20 2/20/10	20 2/20/10	30 3/30/10	20 3/30/20	30 3/30/20	30 3/30/20
Power						
Power Supply		2	40 Volt / 50 Hz / 1 P	hase		
Run Amps / Phase (A/ph.)						
Cooling/Heating	2.86/3.33	4.21 / 4.31	6.2/6.56	7.6 / 7.7	8.6/9.9	10.3/10.5
Power Supply To	45	15		oor Unit	00	00
Rec. Circuit Breaker (A) Interconnecting Wire	15 1.5mm 3 Core + E	15	16	20	20	20

<sup>\*\*</sup> Rated capacity measured in accordance with AS/NZS 3823 conditions: Cooling: Indoor 27°C db / 19°C wb: Ambient 35°C db Mains power source - AC 240V and 50Hz Heating: Indoor 20°C db: Ambient 7°C db / 6°C db



#### 2.5 - 3.5kW

RAS/RAC-25YHA5 RAS/RAC-35YHA6



#### 5.0 - 6.0kW

RAS/RAC-50YHA4 RAS/RAC-60YHA4



#### 7.0 - 8.0kW

RAS/RAC-70YHA4 RAS/RAC-80YHA4



#### Standard Wireless Controller





## 5 Year Warranty

A comprehensive 5 year parts and labour warranty covers the Hitachi Wall Split air conditioning for your home.\*

#### Optional Wireless Controller



\*Refer to Hitachi Warranty for full conditions.

# Comparison tables

Model				
Indoor	RAF-35NXA1	RAF-50NXA1		
Outdoor	RAC-35NXA1	RAC-50NXA1		
Capacity kW				
Nominal Cooling	3.5	5.0		
Nominal Heating	4.2	6.0		
Capacity (Range) kW				
Cooling	1.1 - 4.2	1.1 - 5.2		
Heating	1.1 - 5.2	2.2 - 7.3		
Air Flow I/sec				
Hi/Med/Lo/Sleep	167/138/111/92	180/147/120/103		
Energy Efficiency				
EER / AEER Cooling	3.80/3.74	3.33/3.29		
COP/ACOP Heating	3.95/3.89	3.87/3.83		
Star Rating Cooling	2.50	2.00		
Star Rating Heating	3.00	3.00		
Noise Levels (dB(A))				
Indoor Unit				
Hi/Med/Lo/Sleep	42/35/29/25	46/37/30/25		
Outdoor Unit				
Cooling/Heating	47/49	52/52		
Dimensions (mm)				
Indoor (WxHxD)	760 X 600 X 235	760 X 600 X 235		
Outdoor (WxHxD)	841 X 548 X 335	887 X 600 X 345		
Weights (kg)				
Indoor/Outdoor	14/36	14 / 40		
Operating Range				
Outdoor Operating Temp. (Cooling) °C	-10 to 43 °C	-10 to 43 °C		
Outdoor Operating Temp. (Heating) °C	-15 to 21 °C	-15 to 21 °C		
Refrigerant Type	R410A	R410A		
Pipe Sizes (mm)	Ø9.5/Ø6.35	Ø12.7/Ø6.35		
Refrig Pipe charge (m)	20	20		
Min / Max Pipe Lgth / Lift (m)	3/20/10	3/20/10		
Power				
Power Supply	240 Volt / 50 Hz / 1 Phase	240 Volt / 50 Hz / 1 Phase		
Run Amps / Phase (A/ph.)				
Cooling/Heating	4.8 / 4.9	6.2/7.0		
Power Supply To	Outd	oor Unit		
Rec. Circuit Breaker (A)	16	16		
Interconnecting Wire	1.5mm 2 Core + E	1.5mm 2 Core + E		

<sup>\*\*</sup> Rated capacity measured in accordance with AS/NZS 3823 conditions: Cooling: Indoor 27°C db / 19°C wb: Ambient 35°C db Mains power source - AC 240V and 50Hz Heating: Indoor 20°C db: Ambient 7°C db / 6°C db



#### 3.5 - 5.0kW

RAF/RAC-35NXA1 RAF/RAC-50NXA1



Standard Wireless Controller





## 5 Year Warranty

A comprehensive 5 year parts and labour warranty covers the Hitachi Wall Split air conditioning for your home.\*

\*Refer to Hitachi Warranty for full conditions.



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