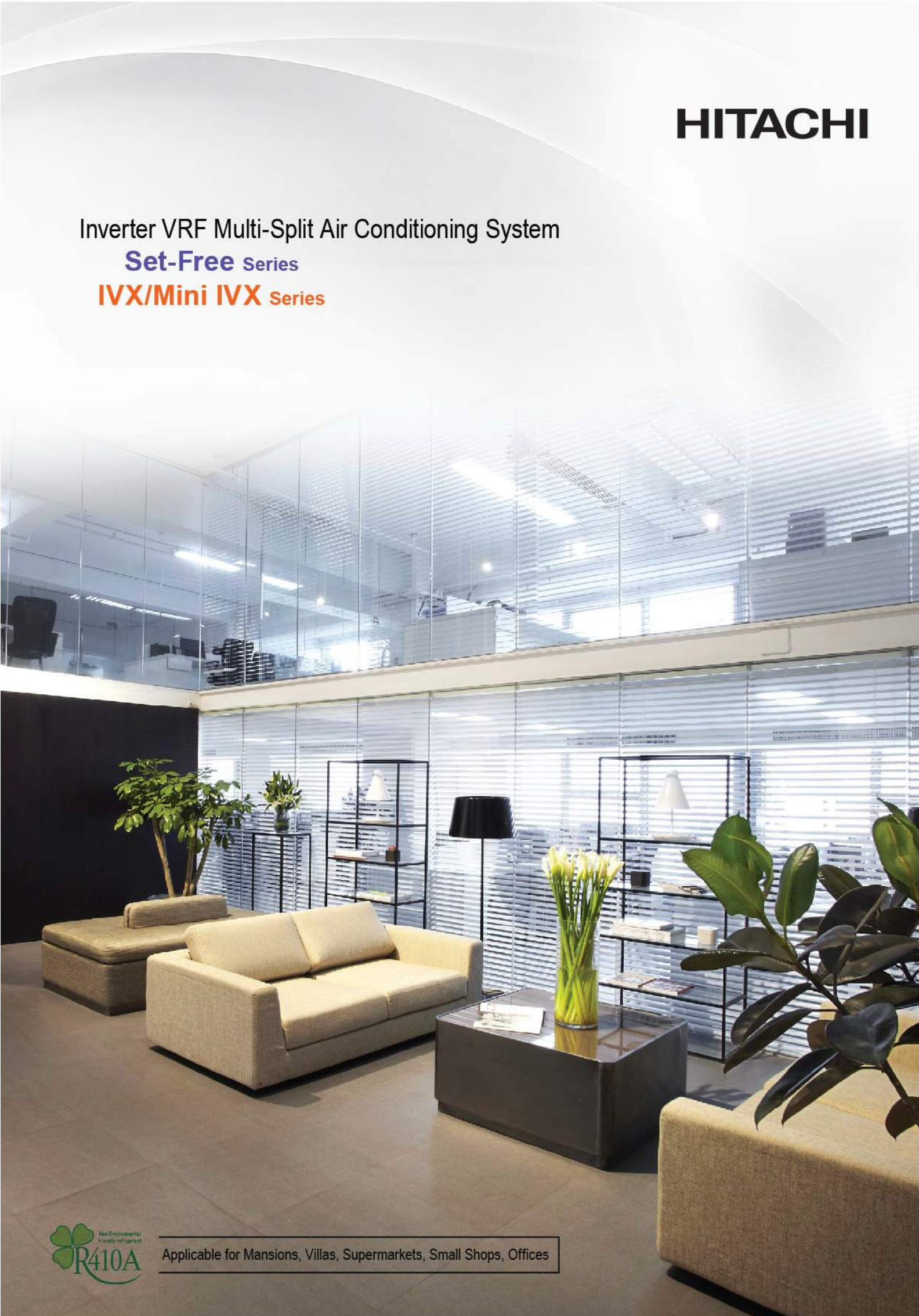
HITACHI

Inverter VRF Multi-Split Air Conditioning System

Set-Free Series

IVX/Mini IVX Series



New Environmental Friendly refrigerant R410A

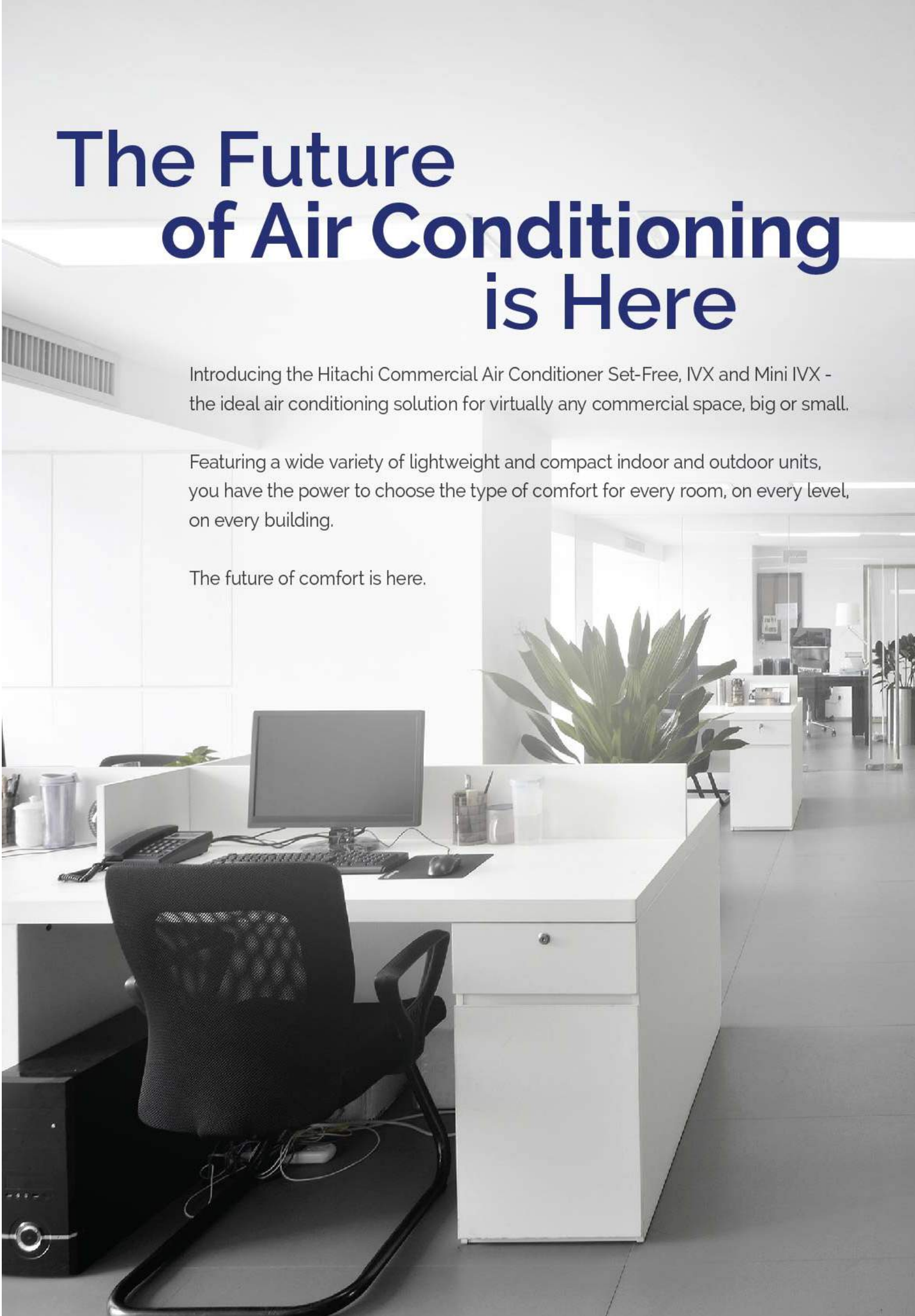
Applicable for Mansions, Villas, Supermarkets, Small Shops, Offices

The Future of Air Conditioning is Here

Introducing the Hitachi Commercial Air Conditioner Set-Free, IVX and Mini IVX - the ideal air conditioning solution for virtually any commercial space, big or small.

Featuring a wide variety of lightweight and compact indoor and outdoor units, you have the power to choose the type of comfort for every room, on every level, on every building.

The future of comfort is here.



Content

HITACHI
Air Conditioning Solutions

1 OUTDOOR UNITS — Capacity From 5 to 54 HP (See P.25-44)

Hitachi Outdoor Units are designed to give you the cooling comfort you deserve while providing ease of installation. These air conditioners feature Hitachi's revolutionary scroll compressor that uses R410a refrigerant that's energy efficient and environmentally friendly at the same time.

ROYAL Series

Top-flow Type from 8 to 54 HP MQ(D)

IVX Series

Side-flow Type
FPS/FPS(B)/FPS(D)

Mini IVX Series (Single Fan)

FPSQB

2 INDOOR UNITS — 6 Indoor Units that can be used interchangeably (See P.46-61)

State-of-the-art control network system provides you ease of access for virtually endless comfort. Old and new refrigerant types are applicable to match the requirements of your outdoor unit.

Cassette Type (4-way)

Cassette Type (2-way)

In-The-Ceiling Type

Wall Type

Floor Type

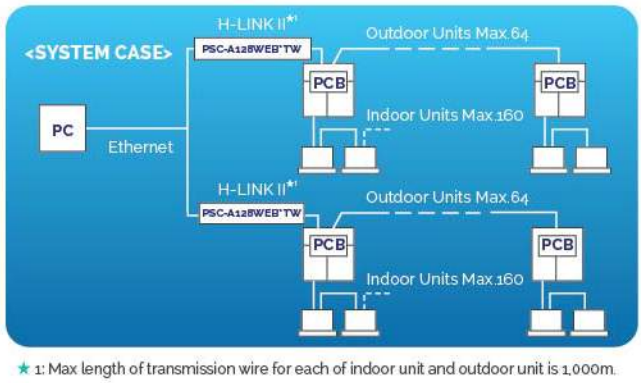
Ceiling Type

Inverter Slim Type

3 NETWORK SYSTEMS — (CS-NET) (See P.14-17)

The CS-NET System, designed specifically for Hitachi Air Conditioners, is optimized for central management systems of buildings and is compatible with computer-controlled systems.

- Through H-LINKⅡwiring, connect up to 64 outdoor units.
- Through H-LINKⅡwiring, connect up to 160 indoor units.



★ 1: Max length of transmission wire for each of indoor unit and outdoor unit is 1,000m.

SYSTEM CONFIGURATION

4 CONTROLLERS

9 Types of Controllers for Efficient Air Conditioning (See P.18-22)

Wireless Remote Control Switch

Wireless function for easy operation

Remote Control Switch

Large LCD display for aircon status

High-Performance Remote Control Switch

Audio guidance and large LCD display

Wired Controller for Hotels

Multi-functional controller ideal for hotels and other similar establishments

Central Station Controller EZ

With 8.5 in. touch panel that can control up to 160 indoor units of 64 groups in 4 interval spaces

Central Station

Controls up to 160 indoor units of 64 groups in 4 interval spaces

Standard Centralized Controller

Operates and display 16 groups of indoor units

Centralized ON/OFF Controller

Controls operation per remote control group. Can connect up to 16 remote control groups and 160 indoor units.

7 Days Timer

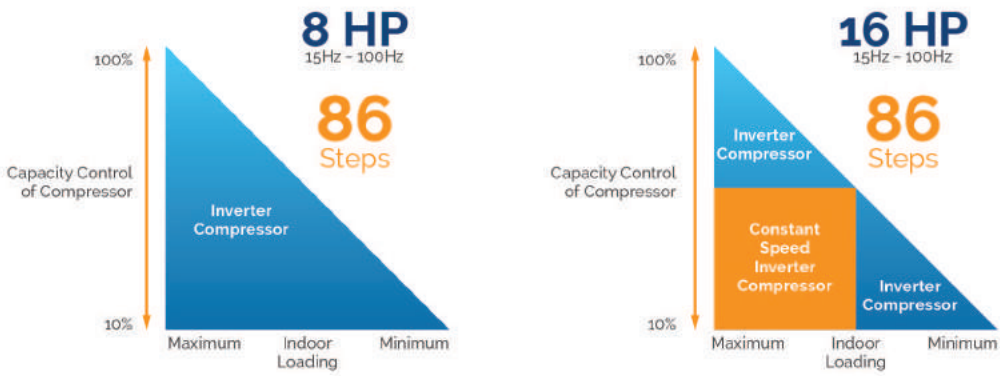
When matched with other remote controls,the schedule-based centralized controller can be used to set daily on/off operations every week.

Higher EERs
for Less Energy Consumption

Higher Energy Efficiency Ratio (EER), keeps you cool for longer hours while consuming relatively less energy.

New Research & Development | 1 Hz / Step Precise Control

High Efficiency DC Inverter Compressor features an IPM tuner that uses vector control technology to control 1 Hz/Step accurately so that the compressor automatically adjusts operation under optimal condition, doubling operational efficiency and reducing power consumption.



8 HP	16 HP
Inverter Compressor: 86 Steps	Inverter Compressor: 86 Steps
15Hz ~ 100Hz	15Hz ~ 100Hz
Product: 86 Steps	Product: 172 Steps

New Research & Development | New DC Inverter Scroll Compressor

Hitachi Set-Free features a DC Motor and new driving mechanism that reduces unit weight up to 50% less than conventional compressors. The Inverter DC Motor has the ability to modulate its operating speed increasing its efficiency.

New R410A scroll

30 years of research by Hitachi produced the most innovative scroll compressor yet.

New Driving Mechanism
(Including fuel control mechanism ... etc.)

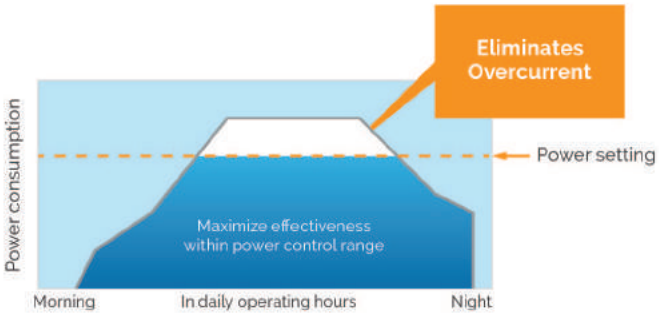
When refrigerant is compressed, heat and mechanical consumption are greatly reduced, thus making it more reliable.

DC Motor

Air conditioner load ranges from low speed to high speed making operations more efficient.

New Research & Development — Self-Demand Control

Self-Demand Control feature automatically controls power consumption by self-detecting current and controls it's original external signals to select multiple operation modes for different requirements.

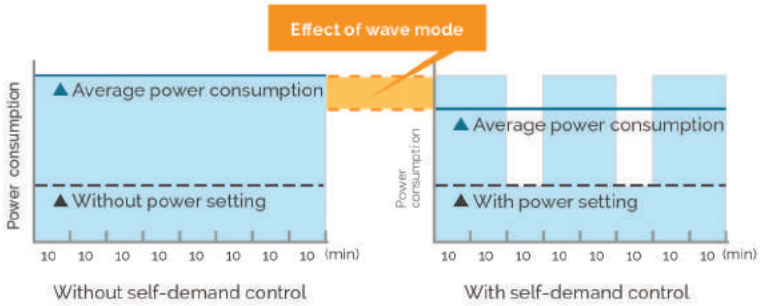


Model		A variety of selection criteria for power consumption
ROYAL series	MQ(D) Top-flow	100%、80%、70%、60%、40%
IVX series	5、6FPS(B)	100%、75%、50%
	8、10、12FPS(D)	100%、80%、70%、60%

Note: At self-demand control, operating capacity may be reduced.

New Wave Mode

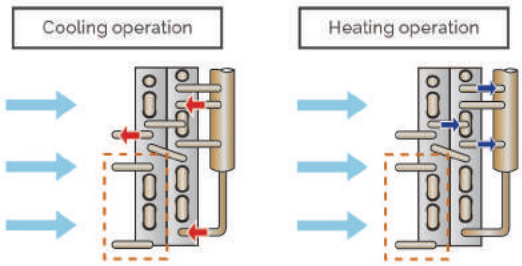
The power rationing setup of Wave Mode enables you to turn the unit on or off automatically between intervals to lower power consumption. It is even capable of using minimal electricity to maintain a constant comfortable temperature in running mode.



New Research & Development — Heat Exchange Optimized to Lower Cooling Waste

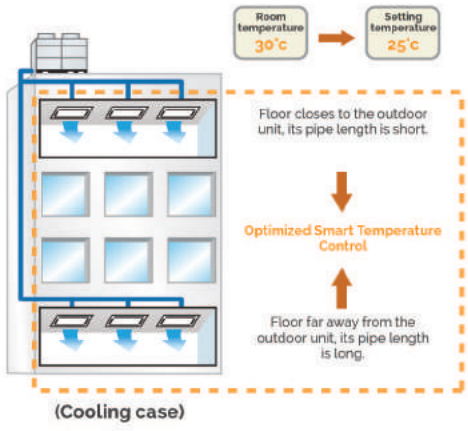
Cooling Operation: Newly designed subcooler enhances cooling capacity for more operational efficiency.

Heating Operation: Liquid flow (Path 1) and gas flow (Path 2) are developed to prevent evaporation and abrupt temperature drops. Subcooler is also placed at a low position to prevent frosting.



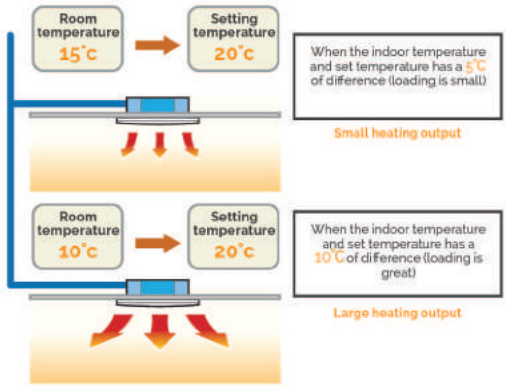
New Research & Development — Smart Temperature Control

Smart temperature control automatically adjusts to the right setting so that each floor has an even cooling or heating supply.



(Cooling case)

Smart Temperature Control can also sense the location of the room, floor number, sunlight exposure and the room capacity to automatically adjust cooling or heating output.



(Heating case)

Flexible Design

Hitachi Set-Free offers a complete set of indoor and outdoor units that can be the solution to your every need.

Variety of Models

Modular configuration can achieve a maximum of 54HP, meeting virtually any building requirement. A variety of cooling capacities are also available for you to choose from.

A Variety of The Indoor Units

Below are the different types of indoor units to meet different space condition with appropriate indoor combination.

4-Way Cassette Type

Ultra quiet and efficient thanks to DC Inverter motor.

2-Way Cassette Type

Small and lightweight, easy installation.

In-The-Ceiling Type

External static pressure setting lets you control multi-directional air ducts and multi-air outlets

Wall Type

Compact design, excellent performance. No grille panel for a touch of elegance

Floor Type

Slim body adds sophistication to any room.

Ceiling Type

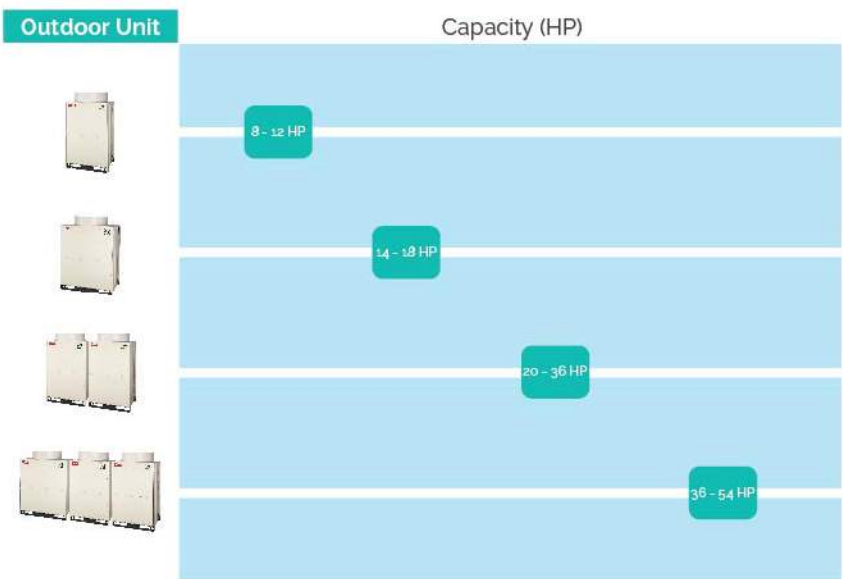
Non-polar transmission to shorten installation time.

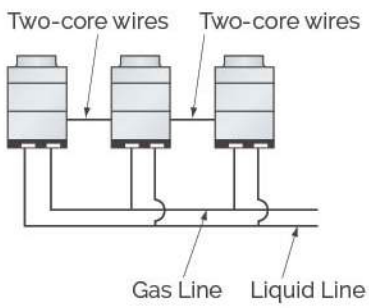
Inverter Slim Type

Slim profile and simplified piping. Uses minimal floor area

Standard Modular Outdoor Unit (For MQ(D) Model)

Only two-core wires and two pipes are required to make a parallel connection for more small horsepower outdoor units, thereby obtaining a large horsepower outdoor unit.



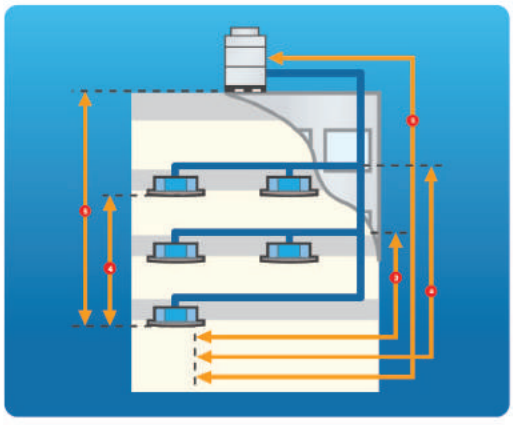


Item			8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP
Type			RAM-8MQ(D)	RAM-10MQ(D)	RAM-12MQ(D)	RAM-14MQ(D)	RAM-16MQ(D)	RAM-18MQ(D)	RAM-12+8MQ(D)	RAM-8+14MQ(D)
Pipe size	Gas line	mm	Φ19.05	Φ22.2	Φ25.4	Φ25.4	Φ28.6	Φ28.6	Φ28.6	Φ28.6
	Liquid line		Φ9.53	Φ9.53	Φ12.7	Φ12.7	Φ12.7	Φ15.88	Φ15.88	Φ15.88
Multi-kit type unit			—	—	—	—	—	—	E-NP692S	E-NP692S

Item			24HP	26HP	28HP	30HP	32HP	34HP	36HP	38HP
Type			RAM-10+14MQ(D)	RAM-12+14MQ(D)	RAM-14+14MQ(D)	RAM-14+16MQ(D)	RAM-16+16MQ(D)	RAM-10+12+12MQ(D)	RAM-12+12+12MQ(D)	RAM-10+12+16MQ(D)
Pipe size	Gas line	mm	Φ28.6	Φ31.75	Φ31.75	Φ31.75	Φ31.75	Φ31.75	Φ38.1	Φ38.1
	Liquid line		Φ15.88	Φ19.05	Φ19.05	Φ19.05	Φ19.05	Φ19.05	Φ19.05	Φ19.05
Multi-kit type unit			E-NP692S	E-NP902S	E-NP902S	E-NP902S	E-NP902S	E-NP902S	E-NP902S	E-NP902S*2

Item			40HP	42HP	44HP	46HP	48HP	50HP	52HP	54HP
Type			RAM-12+12+16MQ(D)	RAM-12+14+16MQ(D)	RAM-12+14+18MQ(D)	RAM-14+14+18MQ(D)	RAM-14+16+18MQ(D)	RAM-18+18+14MQ(D)	RAM-18+18+16MQ(D)	RAM-18+18+18MQ(D)
Pipe size	Gas line	mm	Φ38.1	Φ38.1	Φ38.1	Φ38.1	Φ38.1	Φ38.1	Φ38.1	Φ38.1
	Liquid line		Φ19.05	Φ19.05	Φ19.05	Φ19.05	Φ19.05	Φ19.05	Φ19.05	Φ19.05
Multi-kit type unit			E-NP902S*2	E-NP902S*2	E-NP902S*2	E-NP902S*2	E-NP902S*2	E-NP902S*2	E-NP902S*2	E-NP902S*2

Pipe Length Up to165m (Equivalent Length to 190m)



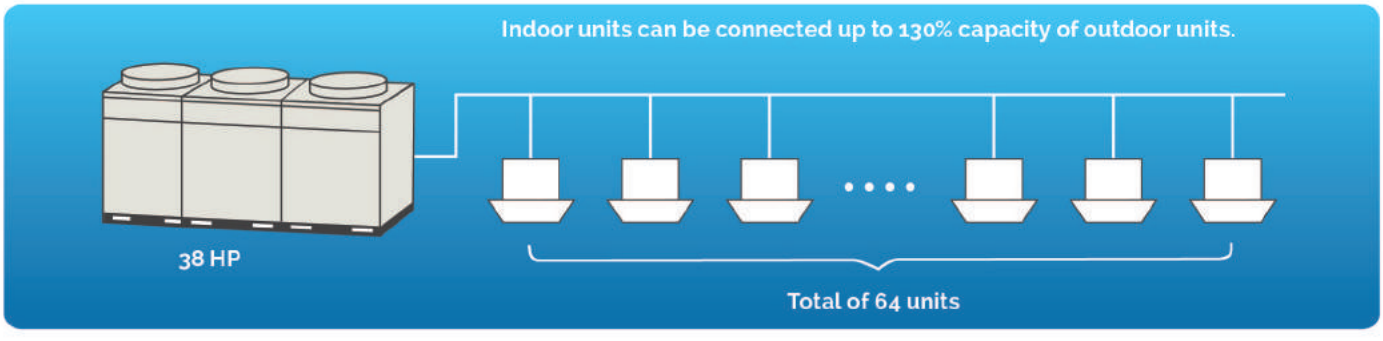
			Top-Flow MQ(D) Type		Side-Flow FPSB/FPSD Type	
			The number of the indoor unit is less than the recommended maximum combined number of unit	The number of the indoor unit exceed the recommended maximum combined number of unit	5.6HP	8-12HP
1	Total length of piping		1000m	300m	95m	250m
2	Maximum piping length	Actual length ①	165m		75m	100m
		Equivalent length ①	190m		95m	120m
3		Length between first multi-kit and the furthest indoor unit ②	90m	40m	—	40m
4		Length between each multi-kit and each indoor unit ③	40m	30m	10m	40m
5	Maximum piping lift	Between the indoor unit ④	15m		3m	15m
6		Indoor unit— Outdoor unit (Upper) ⑤	50/70*1m		30m	40m
		Indoor unit— Outdoor unit (Lower) ⑤	40/70*2m		20m	30m

Notes : 1. For total piping length of MQ(D) type is 1,000m, the recommended maximum quantity of the indoor units can reference connecting quantity of indoor units.

2.*1: More than 50m, stricty follow corresponding.

*2: More than 40m, stricty follow corresponding.

One Outdoor Unit Can Connect with 64 Indoor Units (Only for ROYAL Series)



Connecting quantity of indoor units is listed as below :

Horsepower of MQ(D) type of outdoor units	8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP	24HP	26HP	28HP	30HP
Max. compatible indoor units	13	16	19	23	26	26	33	36	40	43	47	50

Horsepower of MQ(D) type of outdoor units	32HP	34HP	36HP	38HP	40HP	42HP	44HP	46HP	48HP	50HP	52HP	54HP
Max. compatible indoor units	53	56	59	64	64	64	64	64	64	64	64	64

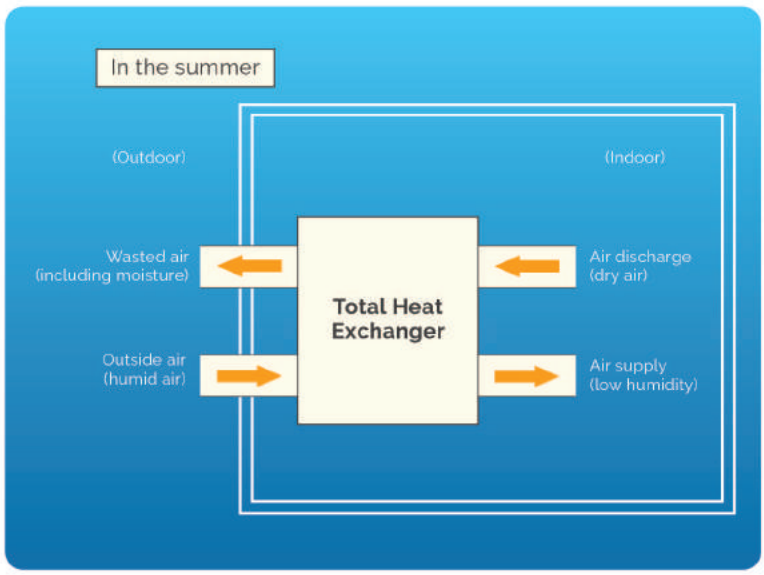
Note: If a value in parentheses ( ) is 1000m of piping and the recommended maximum quantity of the indoor units is over quantity of the pipe arrangement, the recommended maximum quantity is limited (see explanation in above list)

Horsepower of FPS / FPSB / FPSD type of outdoor units	5HP	6HP	8HP	10HP	12HP
Max. compatible indoor units	4	4	5	5	5

Note: Connection capacity is within 100% -130% of range.

Power Saving Total Heat Exchanger

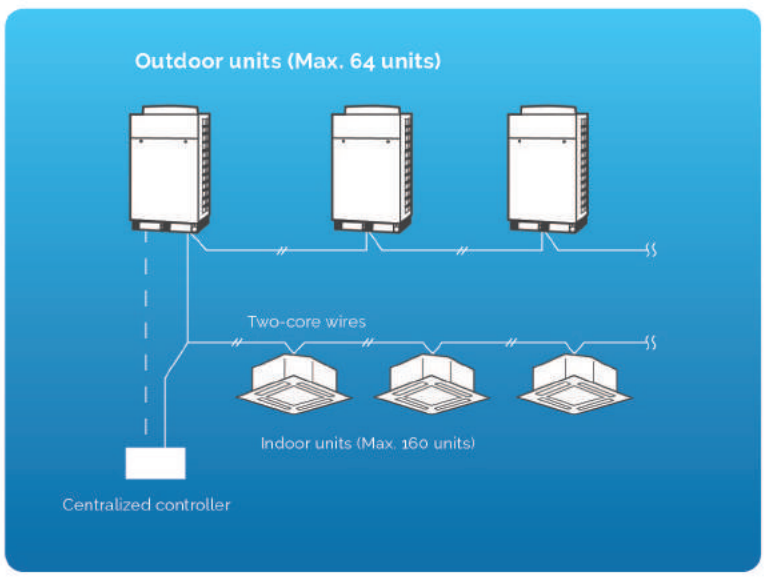
The ventilation system of the Set-Free unit's total heat exchanger can be adjusted to balance the difference between interior and exterior temperature during air exhaust.



H-LINK II Easy and Simple Wiring Configuration

The new wiring configuration for H-LINK II features two-core wired connected to each indoor and outdoor unit (max. 64 refrigerant system sets). This method connects all signal wires of all indoor and outdoor units to the same set of signal wires. In addition, indoor and outdoor units can be connected with a centralized controller.

	H-LINK II
Outdoor units	Max. 64 units
Indoor units	Max. 160 units

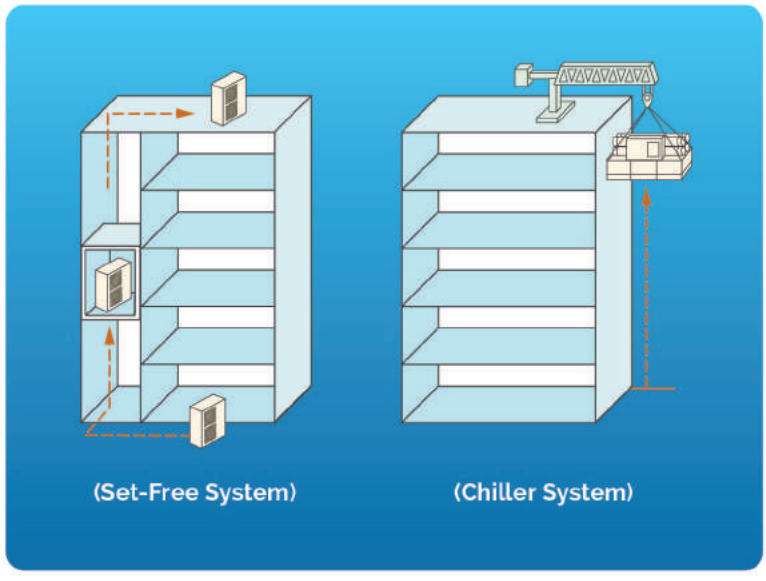


Ease of Installation

Indoor and outdoor units feature compact design to reduce weight and simplify installation

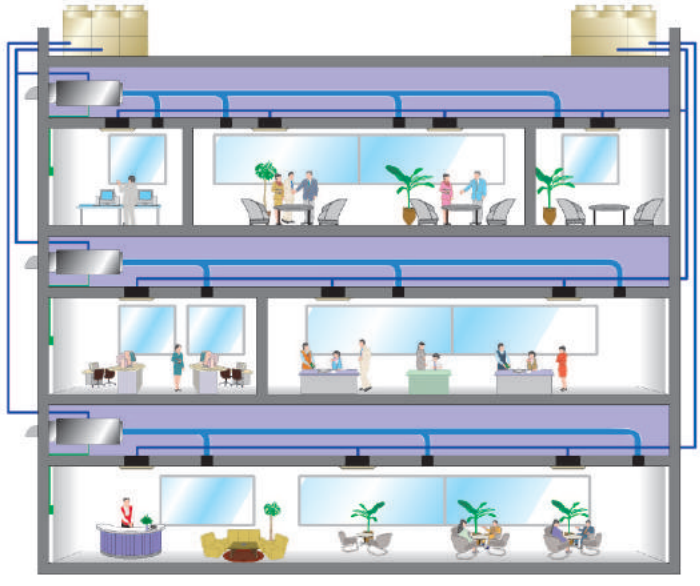
Transport via Elevator

The lightweight outdoor unit can be lifted by an elevator making the use of specialized hooks or apparatus unnecessary.



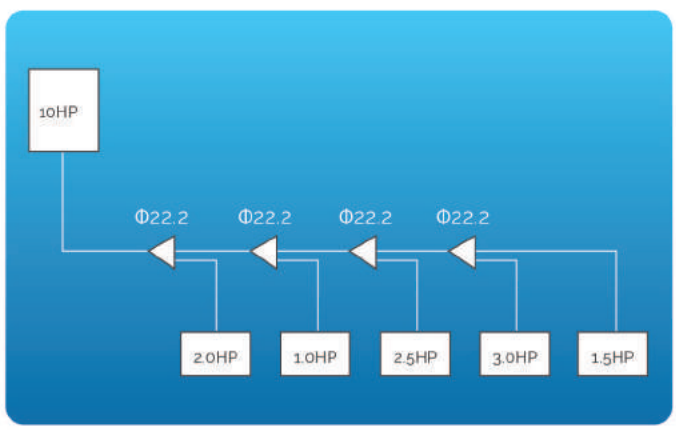
Independent Refrigerant System

Hitachi Set-Free can be installed and tested on each floor even when a building has not yet been constructed completely. Installer can independently test each refrigerant system so full system configuration is not necessary



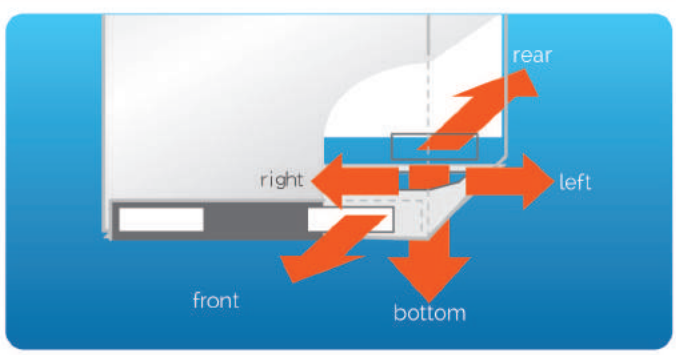
Single Refrigerant Piping for Shorter Installation Time

The innovative single pipe system is possible by transforming the entire piping system into a singular copper pipe (less than 10HP is recommended).



Flexible Refrigerant Piping (for MQ(D) Type)

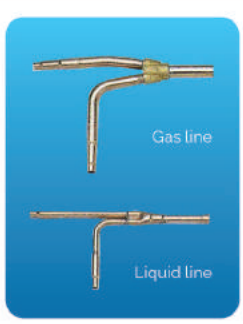
Outdoor piping connection is made easy thanks to its five-way directional flexibility (front, rear, left, right and bottom).



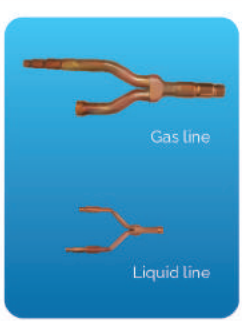
Flexible Multi-Kit Installation

Multi-kit with insulation is included to decrease installation works and increase system reliability.

Note : 1. Maintenance holes of lock-type multi-kit and middle centralized manifold penstock are required.
2. Refrigerant flow noise is reduced by means of Hitachi multi-kit.

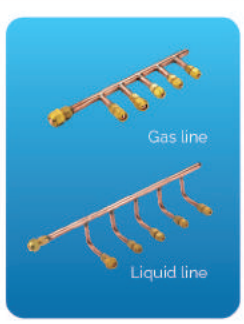


Multi-kit (rtype)



Multi-kit (Y type)

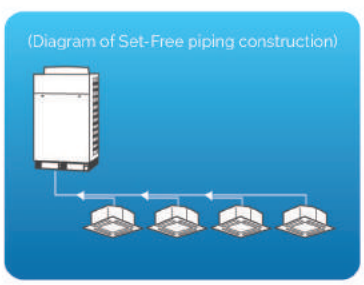
Flare-type multi-kit

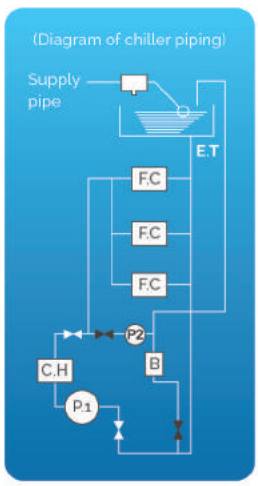


Flare-type centralized multi-kit

Simplified Piping

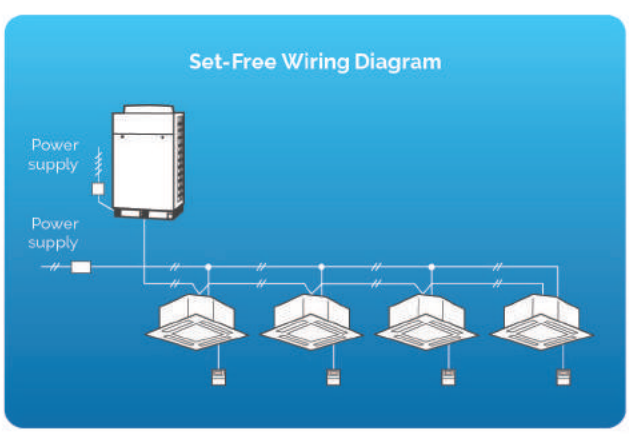
Single piping system
or reduced piping system
reduces construction
and installation cost.





Simplified Wiring System

Innovative non-polar two-core wires are applicable to both indoor and outdoor units to connect wiring immediately and effectively. In addition, because of the non-polar transmission, the connecting error between⊕and⊖ends are minimized to prevent poor transmission.



Automatic Setting

The number of refrigerant systems for indoor units can be set automatically.

Refrigerant Saving

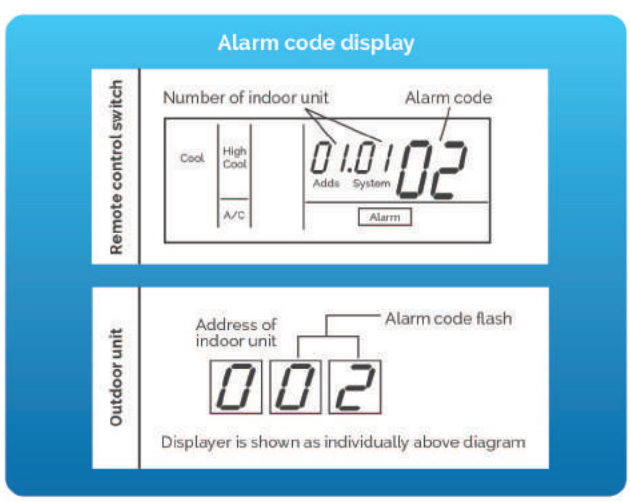
The R410a Refrigerant is not only highly efficient, but eco-friendly too.

Diameter of pipe	R22 model	R410A model
Φ9.53	0.065 x 30 x 4 = 7.8kg	0.070 x (70 + 30 x 4) =13.3kg
Φ12.7	0.120 x 70 = 8.4kg	—
Total	16.2kg (100%)	13.3kg (82%)

Less **18%** refrigerant usage

Self-Diagnose Function

With just one button, you can check the unit's status through the remote control. Vital system information such as pressure differences (high and low) and maintenance status is displayed. It can also detect anomalies in wiring, piping or unit installation.

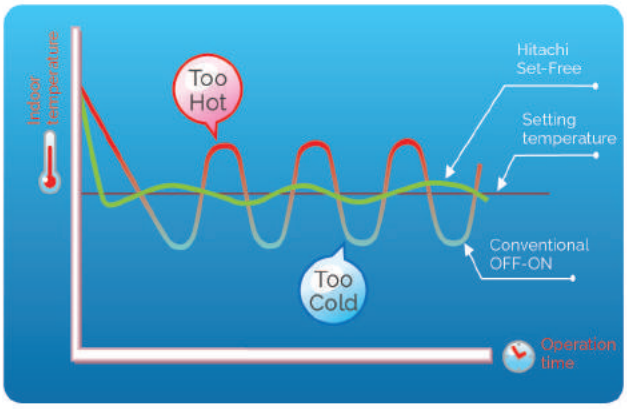


More Comfortable
User Experience

Hitachi Set-Free has constant temperature control that enhances the user's cooling experience.

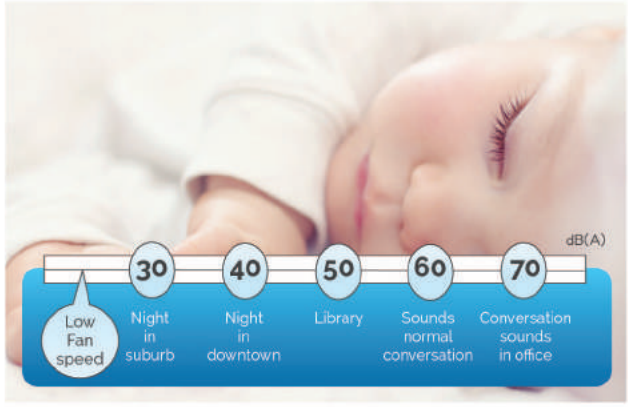
Constant Temperature Control

By employing Hitachi's Inverter Control Technology, the indoor unit detects room ambient temperature and relative temperature of the unit. The operation of the compressor, electronic expansion valve and refrigerant flow is automatically modulated, offering maximum efficiency.



Low Noise

Using computational fluid dynamics (CFD) analysis techniques, Hitachi Set-Free decreases air impedance in each of the indoor and outdoor units for optimum noise levels during operation.



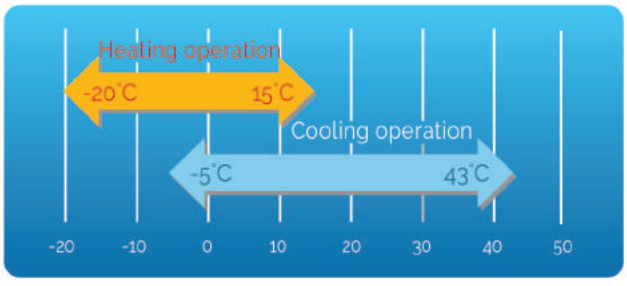
*Tested in low fan speed of RPI-36NR.

*The sound pressure is measured at 1.5m below a center of each units.

*The sound pressure level is measure in an anechoic chamber so that reflected sound should be taken into consideration in the field.

Wide Range of Operation

Hitachi Set-Free has the capacity to operate within -20 to -43°C.



Smart Restart Function

During power outages, Hitachi Set-Free has a restart function (pre-setting required) that can avoidre-setting trouble.

Right Ventilation for Vitality

Being in a closed space for a long time may cause people to become sluggish, stressed or fatigued, which can cause lower work efficiency.

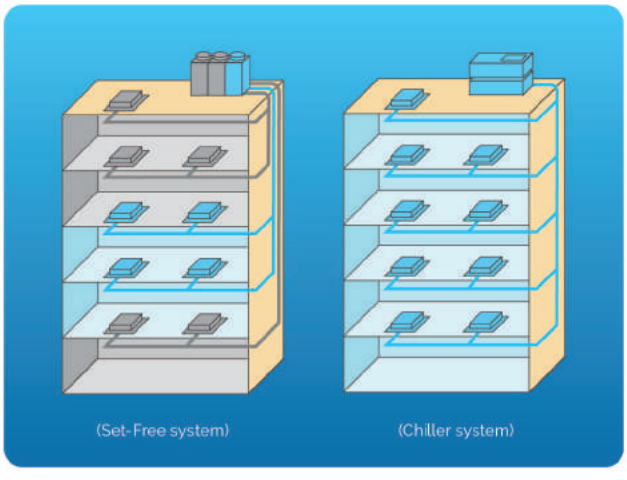
The ventilation system features a total heat exchanger which can automatically enhance the air quality hence create a more comfortable workplace environment.

Independent Unit Operation

Hitachi Set-Free enables all units to operate independently based on your individual requirements.

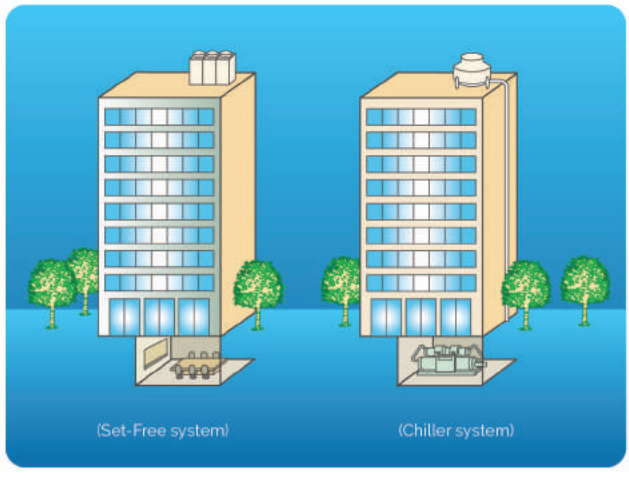
Individual Partition Area Control

Hitachi Set-Free can control individual partition areas and the total operating load of outdoor units to avoid unnecessary operations in unoccupied areas.



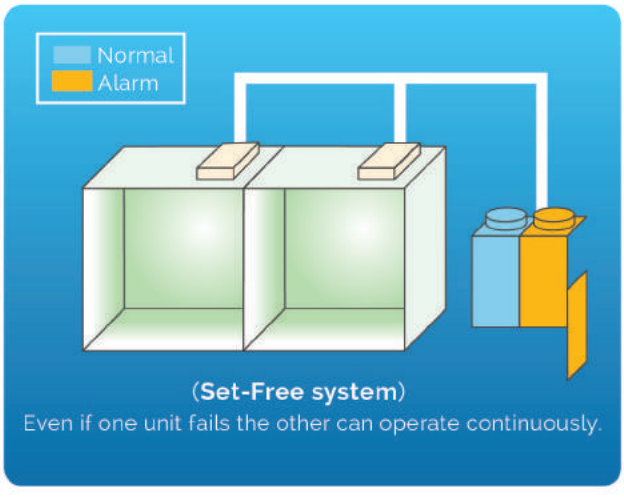
Space-Saving Installation

The small and lightweight outdoor units can be installed on a staircase landing or balcony.



Emergency Backup Operation

Backup operation function prevents the system from going to a complete halt when an outdoor unit fails.



(Set-Free system)
Even if one unit fails the other can operate continuously.

Flexible Refrigerant Piping

Connecting quantity of indoor units can be up to 130% quantity of outdoor units.

A Model for Every Room

Outdoor units are available from 5 HP to 54HP, while indoor units are available in 6 varieties that can virtually meet any room/floor, size, condition or requirement.

Network System

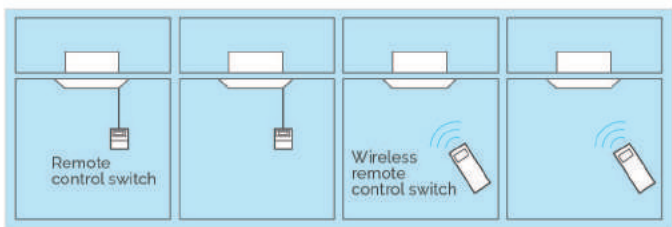
A Central Management Network System can inform its users the operating state through a centralized controller or PC. The system can monitor the operation of air conditioners in real time and also set operating schedules and individual temperatures to make management easy.

Controlling Systems

The two-core wiring connections of H-LINK II is compatible to users' every need to build various controlling systems.

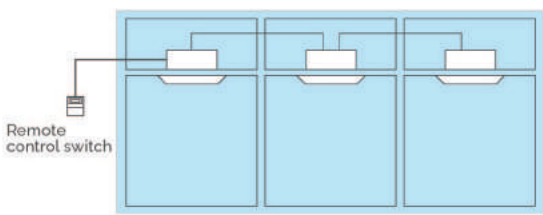
REMOTE CONTROL FOR INDIVIDUAL OPERATIONS

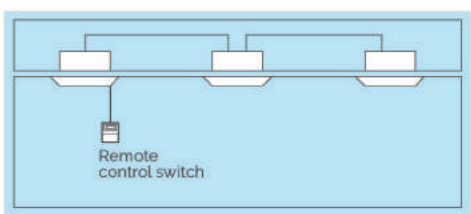
Individual indoor units installed in each room can be controlled by either a wired or wireless remote control.

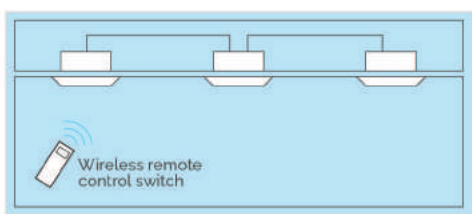


ONE CONTROLLER FOR MULTIPLE UNITS

Fixed remote control can control a maximum of 16 indoor units and turn the unit on/off or modify their operation modes. Wired and wireless remote controls on the other hand can be used to turn the unit on/off units in the same room. Wired and wireless remote controls can control a maximum of 16 indoor units when separately.



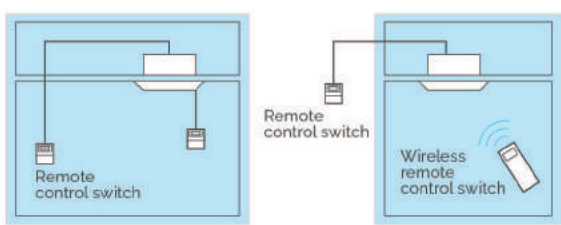




ONE UNIT WITH TWO REMOTE CONTROLS

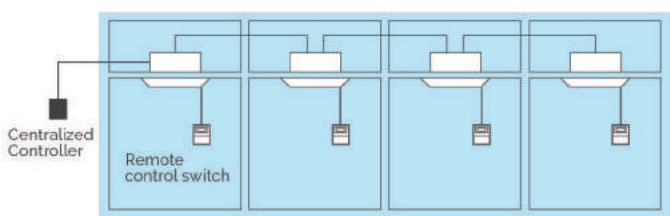
There are two ways to control an indoor unit using two remote controls:

1) Control a single indoor unit using two wired remote controls
2) Control a single indoor unit using a wired remote control and a wireless remote control



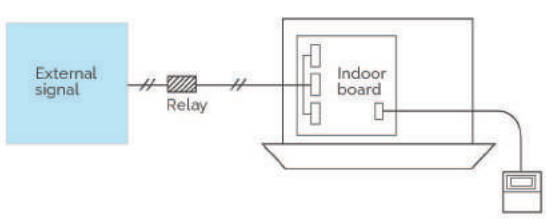
CONTROL REMOTE CONTROLS VIA A CENTRALIZED CONTROLLER

The centralized controller can control not just the indoor units in different rooms, but also the wired remote controls as well.



CONNECTION WITH LOCAL CONTROLLER

Signal conversion is available by ways of relay and an external controller that can turn the indoor units on/off and monitor the system's operation.



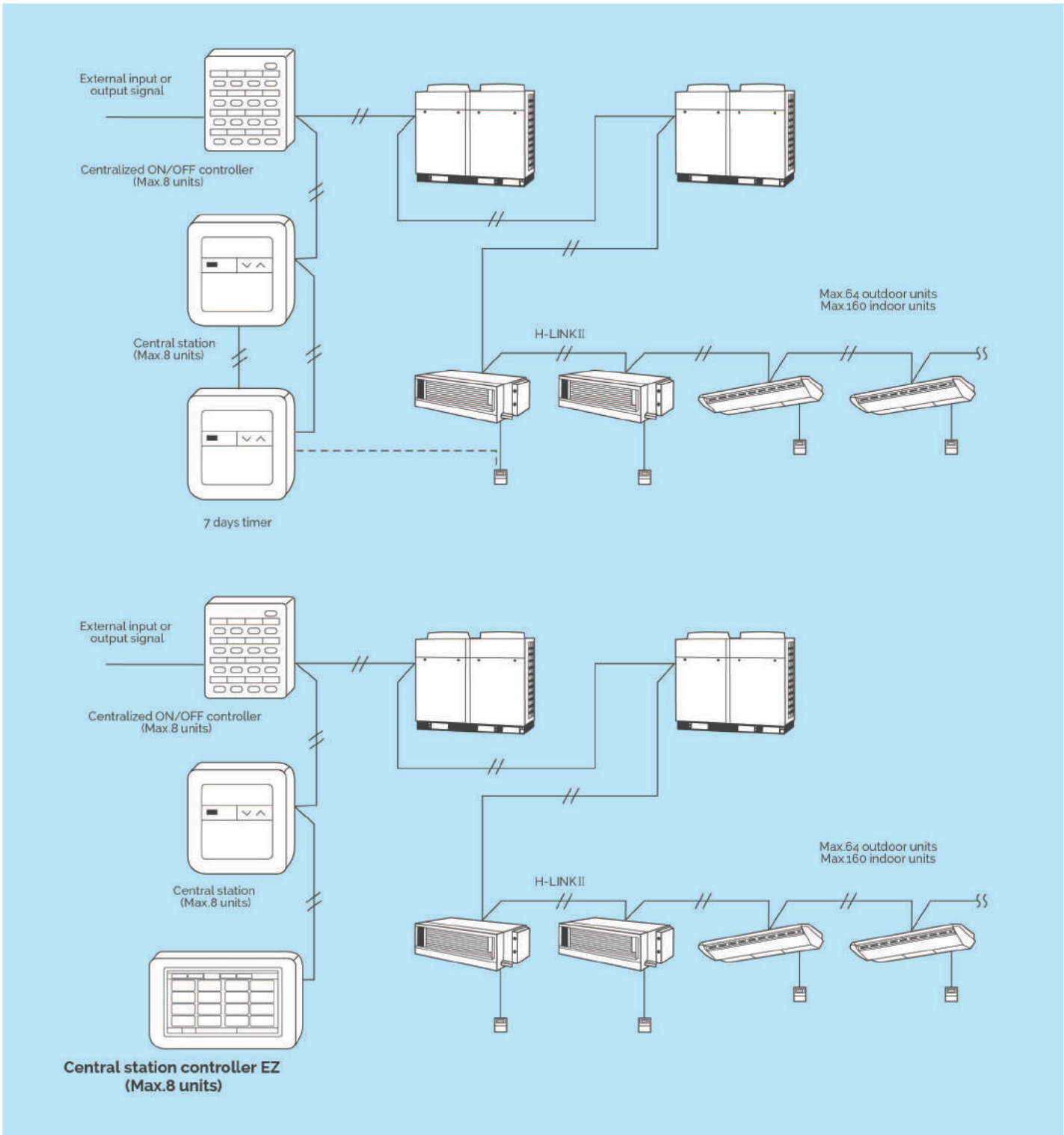
CS-NET For More Details, Please Contact Your Hitachi Sales Officer

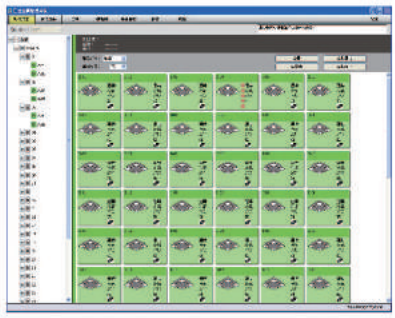
CS-NET can synchronize with the centralized controller, PC or management computer in the building to monitor operation and check any anomaly in the system.

* Applying the wiring connections of H-LINK II, such as non-polar two-core wires, it can connect all indoor units together to simplify construction.

1.Network Management System of Centralized Controller

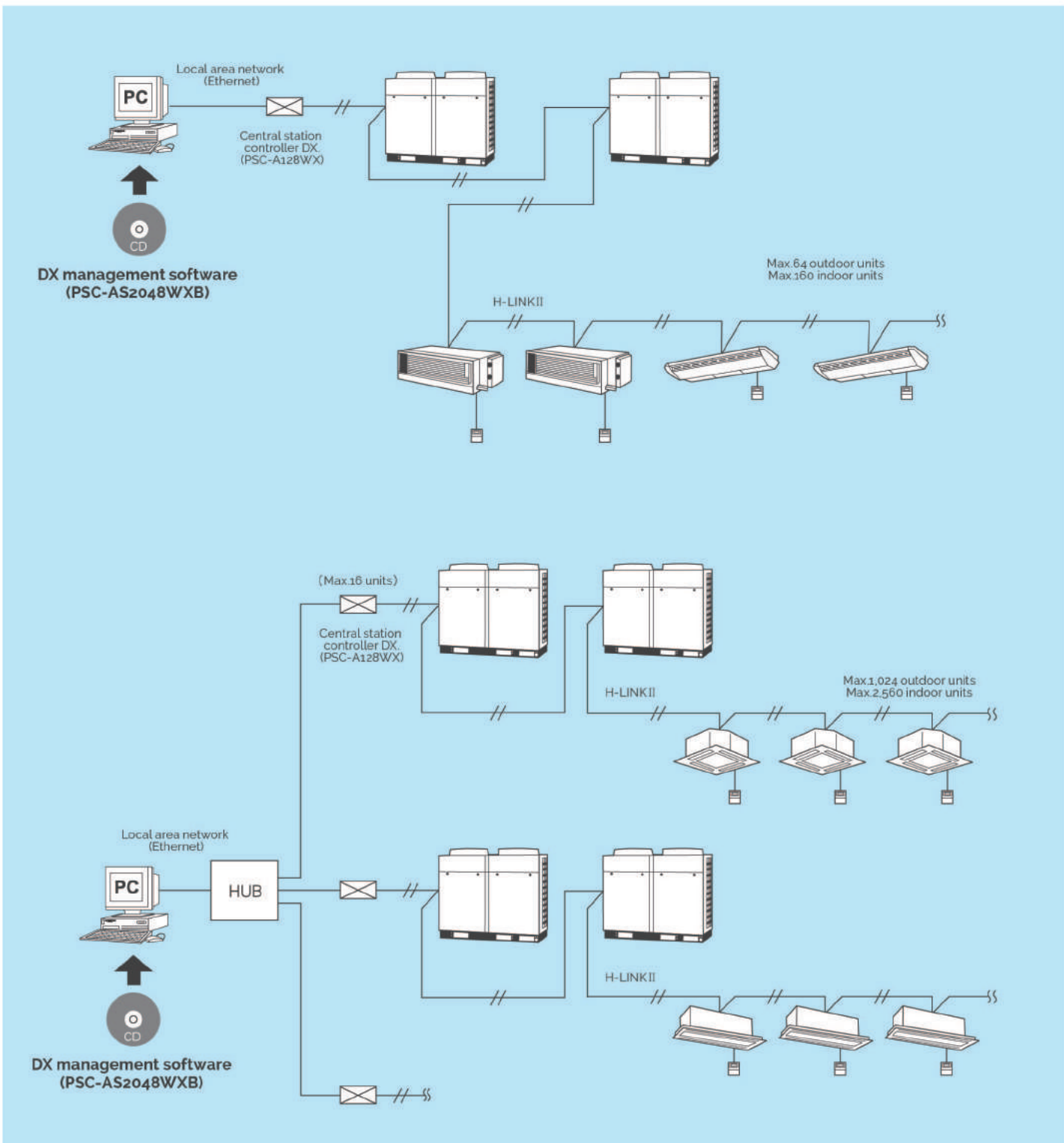
Transmission lines between indoor units, outdoor units and the centralized controller are combined to form a public network, that simplifies the wiring system to reduce the risk of system errors.





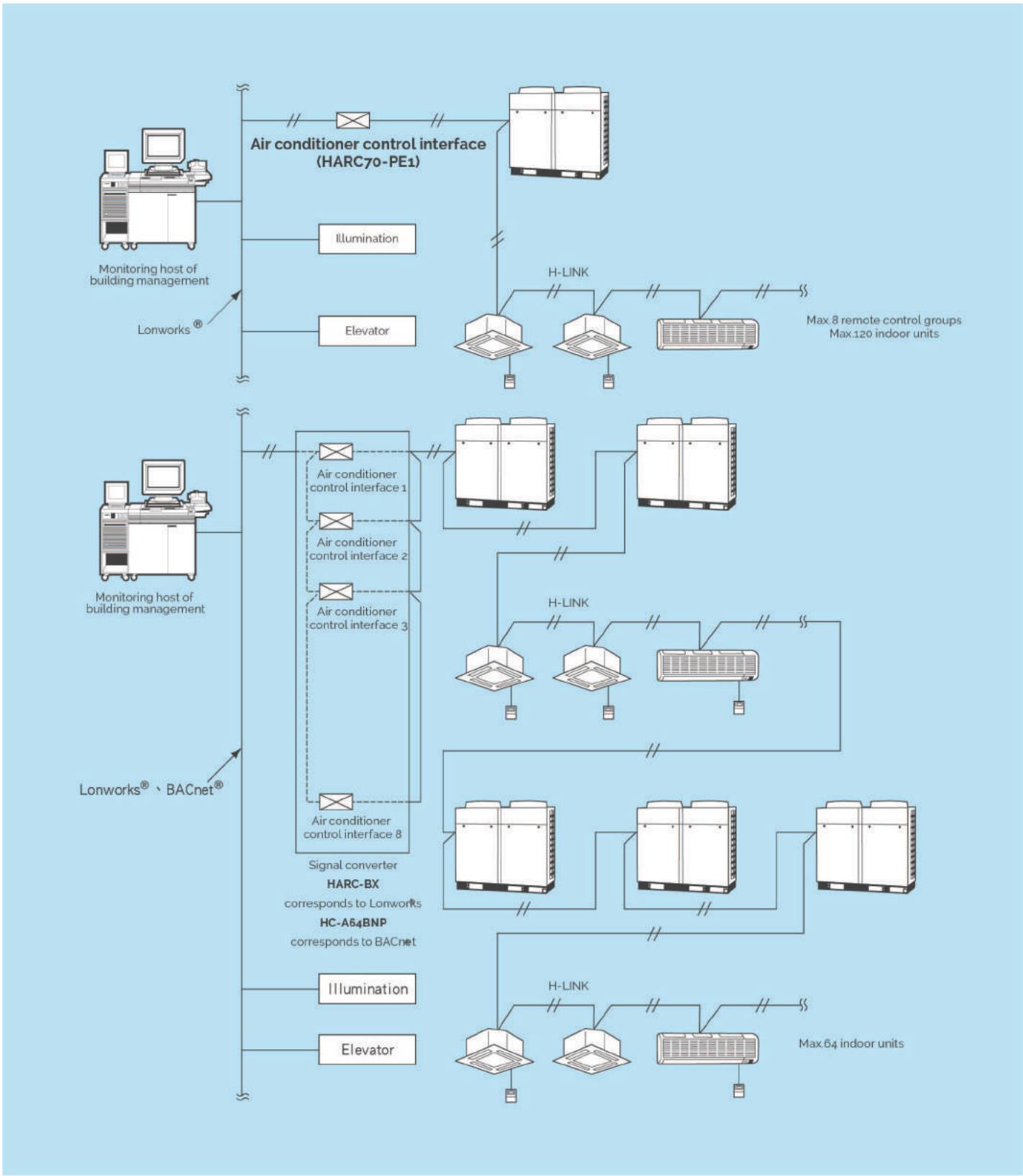
2.Network Management System of PC Framework

* Parallel connection of 16 air converter control interface (PSC-A128WX) by means of one set of management software to control 1,024 outdoor units and 2,560 indoor units.
* Provides configuration diagram of local air conditioners
* Monitor and manage operations via LAN
* Vivid image interface to easily display the operation and temperature of each indoor unit
* 16 operating modes can be set per day for weekly schedule; 5 specific dates can be set for annual schedule
* Operates with central station controller EZ, central, and centralized on/off controller
* Schematic diagram for calculating ratio, operating time and temperature setting is used to facilitate air conditioner operations



3. Building Management System

The building management system can connect with the management computer in the building to integrate with the central air conditioning systems. Specific signal converters lets Hitachi units connect with an open network (Lonworks®, BACnet®) to meet the demands of modern establishments.



Centralized Controller

Central station controller EZ

PSC-A64GT

Independently controls 64 groups of indoor units.

- 8.5-inch touch screen to display information clearly and facilitate operation.
- Controls a maximum of 160 indoor units of 64 groups in 4 blocks.
- Provides basic control functions
- Remote operation, urgent stop, setting operation and fault signals are available via external input or output signal.
- Create daily operation settings such as temperature control or power off.
- Display cumulative operating time of each month of each group to manage energy use.
- Self-demand control can limit power consumption in specific time and save energy.
- Two-core signal wire for easy installation (Max wiring length 1,000m).

Central centralized controller

PSC-A64S

Independently controls 64 groups of indoor units.

- Control up to 160 indoor units of 64 groups in 4 blocks.
- Provide basic control functions
- Three functional settings based on user requirement.
- Remote operation, urgent stop, setting operation and alarm signals are available via external input or output signal.
- Matches with other centralized controllers.
- Two-core signal wire for easy installation (max wiring length 1,000m).

Standard centralized controller

PSC-5S

Can be used as a small centralized controller for remote controller groups.

- Controls up to 16 groups of wired remote controls (Max.128 indoor units).
- Provides basic control functions.
- Remote operation, urgent stop, setting operation and alarm signals are available via external input or output signal.
- Connects up to 8 centralized controllers in H-LINK.
- Matches with other centralized controllers.
- Two-core signal wire for easy installation (Max wiring length 1,000m).

Centralized ON/OFF controller

PSC-A16RS

Simultaneously or independently controls 16 groups of wired remote controls.

- Controls up to 16 groups of wired remote controls (Max.160 indoor units).
- Centralized controller for displaying operation status.
- Connects up to 8 centralized controllers in H-LINK.
- Can be used with other centralized controllers (PSC-A64S1, PSC-5S).
- Matching with remote control or wireless remote control is required.
- Two-core signal wire for easy installation (Max wiring length 1,000m).

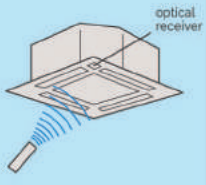
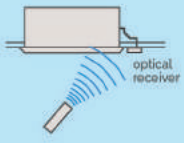
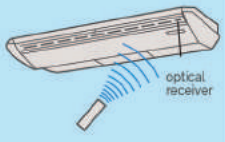
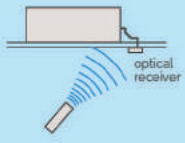
7 days timer

PSC-AIT

Operation based on daily set schedule in a week.

- Switches two modes of weekday setting.
- Users can set up to 3 times of operations every day.
- Digital display to show and confirm setting operation and content easily.
- Restores original setting mode within three days after power failure.
- Matches with other centralized controllers or wired remote controls.
- V (Max wiring length 1,000m).

Remote Controllers

Type \ Model	Cassette Type (4 ways) (RCI)	Cassette Type (2 ways) (RCD)	Ceiling Type (RPC)	In-The-Ceiling Type (RPI)	Wall Type (RPK)
Wireless remote control switch  PC-LH3A	• Matching with optical receiver is required. • Optical receiver is fixed in panel. 	• Matching with optical receiver is required. • Optical receiver is fixed in panel. 	• Matching with optical receiver is required. • Optical receiver is fixed in panel. 	• Matching with optical receiver is required. • The optical receiver can be fixed at desired position. 	• Optical receiver is provided.
Remote control switch  PC-AR	Applicable to all models				
High-performance wired remote control switch  PC-ARF	Applicable to all models				
Wired controller for hotels  PC-ARH	Applicable to all models				

Air Conditioner Control Interface

PSC-A128WX

- Controls up to 64 outdoor units and 160 indoor units in the H-LINK II
- PC (OS : Windows® XP) can be used as a centralized control, daily. Schedule setting, and monitoring of air conditioner
- Central station controller DX management software (PSC-AS2048WXB) is required.
- Remote operation, urgent stop, setting operation and alarm signals are available via external input or output signal
- One computer can connect up to 16 of PSC-A128WX and control 2,048 groups and 2,560 indoor units
- Provides configuration diagram of field conditioner to facilitate viewing of user interface
- Features air conditioner use ratio, operating time, and setting temperature of air conditioner to save energy

HARC70-P1

- Controls up to 8 groups of wired remote controls
- Compatible with an open network (Lonworks®) to enhance building management and operation
- The air conditioner must match with remote control
- Simplified wiring through H-LINK
- Not compatible with other centralized controllers

HC-A64BNP

- Controls up to 64 indoor units
- Compatible with an open network (BACnet®) to enhance building management and operation
- The air conditioner must match with remote control
- Simplified wiring through H-LINK

HC-A32MB

- Controls up to 32 indoor units
- Compatible with an open network (MODbus) to enhance building management and control operation
- Simplified wiring through H-LINK

HC-A8LAN

- Controls up to 8 groups of wired remote controls
- Not compatible with other central controllers
- Simplified wiring through H-LINK
- Compatible with an Ethernet® open netwiork to enhance building management and control operation.

Air Conditioner Control Interface

HARC-BX

- Controls up to 64 groups of wired remote controls
- Air conditioner control interface includes 8 sets of signal converters
- Compatible with an open network (Lonworks®) to enhance building management and control operation
- Connects related parts of H-LINK wiring system according to customer's monitoring demands
- Monitoring and controlling at high capacity is available for large scale systems.
- Corresponds to wired remote control
- Not compatible with other central controllers

Controlling System

Functions		Individual Control					
		Remote Control					
		PC-AR	PC-ARF	PC-ARH	PC-LH3A + (PC-ALH、ALHD、ALHP、ALHZ)	PSC-A16RS	PSC-A64S
		Remote control switch	High-performance wired remote control	Wired controller for Hotels	Wireless remote control + (Optical receiver)	Centralized ON/OFF controller	Central station
Setting function	Operation/Power off	○	○	○	○	○	○
	Switching operating modes	○	○	○	○	×	○
	Temperature	○	○	○	○	×	○
	Fan speed setting	○	○	○	○	×	○
	Limitation of remote control	○	○	×	×	×	○
	Airflow angle setting	○	○	○	○	×	○
	Resetting display of filter cleaning	○	○	×	○	×	○
	Operation/Power off to all machines	X (Note)	X (Note)	X (Note)	X (Note)	○	○
Monitoring function	Operating status	○	○	○	○	○	○
	Operating mode	○	○	○	○	×	○
	Temperature setting	○	○	○	×	×	○
	Fan speed	○	○	○	×	×	○
	Air flow	○	○	○	×	×	○
	Alarm code	○	○	○	○	×	○
	Display of filter cleaning	○	○	×	○	×	○
Daily function	Time set	○	○	×	○	△	△
	Daily operation	△	○	×	×	△	△
	Appointed date operation	△	○	×	×	△	△
Others	Urgently stopping signal input	×	×	×	×	○	○
	Calculating fee of other power consumption	×	×	×	×	×	×
	H-LINK II	○	○	○	○	○	○
Notes					**Mode of optical receiver:** ● PC-ALH(4-Way Cassette Type) ● PC-ALHD(2-Way Cassette Type) ● PC-ALHP(Ceiling Type) ● PC-ALHZ(In-The-ceiling Type, Wall Type)		

△: Combination with 7 days timer is required. —: Setting in host system is required.

Individually. Regional Control			Intelligent Management				
Centralized Controller			Air conditioner Control Interface				Air conditioner Control Interface + Management Software
PSC-5S	PSC-AIT	PSC-A64GT	HC-A64BNP	HARC70-P1 HARC-BX	HC-A32MB	HC-A8LAN	PSC-A128WX + PSC-AS2048WXB
Standard centralized controller	7 days timer	Central station controller EZ	BACnet Air conditioner control interface	Lonworks Air conditioner control interface	MODbus Air conditioner control interface	LAN Air conditioner control interface	Central station controller DX + Central station controller DX management software
○	×	○	○	○	○	○	○
○	×	○	○	○	○	○	○
○	×	○	○	○	○	○	○
○	×	○	○	○	○	○	○
○	×	○	○	○	×	○	○
○	×	○	×	○	○	○	○
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○	×	○	—	○	—	—	○
○	×	○	○	○	○	○	○
○	×	○	○	○	○	○	○
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×	×	×	×	×	×	×	○
×	○	○	○	×	○	○	○
	● Operating schedule is set by matching with wired remote control or centralized controller.		● Provides signals to connect with BMS host.	● Provides signals to connect with BMS host.	● Provides signals to connect with BMS host.	● Provides signals to connect with BMS host.	● Matches with personal computer or tablet PC is required. ● Contains calculation of the ratio of easy air conditioner using.

(Note) : As multiple indoor units match with one common remote control, the entire indoor unit system can be operated/stopped.

Set-Free

Compact and Powerful Air Conditioning Solution

POWER SAVING

DC INVERTER SCROLL COMPRESSOR

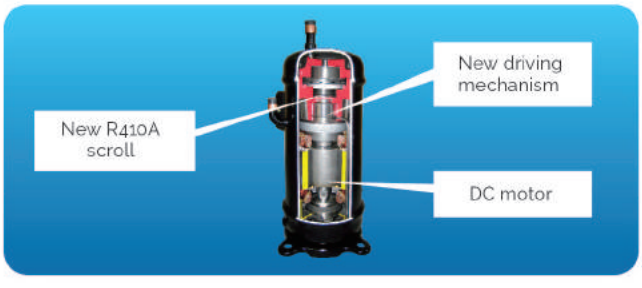
With the combination of a DC motor and a new and highly efficient driving mechanism, the outdoor unit reduced weight up to 50% less than conventional units.

New driving mechanism

The new driving mechanism can enhance reliability because it decreases mechanical movement when the refrigerant is compressed.

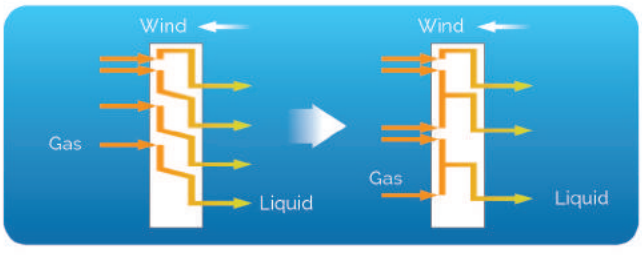
1Hz / Step precise control

High-efficiency DC inverter compressor applies vector technology to control the compressor 1Hz/step accurately so that it can automatically adjust operation for optimal comfort.



OPTIMIZED HEAT EXCHANGER

2 in 1 path arrangements (such as fluid path 2 and airflow path 1) were developed to prevent damage in the heat exchanger to further enhance its performance.

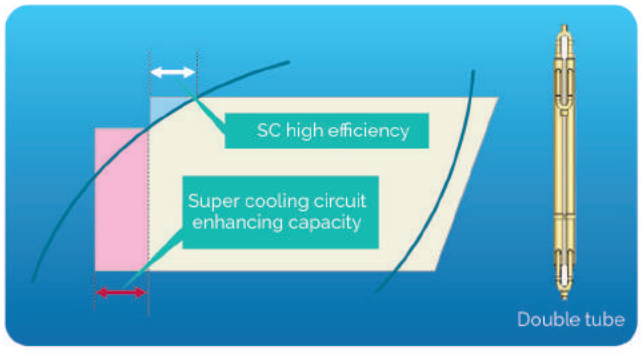


ENERGY SAVING

With the combination of the optimized heat exchanger, the optimized heat transfer pipe for the refrigerant, and efficient sub cooling circuit; the Energy Efficiency Ratio (EER) is increased. Higher EERs mean bigger savings.

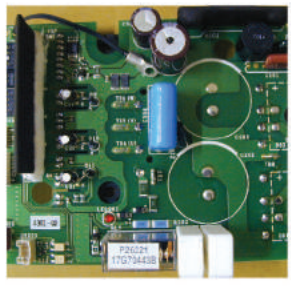
SUPER COOLING CIRCUIT

High efficiency double pipe heat exchanger (for MQ(D) type only) enhances overall performance.



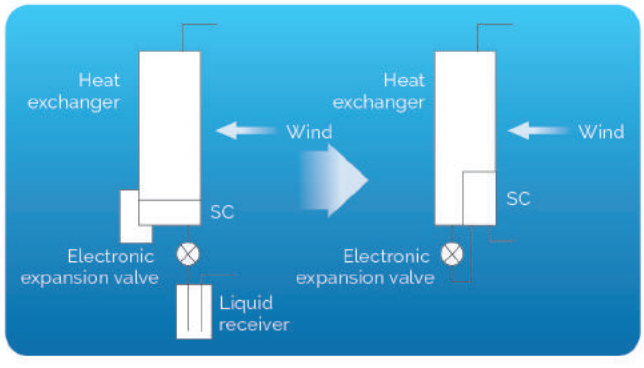
Inverter DC fan motor

New control board distributes cooling load efficiently during low or high speeds.



Efficient Sub Cooler Design

The sub cooler is placed in front of the unit for optimum performance.



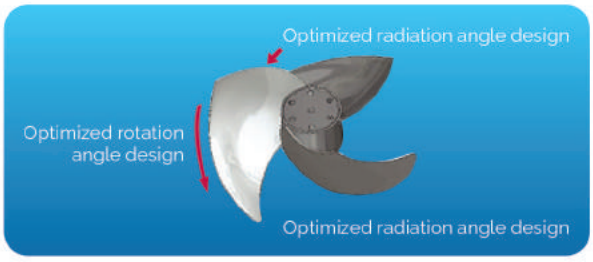
Environment Friendly

Improved cooling cycle reduces the amount of cooling waste to minimize environmental impact.

INSTANT COMFORT

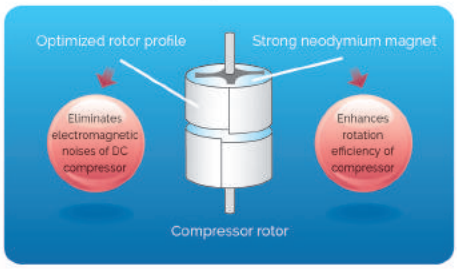
HIGHLY EFFICIENT FAN

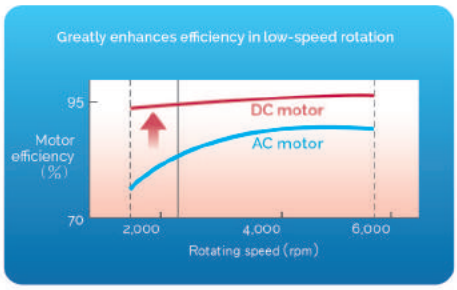
- New three wing ultra-flow fan with 644mm diameter
- Low rotation, low noise and low power consumption



QUIET OPERATION

- Inverter DC motor design enhances operational efficiency
- Compressor rotor generates electromagnetic interference to eliminate electromagnetic noise





OVERVOLTAGE PROTECTION RELAY (Optional)

Additional feature that protects the unit from damage caused by overvoltage. Abnormal overvoltage may be caused by various reasons including sudden power interruptions, lightning impulses, switching impulses, etc.

EASY INSTALLATION

LIGHT WEIGHT DESIGNS, TRANSPORTED BY ELEVATOR

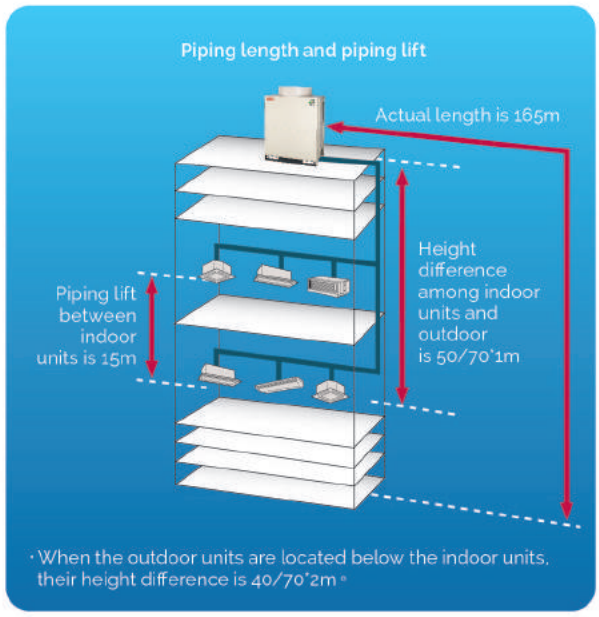
- Compact and lightweight unit can be delivered via elevator easily.

RAM-8~12MQ(D)	Transported by elevator with 8 people loading capacity
RAM-14~18MQ(D)	Transported by elevator with 10 people loading capacity

- Integrated unit casing allows compressors to be arranged side by side.

FREE INSTALLATION LONG PIPING (MQ(D) TYPE)

Maximum pipe length is 165m, and first branch pipe to the farthest indoor unit can reach up to 90m.



Note : *1 : Follow strict specification for over 50 m.

*2 : Follow strict specification for over 40 m.

HITACHI Set - Free

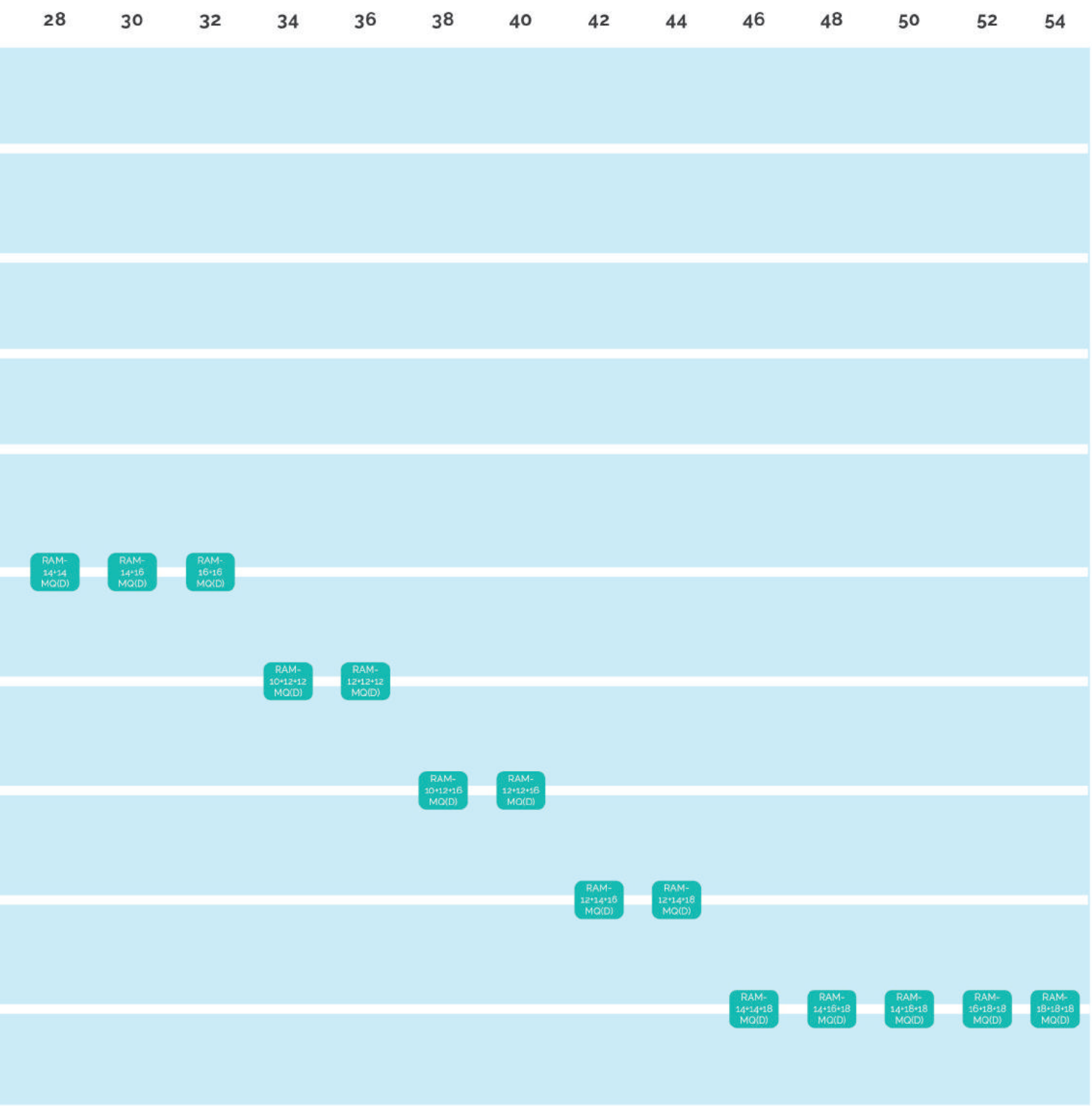
Outdoor Unit

Outdoor units start from 8HP.
Modular configuration can be set up to 54HP.

R410A Refrigerant

Capacity (HP)	5	6	8	10	12	14	16	18	20	22	24	26
Premium												
			RAM-8 MQ(D)	RAM-10 MQ(D)	RAM-12 MQ(D)							
						RAM-14 MQ(D)	RAM-16 MQ(D)	RAM-18 MQ(D)				
									RAM-8+12 MQ(D)			
										RAM-8+14 MQ(D)	RAM-10+14 MQ(D)	RAM-12+14 MQ(D)
												
												
												
												
												

Full Range of Products



HITACHI Set - Free

Outdoor Unit

Outdoor units start from 8HP.
Modular configuration can be set up to 48HP.

R410A Refrigerant

Capacity (HP)

5 6 8 10 12 14 16 18 20 22 24 26

Economic





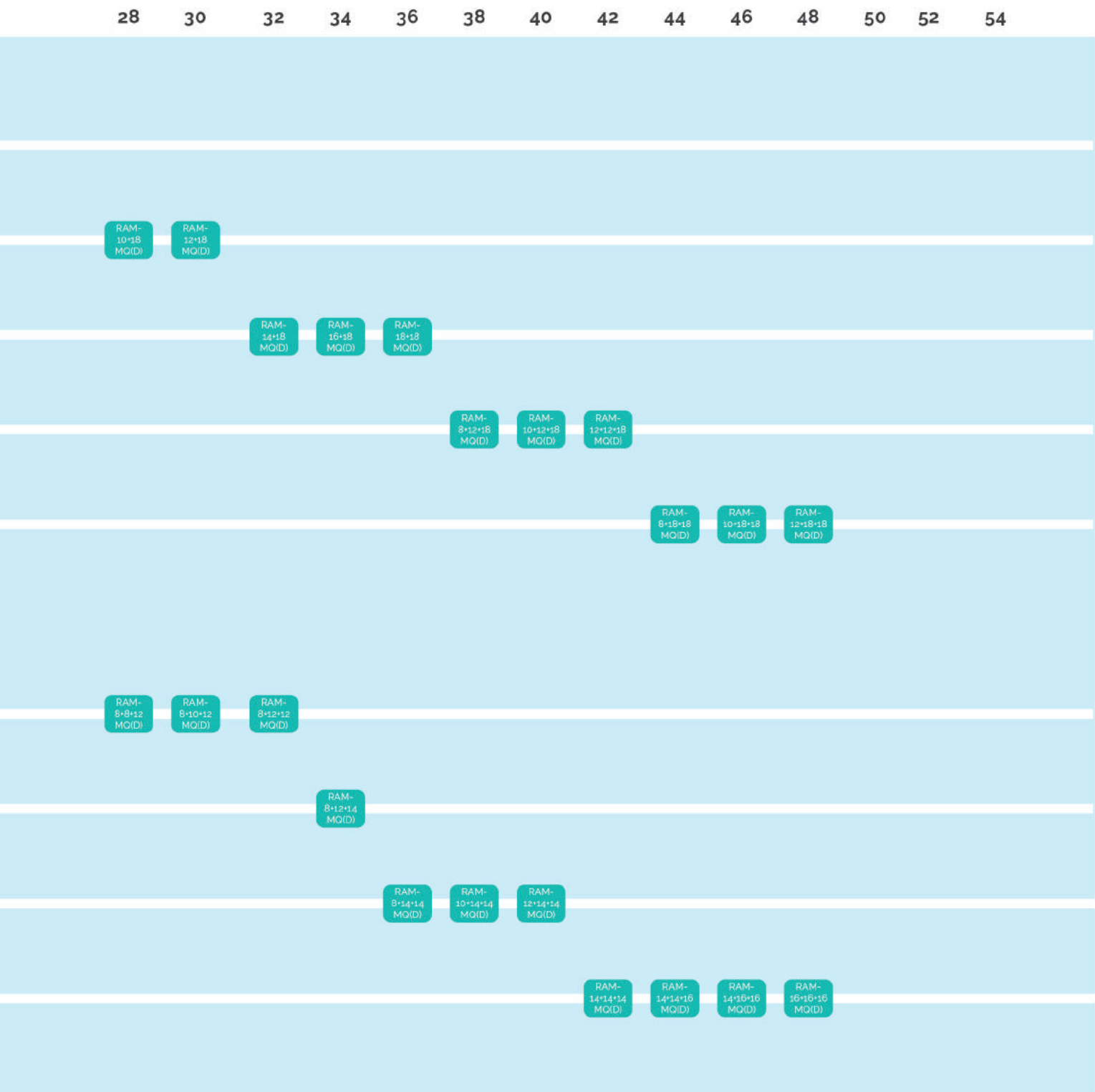
RAM-10+12 MQ(D)
RAM-12+12 MQ(D)
RAM-8+18 MQ(D)

High Performance




RAM-8+8+8 MQ(D)
RAM-8+8+10 MQ(D)

Full Range of Products



GENERAL DATA

ROYAL Series MQ/MQD Model (PREMIUM)

Model								
			RAM-8MQ(D)	RAM-10MQ(D)	RAM-12MQ(D)	RAM-14MQ(D)	RAM-16MQ(D)	RAM-18MQ(D)
Power Supply			MQ Model : AC 3phase 230V 60Hz / MQD Model : AC 3phase 4wires 380V 60Hz					
Outer Dimensions (WxDxH)		mm	950 x 750 x 1,720	950x750x1,720	950x750x1,720	1,210 x 750 x 1,720	1,210 x 750 x 1,720	1,210 x 750 x 1,720
Nominal Cooling Capacity		kW	22.4	28.0	33.5	40.0	45.0	50.4
Cooling Power Consumption		kW	5.17	7.20	8.89	10.67	12.57	15.00
EER		W/W	4.33	3.89	3.77	3.75	3.58	3.36
Running Current	230 V	A	14.4	20.1	24.8	29.7	35.1	41.8
	380V	A	8.7	12.2	15.0	18.1	21.2	25.3
Starting Current	230V	A	15	15	15	158*	158*	191*
	380V	A	9	9	9	96*	96*	116*
Compressor Output		kW	4.8	4.8	4.8	4.8 x 2	4.8 x 2	4.8 + 6.4
Condenser Fan	Air Flow	m^3/min	155	170	175	195	195	195
	Motor Output	kW	0.44	0.44	0.44	0.66	0.66	0.66
Main Refrigerant Piping	Gas Line	mm	ψ 19.05 (welding)	ψ 22.2 (welding)	ψ 25.4 (welding)	ψ 25.4 (welding)	ψ 28.6 (welding)	ψ 28.6 (welding)
	Liquid Line	mm	ψ 9.53 (with nut)	ψ 9.53 (with nut)	ψ 12.7 (with nut)	ψ 12.7 (with nut)	ψ 12.7 (with nut)	ψ 15.88 (with nut)
Net Weight		kg	215	215	240	325	325	331
Sound Pressure Level		dB(A)	57	58	60	62	62	63
Refrigerant		--	R410A					
Packaging Measurement		m^3	1.65	1.65	1.65	2.07	2.07	2.07

* Represents that starting current of the last compressor while other compressors are in operation.

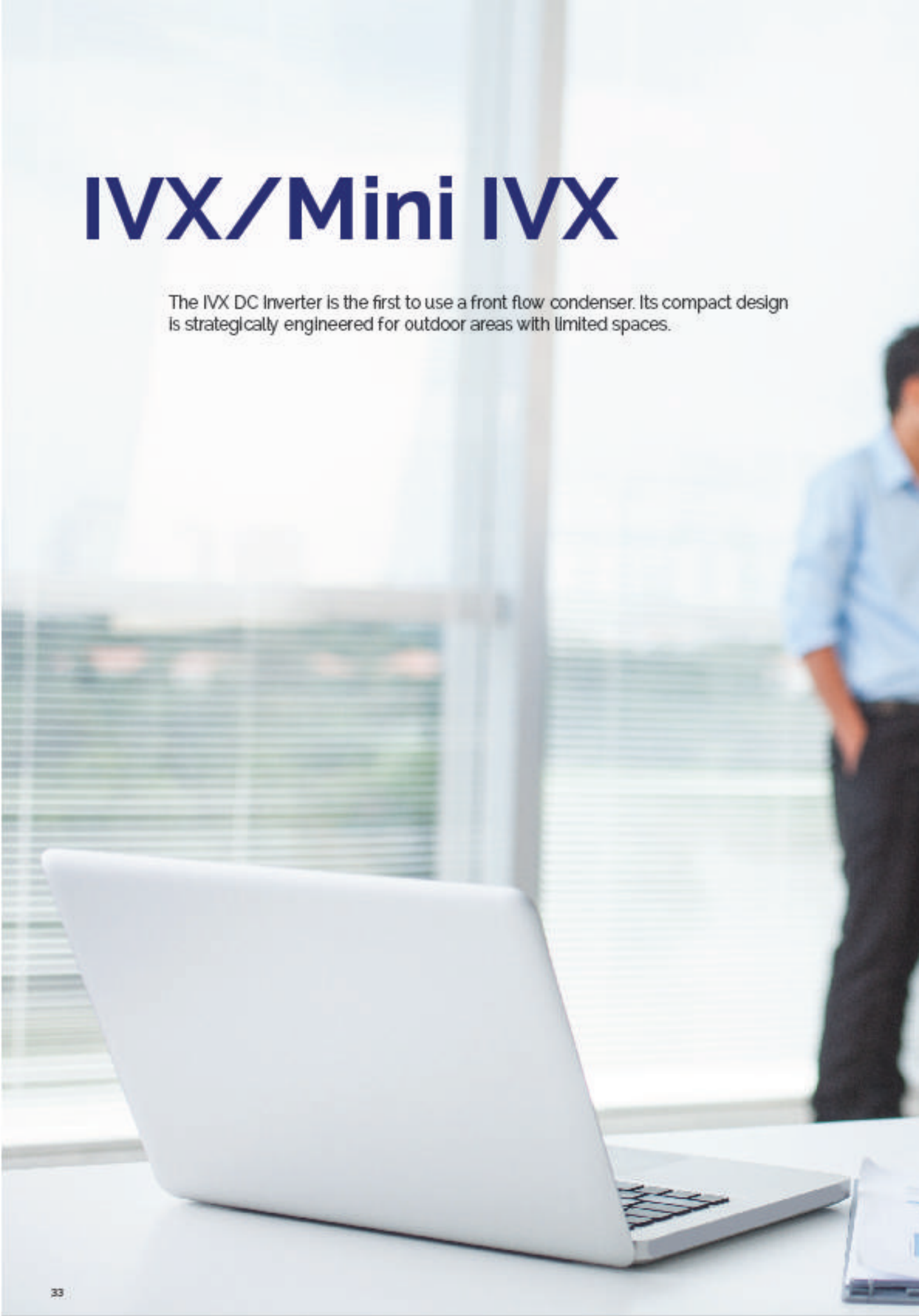
ROYAL Series MQ/MQD Model (PREMIUM)

Model									
			RAM-12MQ(D) RAM-8MQ(D)	RAM-14MQ(D) RAM-8MQ(D)	RAM-14MQ(D) RAM-10MQ(D)	RAM-14MQ(D) RAM-12MQ(D)	RAM-14MQ(D) RAM-14MQ(D)	RAM-16MQ(D) RAM-14MQ(D)	RAM-16MQ(D) RAM-16MQ(D)
Power Supply			MQ Model : AC 3phase 230V 60Hz / MQD Model : AC 3phase 4wires 380V 60Hz						
Outer Dimensions (WxDxH)		mm	1,920 x 750 x 1,720	2,180 x 750 x 1,720	2,180x 750 x 1,720	2,180x 750 x 1,720	2,440 x 750 x 1,720	2,440 x 750 x 1,720	2,440 x 750 x 1,720
Nominal Cooling Capacity		kW	55.9	62.4	68.0	73.5	80.0	85.0	90.0
Cooling Power Consumption		kW	14.06	15.84	17.87	19.56	21.34	23.24	25.14
EER		W/W	3.98	3.94	3.81	3.76	3.75	3.66	3.58
Running Current	230 V	A	39.2	44.1	49.8	54.5	59.4	64.8	70.2
	380V	A	23.7	26.8	30.3	33.1	36.2	39.3	42.4
Starting Current	230V	A	30*	178*	178*	178*	198*	198*	198*
	380V	A	18*	108*	108*	108*	120*	120*	4.8 x 4
Compressor Output		kW	4.8 x 2	4.8 x 3	4.8 x 3	4.8 x 3	4.8 x 4	4.8 x 4	4.8 + 4
Condenser Fan	Air Flow	m^3/min	175 + 155	195 + 155	195 + 170	195 + 175	195 + 195	195 + 195	195 X 2
	Motor Output	kW	0.44 x 2	0.66 + 0.44	0.66 + 0.44	0.66 + 0.44	0.66 x 2	0.66 x 2	0.66 x 2
Main Refrigerant Piping	Gas Line	mm	ψ 28.6	ψ 28.6	ψ 28.6	ψ 31.75	ψ 31.75	ψ 31.75	ψ 31.75
	Liquid Line	mm	ψ 15.88	ψ 15.88	ψ 15.88	ψ 19.05	ψ 19.05	ψ 19.05	ψ 19.05
Net Weight		kg	240 + 215	325 + 215	325 + 215	325 + 240	325 + 325	325 + 325	325 + 325
Sound Pressure Level		dB(A)	62	62	63	63	64	65	65
Refrigerant		--	R410A						
Packaging Measurement		m^3	1.65 + 1.65	2.07 + 1.65	2.07 + 1.65	2.07 + 1.65	2.07 + 2.07	2.07 + 2.07	2.07 + 2.07

* Represents that starting current of the last compressor while other compressors are in operation.

IVX/Mini IVX

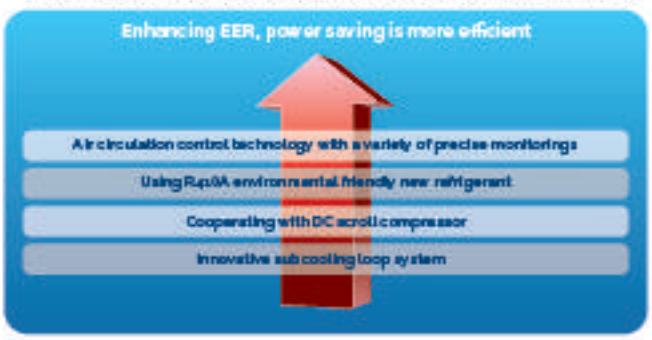
The IVX DC Inverter is the first to use a front flow condenser. Its compact design is strategically engineered for outdoor areas with limited spaces.



POWER SAVING

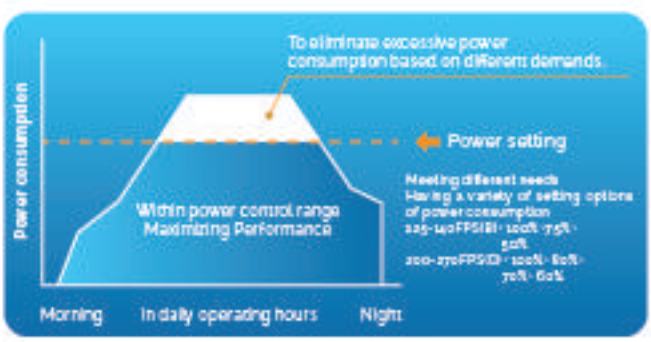
High EER to save more power

With the DC Inverter Scroll Compressor, cooling capacity goes high without necessarily bringing power consumption with it.



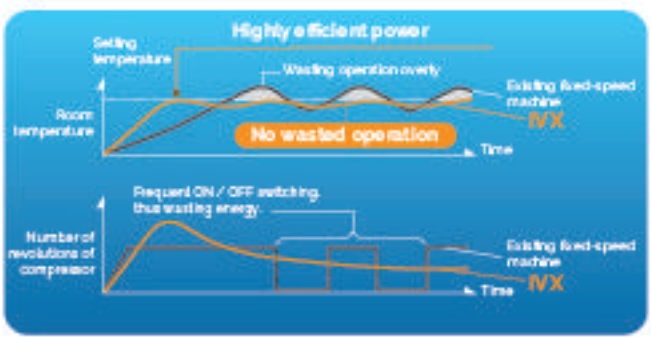
Self-demand control

With self- demand control feature, the unit automatically controls power consumption by detecting current and controls its original external signals to select multiple operation modes ideal for different requirements.



Improving energy efficiency

PAM Inverter Control can set the temperature quickly after initialization, thus maximizing cooling and heating performance with minimal power consumption.

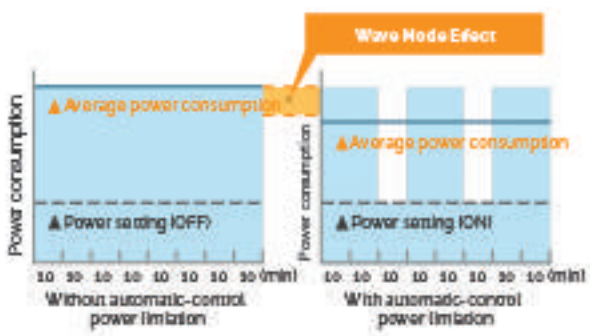


High Efficiency DC Scroll Compressor

Combined with a new driving mechanism, the highly efficient DC motor weighs 50% less than conventional compressors. It's high operational efficiency effectively lowers power consumption keeping you cool for even longer hours.

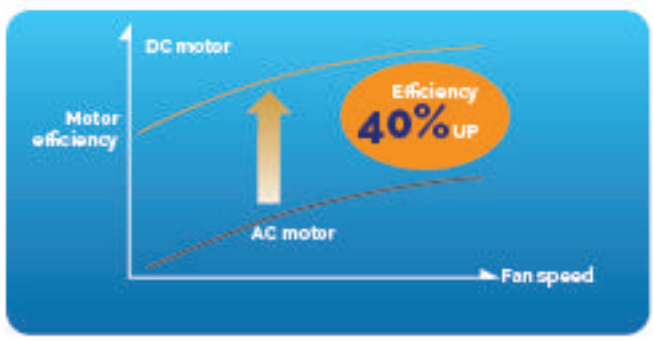
New Wave Mode

The power rationing setup of Wave Mode enables you to turn the unit on or off automatically between intervals to lower power consumption.



Power Saving DC Inverter Motor

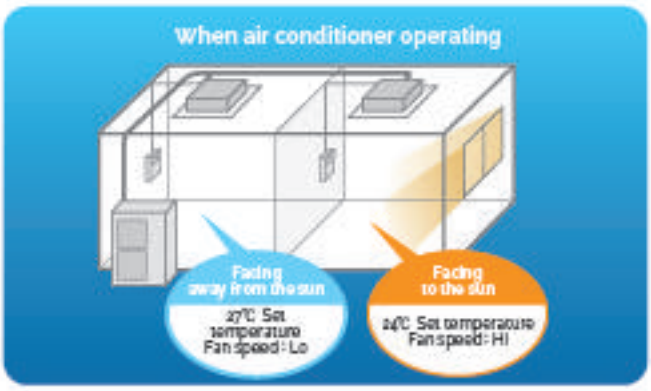
IVX outdoor unit fan is driven by a DC inverter motor that operates more efficiently than conventional AC motors.



INSTANT COMFORT

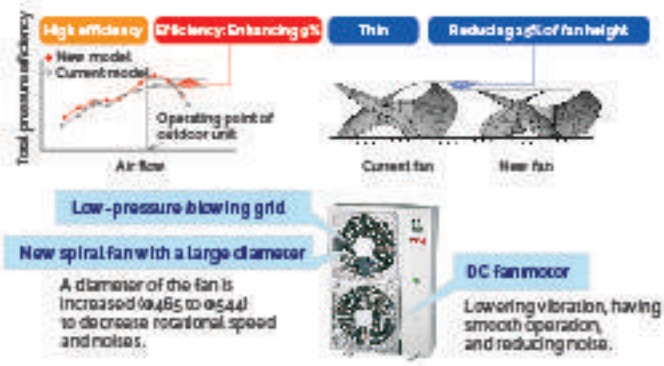
Individual Operation for Individual Units

Hitachi IVX can set separate operating modes for separate rooms of different conditions (i.e. sunlit room, narrow or wide rooms, etc.)



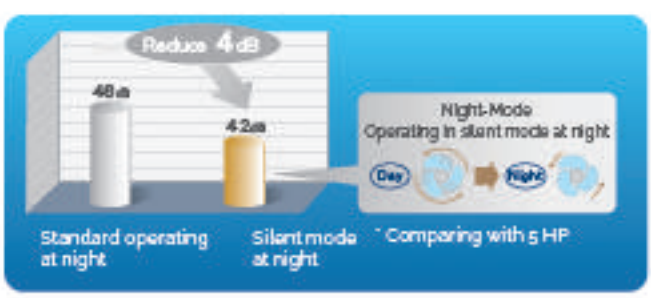
Silent technology

Low pressure blowing grid and thin spiral fan generates low noise levels for uninterrupted comfort.



Night Mode

Hitachi IVX features a silent function ideal for night operations that further reduces noise levels at night.

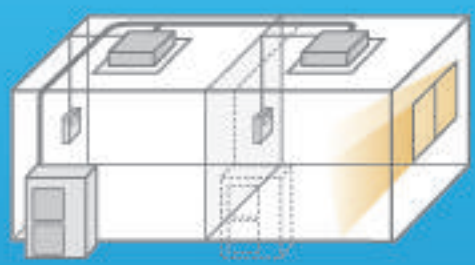


EASY INSTALLATION

One Outdoor Unit Requirement

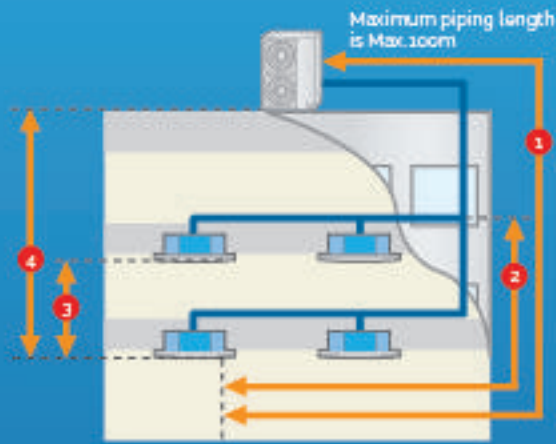
Individual operation of two indoor units is possible with just one outdoor unit. This would also require less piping and wiring.

When the air conditioner operating



Long Piping Installation

Long piping for more flexible installation options.



		5HP	6HP	8HP	10HP	12HP
		RAM-[illegible]	RAM-[illegible]	RAM-[illegible]	RAM-[illegible]	RAM-[illegible]
Maximum Piping length	Maximum Piping length ①	75m	75m	100m	100m	100m
	Equivalent length ①	90m	90m	110m	110m	110m
	Multi-kit to indoor unit ②	10m	10m	40m	40m	40m
Maximum Piping Lift	Between indoor units ③	5m	5m	10m	10m	10m
	Indoor unit to outdoor unit H.upper ④	30m	30m	40m	40m	40m
	Indoor unit to outdoor unit H.lower ④	40m	40m	50m	50m	50m
Maximum indoor units		4	4	5	5	5

OVERVOLTAGE PROTECTION RELAY (Built in)

Additional feature that protects the unit from damage caused by overvoltage. Abnormal overvoltage may be caused by various reasons including sudden power interruptions, lightning impulses, switching impulses, etc.

THE MINI IVX WITH FULL DC INVERTER TECHNOLOGY (SINGLE FAN)

- Same DC technology now in a more compact size-total weight is decreased by 21%.
- DC fan motors work more efficiently compared to AC motors therefore using less energy.
- Uses environmentally friendly R410 refrigerant improving EER value.

Environmental friendly refrigerant R410A

ENVIRONMENT FRIENDLY REFRIGERANT,CARING FOR OUR PLANET

REVOLUTIONARY R410A REFRIGERANT

The R410A refrigerant was developed to replace R-22 which has high ozone depletion potential.It also allows the air conditioner to consume less energy while delivering the same cooling comfort you deserve.

SINGLE REFRIGERANT PIPING SYSTEM

Hitachi's frequency inverter reduces the loss of traditional start cycle operations by utilizing a lower electrical load, reducing power consumption during operation.

SINGLE REFRIGERANT PIPING SYSTEM

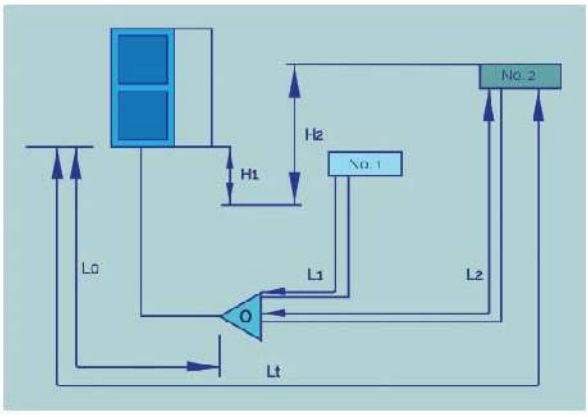
The single refrigerant piping system can reduce your use of refrigerants and the pipelines are streamlined for easy installation freeing your workplace for more space. The outdoor unit can be used for pipe connections compatible for all directions: from the front, back and bottom aof the installation, and long refrigerant piping can be installed.

SINGLE REFRIGERANT PIPING SYSTEM

CS-NET controls your whole air conditioning system or use the signal converter to open the building on the web (LONWORKS-BACnet) for monitoring.

COMPATIBLE INDOOR UNIT

The Mini IVX (Single Fan) with Full DC Inverter Technology can connect up to two (2) indoor units.



FLEXIBLE INSTALLATION

The Mini IVX series air conditioner is optimized for long installations up to 95 m.

(In this example, only one refrigerant pipe is used. In actual installation, however, seperate pipes should be used for refrigerant and refrigeration oil.)

Outdoor Unit Model			RAM-112FPSQB	RAM-125FPSQB	RAM-140FPSQB	RAM-160FPSQB
Total Pipe Length: Lo+L1+L2			70	75	75	75
Max. Pipe Length (Actual): Lt		Pipe length from the outdoor unit to each indoor unit.	90 (70)	95 (75)	95 (75)	95 (75)
Max. Lapse Height between the outdoor unit and indoor units: H1		When the outdoor unit is higher than the indoor unit.	30	30	30	30
		When the outdoor unit is lower than the indoor unit.	20	20	20	20
Max. Lapse Height between indoor units: H2			3	3	3	3
Max. Pipe Length between branch pipes and indoor units: L1, L2			10	10	10	10
Refrigerant Pipe Size	Gas	Indoor	Φ15.88	Φ15.88	Φ15.88	Φ15.88
		Outdoor	Φ15.88	Φ15.88	Φ15.88	Φ15.88
	Liquid	Indoor	Φ6.35	Φ6.35	Φ6.35	Φ6.35
			Φ9.53	Φ9.53	Φ9.53	Φ9.53
		Outdoor	Φ9.53	Φ9.53	Φ9.53	Φ9.53

HITACHI IVX / Mini IVX

Outdoor Unit

R410A Refrigerant

Capacity (kW)

10 11 12 13 14 15 16 17 18

IVX Series Dual Fan

RAM-125 FPS(B)

RAM-140 FPS(B)

Mini IVX Single Fan

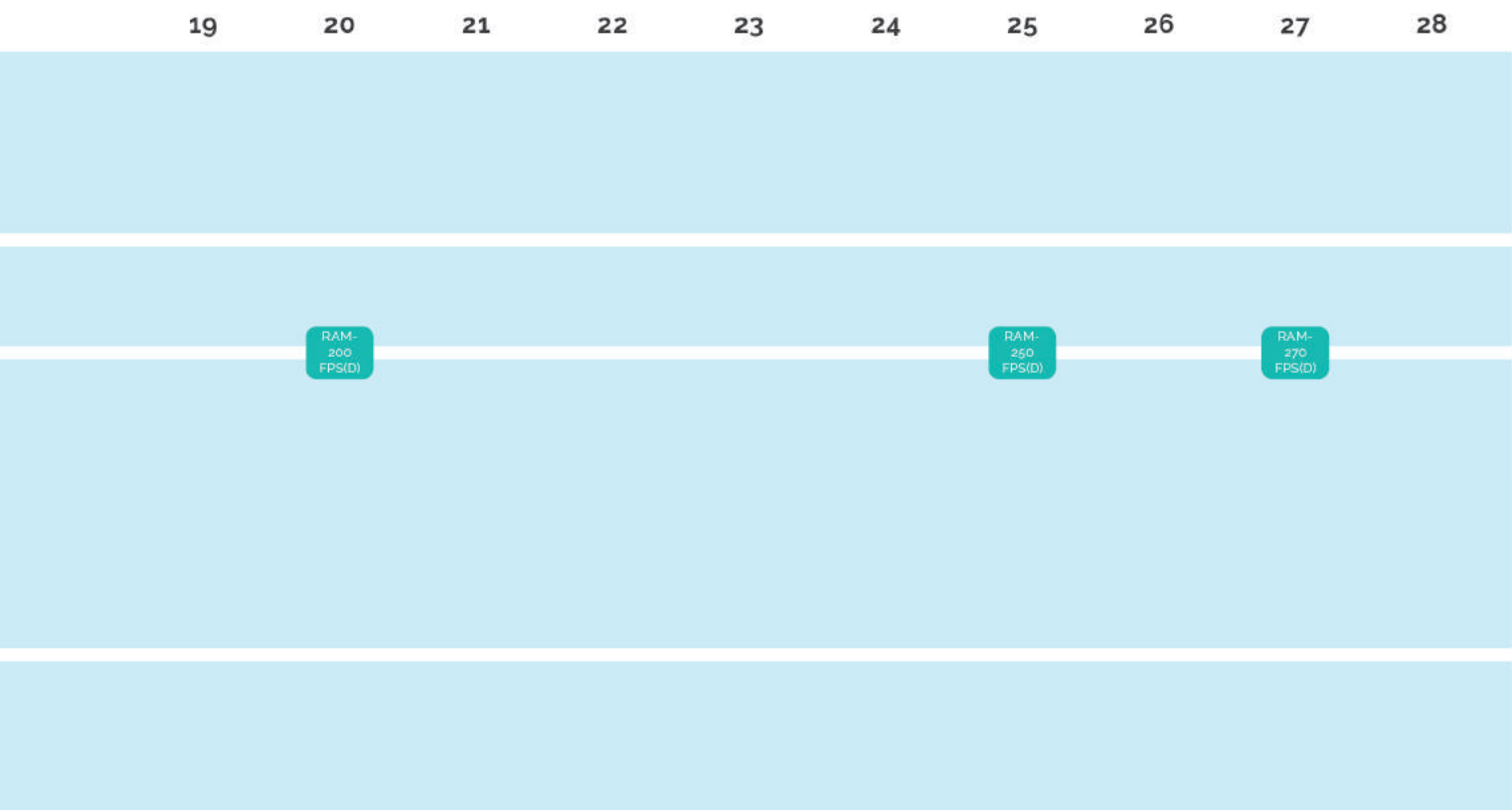
RAM-112 FPSQB

RAM-125 FPSQB

RAM-140 FPSQB

RAM-160 FPSQB

Full Range of Products



GENERAL DATA

IVX Series FPS(B) / FPS(D) Model

Model				
			RAM-125FPS(B)	RAM-140FPS(B)
Power Supply			FPS Model : AC 3 Phase 230V 60Hz / FPS (B) Model : AC 1 Phase 230V 60Hz	
Outer Dimensions (WxDxH)		mm	950 x 370 x 1,380	950 x 370 x 1,380
Nominal Cooling Capacity		kW	12.5	14.0
Cooling Power Consumption		kW	2.91	3.92
EER		W/W	4.30	3.57
Running Current	230 V	A	13.8 / 7.9	18.5 / 10.7
	380V	A	-	-
Starting Current	230V	A	14 / 8	14 / 8
	380V	A	-	-
Compressor Output		kW	3.0	3.0
Condenser Fan	Air Row	m^3/min	90	100
	Motor Output	kW	0.074 (8) + 0.074 (8)	0.074 (8) + 0.074 (8)
Main Refrigerant Piping	Gas Line	mm	ψ15.88 (with nut)	ψ15.88 (with nut)
	Liquid Line	mm	ψ9.53 (with nut)	ψ9.53 (with nut)
Net Weight		kg	96	96
Sound Pressure Level		dB(A)	46	48
Refrigerant		--	R410A	

NOTES

1. The above data is based on 100% capacity combination of the indoor units and the following conditions.
Cooling Operation Conditions
Indoor Temperature : 27℃(DB)/19℃(WB)
Outdoor Temperature : 35℃(DB)
Piping Length : 7.5 Meters Piping Lift : 0 Meter
Combined capacity range is 100~130%(For IVX series).
2. The sound pressure level is based on the following conditions :
1 Meter from the unit service cover surface and 1.5 meters from floor level.
In the case of heating mode, the sound pressure level increases by approximately 1-2dB.
3. The sound pressure is measured in the anechoic chamber so that reflected sound should be taken into consideration in the field.
4. *Represents that starting current of the last compressor while other compressors is in operation.
5. To offer a comfort environment, the speed of compressor is probably raised. The current of the above data is at normal operating conditions, not the maximum current.
6. Choose the field- supplied ELB, power switch, fuse, power cable according to the service manual or technical catalog.

GENERAL DATA

IVX Series FPS(B) / FPS(D) Model

Model					
			RAM-200FPS(D)	RAM-250FPS(D)	RAM-270FPS(D)
Power Supply			FPS Model : AC 3 Phase 230V 60Hz / FPSD Model : AC 3 Phase 380V 60Hz		
Outer Dimensions (WxDxH)		mm	1,100 x 390 x 1,650	1,100 x 390 x 1,650	1,100 x 390 x 1,650
Nominal Cooling Capacity		kW	20.0	25.0	27.0
Cooling Power Consumption		kW	4.77	6.94	7.80
EER		W/W	4.19	3.60	3.46
Running Current	230 V	A	13.3	19.4	21.8
	380V	A	7.8	11.4	12.8
Starting Current	230V	A	7	7	7
	380V	A	4	4	4
Compressor Output		kW	4.8	4.8	4.8
Condenser Fan	Air Row	m^3/min	121	150	163
	Motor Output	kW	0.138 (8) + 0.11 (6)	0.138 (8) + 0.12 (6)	0.138 (8) + 0.24 (6)
Main Refrigerant Piping	Gas Line	mm	ψ25.4 (with flange)	ψ25.4 (with flange)	ψ28.6 (with flange)
	Liquid Line	mm	ψ9.53 (with nut)	ψ12.7 (with nut)	ψ12.7 (with nut)
Net Weight		kg	170	170	173
Sound Pressure Level		dB(A)	56	58	60
Refrigerant		--	R410A		

NOTES

1. The above data is based on 100% capacity combination of the indoor units and the following conditions.
   Cooling Operation Conditions
   Indoor Temperature : 27℃(DB)/19℃(WB)
   Outdoor Temperature : 35℃(DB)
   Piping Length : 7.5 Meters Piping Lift : 0 Meter
   Combined capacity range is 100-130%(For IVX series).
2. The sound pressure level is based on the following conditions :
   1 Meter from the unit service cover surface and 1.5 meters from floor level.
   In the case of heating mode, the sound pressure level increases by approximately 1-2dB.
3. The sound pressure is measured in the anechoic chamber so that reflected sound should be taken into consideration in the field.
4. *Represents that starting current of the last compressor while other compressors is in operation.
5. To offer a comfort environment, the speed of compressor is probably raised. The current of the above data is at normal operating conditions, not the maximum current.
6. Choose the field- supplied ELB, power switch, fuse, power cable according to the service manual or technical catalog.
   *For RAM-200-270FPS will be available April 2016
7. IVX 200 Series (RAM 200-270 FPS) availability to be confirmed.

GENERAL DATA

Mini IVX

Model			RAM-112FPSQB	RAM-125FPSQB
Indoor Unit			2	
Power Supply			AC 1phase 230V 60Hz	
Outer Dimensions (WxDxH)		mm	1,060x370x940	1,060x370x940
Nominal Cooling Capacity		kW	11.2	12.5
Cooling Power Consumption		kW	2.66	3.20
EER		W/W	4.20	3.90
Running Current	230V	A	12.9	15.5
Starting Current	230V	A	13.0	13.0
Compressor Motor Output		kW	3.0	3.0
Condenser Fan	Air Flow	m3/min	60	66
	Motor Output	kW(pole)	0.183(8)	0.183(8)
Main Refrigerant Piping	Gas Line	mm	ψ15.88(with nut)	ψ15.88(with nut)
	Liquid Line	mm	ψ9.53(with nut)	ψ9.53(with nut)
Net Weight		kg	76	76
Sound Pressure Level		dB(A)	52	55
Refrigerant		---	R410A	R410A

Notes:
1. The above data is based on 100% capacity combination of the indoor units and the following conditions.
   Cooling Operation Conditions
   Indoor Temperature: 27°C(DB)/19°C(WB)
   Outdoor Temperature: 35°C(DB)
   Piping Length: 7.5 Meters Piping Lift: 0 Meter
   Combined capacity range is up to 110%.
2. The sound pressure level is based on the following conditions:
   1 Meter from the unit service cover surface and 1.5 meters from floor level.
   In the case of heating mode, the sound pressure level increases by approximately 1-2dB.
3. The sound pressure is measured in anechoic chamber so that reflected sound should be taken into consideration in the field.
4. "Represents that starting current of the last compressor while other compressorsis in operation.
5. To offer a comfort environment, the speed of compressor is probably raised. The current of the above data is at normal operating conditions, not the maximum current.
6. Choose the field-supplied ELB, power switch, fuse, power cable according to the service manual or technical catalog.

GENERAL DATA

Mini IVX

Model			RAM-140FPSQB	RAM-160FPSQB
Indoor Unit			2	
Power Supply			AC 1phase 230V 60Hz	
Outer Dimensions (WxDxH)		mm	1,060x370x940	1,060x370x940
Nominal Cooling Capacity		kW	14.0	16.0
Cooling Power Consumption		kW	3.96	5.16
EER		W/W	3.53	3.10
Running Current	230V	A	19.1	25.0
Starting Current	230V	A	13.0	13.0
Compressor Motor Output		kW	3.0	3.0
Condenser Fan	Air Flow	m3/min	72	74
	Motor Output	kW(pole)	0.183(8)	0.183(8)
Main Refrigerant Piping	Gas Line	mm	ψ15.88(with nut)	ψ15.88(with nut)
	Liquid Line	mm	ψ9.53(with nut)	ψ9.53(with nut)
Net Weight		kg	76	76
Sound Pressure Level		dB(A)	57	58
Refrigerant		---	R410A	R410A

Notes:
1. The above data is based on 100% capacity combination of the indoor units and the following conditions.
   Cooling Operation Conditions
   Indoor Temperature: 27°C(DB)/19°C(WB)
   Outdoor Temperature: 35°C(DB)
   Piping Length: 7.5 Meters Piping Lift: 0 Meter
   Combined capacity range is up to 110%.
2. The sound pressure level is based on the following conditions:
   1 Meter from the unit service cover surface and 1.5 meters from floor level.
   In the case of heating mode, the sound pressure level increases by approximately 1-2dB.
3. The sound pressure is measured in anechoic chamber so that reflected sound should be taken into consideration in the field.
4. `Represents that starting current of the last compressor while other compressorsis in operation.
5. To offer a comfort environment, the speed of compressor is probably raised. The current of the above data is at normal operating conditions, not the maximum current.
6. Choose the field-supplied ELB, power switch, fuse, power cable according to the service manual or technical catalog.

Indoor Units

Air conditioning solution for every room

Indoor Unit
4-Way Cassette Type

Sleek and lightweight design has a low noise value of 32 dB(A) (2.5 HP model).

DC MOTORS

FS Type

DC MOTORS

D Type

Main Functions

Comfort	Electronic dust collector	●
	Vertical moving decorative frame	●
	Antibacterial cleaning filter	●
	High purity filter	●
	Deodorizing filter	●
Control	Total heat corresponding cross-linked operation	●
	Centralized remote correspondence	●
	Remote distance correspondence	●
	Control of 1 remote control group	●
	Operation of 2 remote controls	●
	Wireless remote control correspondence	●
Maintaining construction	Alarm diagnosis function	●
	Filter cleaning display	●
	Drain device	●
Optional parts	Regular operation	●
	High ceiling correspondence	●
	Dehumidification	●
	3 sections of airflow adjustment	●
	Airflow angle option	●
	Auto swing	●

INSTANT COMFORT

Quiet Operation

- Compact size lowers approximately 24% of ventilation impedance, lowering noise levels during operation.
- Large diameter turbo fan enhances blowing efficiency without generating faster fan speed. The DC motor is also fitted with an anti-vibration rotary shaft.

Clean Air Quality

- Electronic dust collector with optional photocatalytic deodorizing filter and antibacterial purity filter is SEK certified

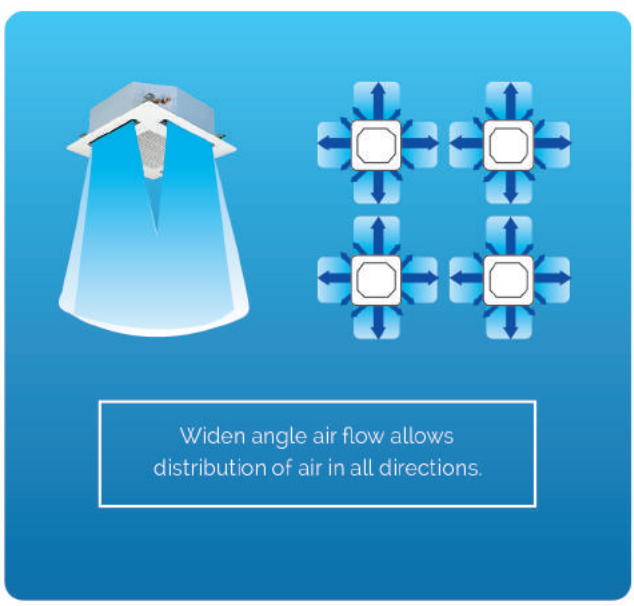
Notes:
SEK Certification means the products is in compliance with standard set by JAFET to ensure quality and safety of product.
(1)Antibacterial
(2)Effective durability
(3)Processing security

Certification No. of JAFET 007SF00

- Antibacterial purity filter can inhibit breeding of bacteria and mold by neutralizing inorganic and organic antimicrobial materials.

Wide Angle Airflow Design

Wide angle airflow design extends the reach of comfort throughout a room so temperature is even.

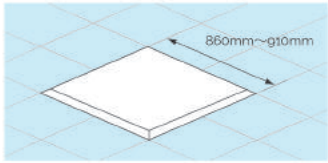


Widen angle air flow allows distribution of air in all directions.

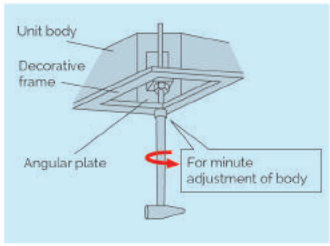
EASY INSTALLATION

Flexibility of installation

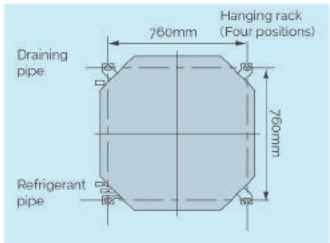
- The size of installation opening is 860 to 910 mm that uses minimal ceiling area.



- Adjust unit height without having to remove decorative frame by adjusting separate angular plate.



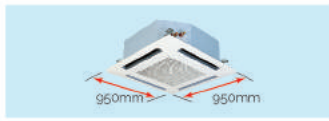
- Refrigerant pipe and draining pipe are placed in different corners of the unit for easy access.



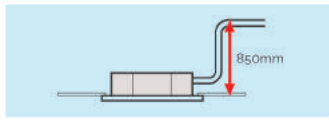
- Ceiling unit features square hanging holes for easy installation without changing piping outlet.
- The decorative frame can be rotated 360 degrees when installed.

Enhancing installing Freedom

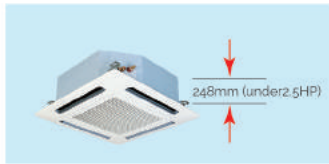
- Decorative frames span a 950mm x 950mm area.



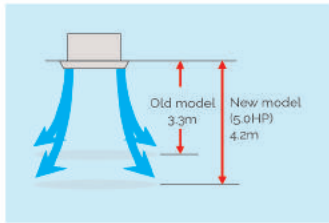
- High lift drain device for draining height up to 850mm.



- Lightweight unit body can be fixed in a narrow ceiling with a height of merely 248mm (when installing the decorative frame vertically, an extra 80mm clearance should be added).



- Blowing distance up to 4.2m (5 HP).



(unit: m)

		Number of outlet								
		1.0~2.0HP			2.5~3.0HP			4.0~6.0HP		
		4ways	3ways	2ways	4ways	3ways	2ways	4ways	3ways	2ways
Height of ceiling	Standard	2.7	3.0	3.3	2.7	3.0	3.3	3.2	3.6	4.0
	Accelerating ①	3.0	3.3	3.5	3.0	3.3	3.5	3.6	4.0	4.2
	Accelerating ②	3.5	3.6	—	3.5	3.6	—	4.2	4.3	—

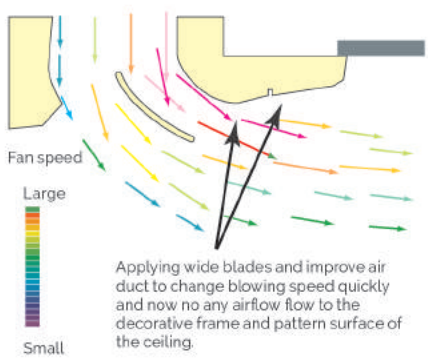
Notes:

- Shifting acceleration by using remote control.
- For setting blowing direction, extra shielding plate has to be purchased.

EASY MAINTENANCE

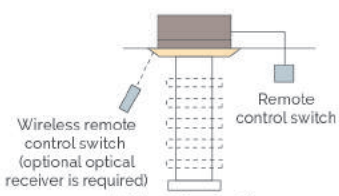
Thoughtful Design for Easy Cleaning

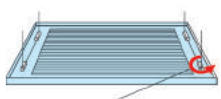
Wide blade design reduces dust build up.
The blades are also no-tufting, so dust particles can be cleaned easily.



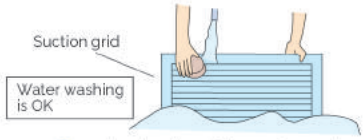
Vertical Blowing Grips for Easy Cleaning

Suction grid and filter can descend with a touch of the remote control for easy maintenance and cleaning (optional).





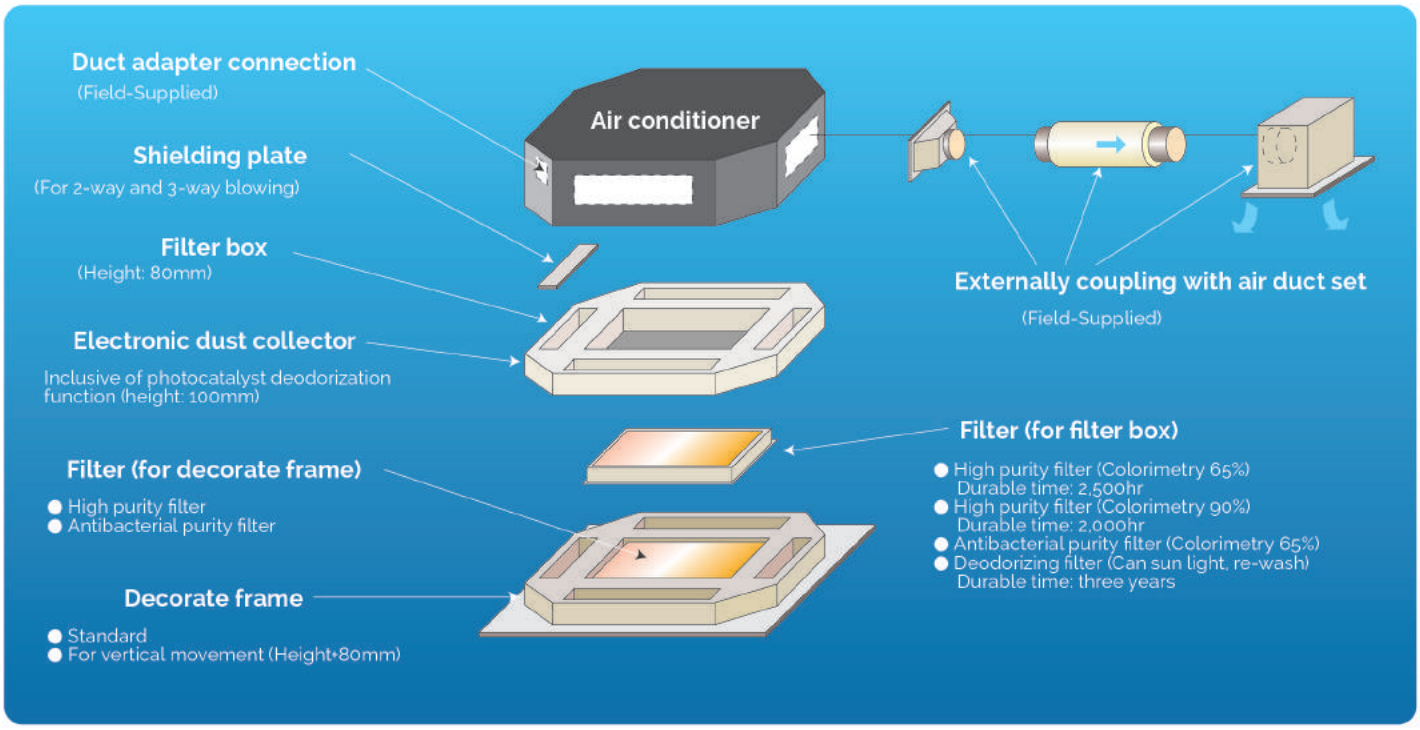
Rotate fixed portion of suction grid 90 degrees to remove and clean the suction grip.



- Regular cleaning of filter each month can save electricity.

OPTIONAL PARTS

Note: For below optional parts and their installation, please contact our sales.



General Data (FS Type)

Model		RCI-1.0 FSN1Q	RCI-1.3 FSN1Q	RCI-1.5 FSN1Q	RCI-1.8 FSN1Q	RCI-2.0 FSN1Q	RCI-2.3 FSN1Q	RCI-2.5 FSN1Q	RCI-3.0 FSN1Q	RCI-3.3 FSN1Q	RCI-4.0 FSN1Q	RCI-5.0 FSN1Q	RCI-6.0 FSN1Q
Power Supply		AC1Φ, 220V~240V/50Hz, 220V/60Hz											
Nominal Cooling Capacity*1)	kW	2.9	3.8	4.4	5.2	5.8	6.5	7.3	8.7	9.3	11.6	14.5	16.5
Nominal Cooling Capacity*2)	kW	2.8	3.6	4.3	5.0	5.6	6.3	7.1	8.4	9.0	11.2	14.2	16.0
Sound Pressure Level (Hi/Me/Lo)	dB(A)	32/30/28	32/30/28	32/30/28	32/30/28	32/30/28	32/30/28	32/30/28	34/32/30	34/32/30	41/36/33	43/38/35	44/40/36
Outer Dimensions (WxDxH)	mm	840 x 840 x 248	840 x 840 x 248	840 x 840 x 248	840 x 840 x 248	840 x 840 x 248	840 x 840 x 248	840 x 840 x 248	840 x 840 x 298	840 x 840 x 298	840 x 840 x 298	840 x 840 x 298	840 x 840 x 298
Net Weight	kg(lbs)	23 (51)	23 (51)	23 (51)	24 (53)	24 (53)	24 (53)	24 (53)	26 (57)	26 (57)	29 (64)	29 (64)	29 (64)
Refrigerant		R410A (Nitrogen-charged for Corrosion-resistance)											
Indoor Fan Air Flow Rate (Hi/Me/Lo)	m^3/min	13/12/11	15/13.5/12	15/13.5/12	16/14/12	16/14/12	19/17/14	20/17/15	26/23/20	26/23/20	32/28/24	34/29/25	37/32/27
Motor Output	W	56	56	56	56	56	56	56	56	56	108	108	108
Connections Refrigerant Piping		Flare-nut Connection (with Flare Nuts)											
Liquid Line	mm(in.)	Φ6.35 (1/4)	Φ6.35 (1/4)	Φ6.35 (1/4)	Φ6.35 (1/4)	Φ6.35 (1/4)	Φ9.53 (3/8)	Φ9.53 (3/8)	Φ9.53 (3/8)	Φ9.53 (3/8)	Φ9.53 (3/8)	Φ9.53 (3/8)	Φ9.53 (3/8)
Gas Line	mm(in.)	Φ12.7 (1/2)	Φ12.7 (1/2)	Φ12.7 (1/2)	Φ15.88 (5/8)	Φ15.88 (5/8)	Φ15.88 (5/8)	Φ15.88 (5/8)	Φ15.88 (5/8)	Φ15.88 (5/8)	Φ15.88 (5/8)	Φ15.88 (5/8)	Φ15.88 (5/8)
Condensate Drain		VP25 (Outer Diameter Φ 32)											
Approximate Packing Measurement	m3	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.26	0.26	0.26	0.26	0.26
Standard Accessories		Suspension Brackets											
Panel Model		P-N23NAQ											
Cabinet Color		Neutral White											
Outer Dimensions (WxDxH)	mm	950 x 950 x 37	950 x 950 x 37	950 x 950 x 37	950 x 950 x 37	950 x 950 x 37	950 x 950 x 37	950 x 950 x 37	950 x 950 x 37	950 x 950 x 37	950 x 950 x 37	950 x 950 x 37	950 x 950 x 37
Net Weight	kg(lbs)	6 (13)	6 (13)	6 (13)	6 (13)	6 (13)	6 (13)	6 (13)	6 (13)	6 (13)	6 (13)	6 (13)	6 (13)
Approximate Packing Measurement	m3	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08

Notes: 1. The nominal cooling capacity is based on following conditions :
Indoor Air Inlet Temperature : 27℃ DB (80℉ DB)
*1) :19.5℃ WB (67℉ WB)
*2) :19.0℃ WB (66.2℉ WB)
Outdoor Air Inlet Temperature : 35℃ DB (95℉ DB)
Piping Length : 7.5m Piping Lift : 0m

2. The sound pressure level is based on following conditions.
1.5m beneath the unit.
The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

(D Type)

Model			RCI-28DT	RCI-36DR	RCI-40DH	RCI-45DM	RCI-50DF	RCI-56DN	RCI-63DS
Power Supply			AC1Φ, 220V/60Hz						
Outer Dimensions (W x D x H)		mm	840 x 840 x 248	840 x 840 x 248	840 x 840 x 248	840 x 840 x 248	840 x 840 x 248	840 x 840 x 248	840 x 840 x 248
Nominal Cooling Capacity		kW	2.8	3.6	4.0	4.5	5.0	5.6	6.3
Nominal Heating Capacity		kW	3.3	4.1	4.8	5.2	5.6	6.5	7.5
Sound Pressure Level (Hi/Me/Lo)		dB(A)	32/30/28	32/30/28	32/30/28	32/30/28	32/30/28	32/30/28	32/30/28
Fan Device	Air Flow (Hi/Me/Lo)	m^3/min	13/12/11	13/12/11	15/13.5/12	15/13.5/12	17/14/12	18/15.5/13.5	20/17/15
	Motor Output	W	56	56	56	56	56	56	56
Main Refrigerant Piping	Gas Line	mm	Φ 12.7 (with nuts)	Φ 12.7 (with nuts)	Φ 12.7 (with nuts)	Φ 12.7 (with nuts)	Φ 15.88 (with nuts)	Φ 15.88 (with nuts)	Φ 15.88 (with nuts)
	Liquid Line	mm	Φ 6.35 (with nuts)	Φ 6.35 (with nuts)	Φ 6.35 (with nuts)	Φ 6.35 (with nuts)	Φ 6.35 (with nuts)	Φ 6.35 (with nuts)	Φ 9.53 (with nuts)
Condensate Drain			VP25	VP25	VP25	VP25	VP25	VP25	VP25
Panel Model			P-N23NAT	P-N23NAT	P-N23NAT	P-N23NAT	P-N23NAT	P-N23NAT	P-N23NAT
Net Weight		kg	23	23	23	23	24	24	26
Refrigerant			R410A/R407C/R22	R410A/R407C/R22	R410A/R407C/R22	R410A/R407C/R22	R410A/R407C/R22	R410A/R407C/R22	R410A/R407C/R22

Model			RCI-71DE	RCI-80DL	RCI-90DK	RCI-112DQ	RCI-140DZ	RCI-160DJ
Power Supply			AC1Φ, 220V/60Hz					
Outer Dimensions (W x D x H)		mm	840 x 840 x 298	840 x 840 x 298	840 x 840 x 298	840 x 840 x 298	840 x 840 x 298	840 x 840 x 298
Nominal Cooling Capacity		kW	7.1	8.0	9.0	11.2	14.2	16.0
Nominal Heating Capacity		kW	8.5	9.0	10.0	13.0	16.3	18.0
Sound Pressure Level (Hi/Me/Lo)		dB(A)	33/31/28	34/32/30	38/35/33	42/37/34	42/39/35	43/40/36
Fan Device	Air Flow (Hi/Me/Lo)	m^3/min	24/18.5/15	27.5/24/18	32/28/24	34/29/25	35/32/27	36/33/28
	Motor Output	W	56	124	124	124	124	124
Main Refrigerant Piping	Gas Line	mm	Φ 15.88 (with nuts)	Φ 15.88 (with nuts)	Φ 15.88 (with nuts)	Φ 15.88 (with nuts)*3	Φ 15.88 (with nuts)*3	Φ 15.88 (with nuts)*3
	Liquid Line	mm	Φ 9.53 (with nuts)	Φ 9.53 (with nuts)	Φ 9.53 (with nuts)	Φ 9.53 (with nuts)	Φ 9.53 (with nuts)	Φ 9.53 (with nuts)
Condensate Drain			VP25	VP25	VP25	VP25	VP25	VP25
Panel Model			P-N23NAT	P-N23NAT	P-N23NAT	P-N23NAT	P-N23NAT	P-N23NAT
Net Weight		kg	26	29	29	29	29	29
Refrigerant			R410A/R407C/R22	R410A/R407C/R22	R410A/R407C/R22	R410A/R407C/R22	R410A/R407C/R22	R410A/R407C/R22

Notes: Data in Specification List is measured according to following conditions.

- Cooling : Indoor temperature is 27℃(DB) / 19.0℃(WB) Outdoor temperature is 35℃(DB)
- Heating : Indoor temperature is 20℃(DB) Outdoor temperature is 7℃(DB) / 6℃(WB)
- Piping Length 7.5m
- Piping Lift 0m

- Noise value is measured at 1.5m of distance away from a center portion of unit body.
- Noise value is measured in the anechoic chamber, so that reflected sound should be taken into consideration in the field.
- If using R407C or R22 refrigerant system at "3 remarked positions"*", please match with pipe at Φ19.05.

Indoor Unit
2-Way Cassette Type

Small, lightweight and easy to install.

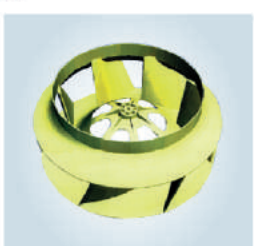
Main Functions

Comfort	Vertical moving decorative frame	●
	Antibacterial cleaning filter	●
	High purity filter	●
	Deodorizing filter	●
Control	Total heat corresponding cross-linked operation	●
	Centralized remote correspondence	●
	Remote distance correspondence	●
	Control of 1 remote control group	●
	Operation of 2 remote controls	●
	Wireless remote control correspondence	●
Maintaining construction	Alarm diagnosis function	●
	Filter cleaning display	●
	Drain device	●
Optional parts	Regular operation	●
	High ceiling correspondence	●
	Dehumidification	●
	3 sections of airflow adjustment	●
	Airflow angle option	●
	Auto swing	●

INSTANT COMFORT

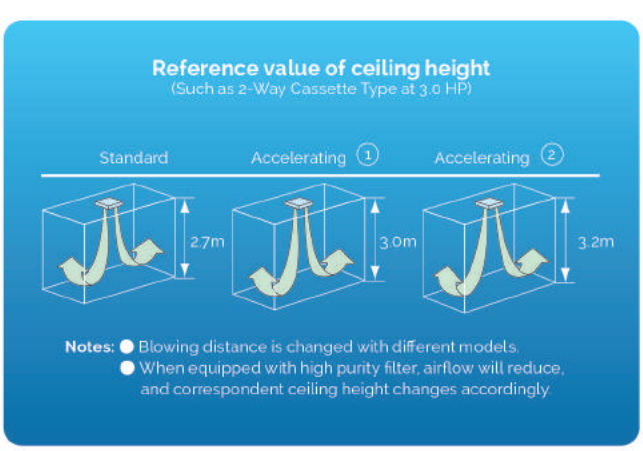
Compact Turbo Fan with Low Noise

- Compact turbo fan with three dimensional flexible blades reduce noise levels (38 dB(A) for 2.5 HP models). CAE analysis is also applied to significantly decrease ventilation impedance of air flow.
- The newly developed AC chopper can control the rotation frequency to eliminate electromagnetic noise.



Equal Cooling in High-Ceiling Spaces

A built-in accelerating device can be accessed via remote control to adjust airflow depending on ceiling height.



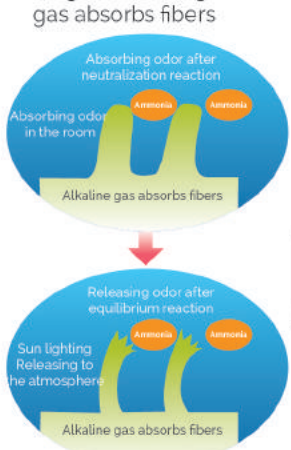
Clean Air Conditioning

A fiber deodorizing filter (optional) made with special chemicals eliminate smoke and odor.

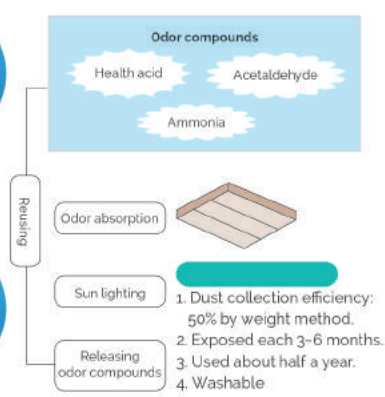
Deodorizing Filter

Electronic dust collector with photocatalytic deodorizing filter (optional) is antibacterial and SEK approved.

Diagram showing alkaline gas absorbs fibers



Recycled filter after sun light to clean air



1. Dust collection efficiency: 50% by weight method.
2. Exposed each 3-6 months.
3. Used about half a year.
4. Washable

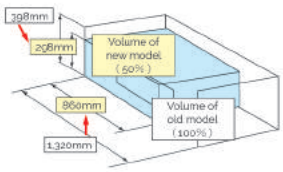
Antibacterial Purity Filter (SEK approved)

Double antimicrobial structure (Colorimetry 65%) inhibits breeding of mold and dust mite. It also eliminates airborne bacteria.

EASY INSTALLATION

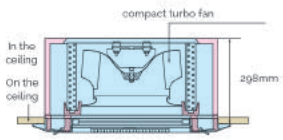
Lightweight for Easy Installation

The 2.5 HP model features a compact build, reducing 50% of its weight to become just 30 kg.



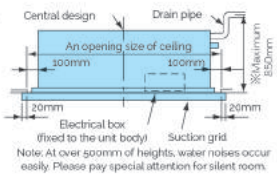
Easy installation for tight spaces

The compact turbo fan only has a height of 298 mm. The unit also features a general width of just 860 mm. ideal for limited spaces.



Optimum Design Simplifies Installation

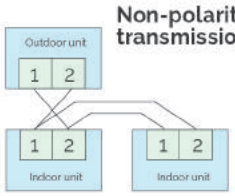
Access to the unit's indoor board and wiring system can be done by simply removing the suction grid. Piping height can be up to 850mm to enhance installation efficiency.



Simplified Wiring System

- Non-polar two-core transmission wires are utilized to avoid connection errors and abnormal transmissions.
- In case of wrong connections between the power wire and transmission terminal block, fuse is shorted out to protect the system.

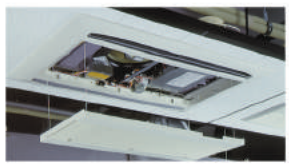
Non-polarity of transmission wire

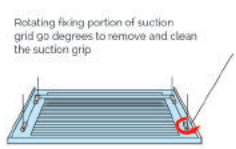


EASY MAINTENANCE

Vertical Blowing Grips for Easy Cleaning

The suction grid and filter can be removed by hand or by remote control for cleaning.



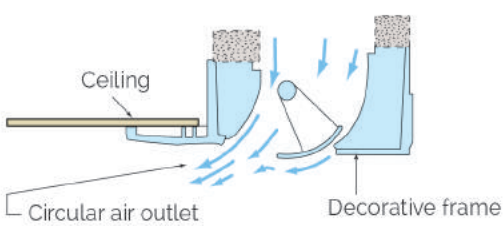


- Regular cleaning each month to save electricity expense.

Considerate Design for Easy Cleaning

- Improved air duct design

- Improved suction grid profile that reduces dust collection
- Air outlet is designed with a special circular design to prevent dirt accumulation



General Data

Model		RCD-1.0FSN2	RCD-1.5FSN2	RCD-2.0FSN2	RCD-2.5FSN2	RCD-3.0FSN2	RCD-4.0FSN2	RCD-5.0FSN2
Power Supply		AC1Φ, 220-240V/50Hz, 220V/60Hz						
Nominal Cooling Capacity *1)	kW	2.9	4.1	5.8	7.3	8.3	11.6	14.5
Nominal Cooling Capacity *2)	kW	2.8	4.0	5.6	7.1	8.0	11.2	14.0
Nominal Heating Capacity	kW	3.2	4.8	6.3	8.5	9.0	12.5	16.0
Sound Pressure Level (Hi/Me/Lo)	dB(A)	34/32/30	35/32/30	35/32/30	38/34/31	38/34/31	40/36/33	43/40/46
Outer Dimensions (HxWxD)	mm	298 x 860 x 620	298 x 860 x 620	298 x 860 x 620	298 x 860 x 620	298 x 860 x 620	298 x 1,420 x 620	298 x 1,420 x 620
Net Weight	kg	27	27	27	30	30	48	48
Refrigerant		R410A / R407C / R22 (Nitrogen-Charged for Corrosion-Resistance)						
Air Flow Rate (Hi/Me/Lo)	m³/min(cfm)	10/9/8	13/11/9 (459/388/318)	15/13/11 (530/459/388	19/16/14 (671/565/494	19/16/14 (671/565/494	29/24/21 (1,024/847/742	34/29/25(1,201/1,024/883
Motor Output	W	35	35	35	55	55	35 x 2	55 x 2
Connections Liquid Line/Gas Line	mm	Flare-Nut Connection (With Flare Nuts)						
		Φ 6.35/12.7	Φ 6.35/12.7	Φ 6.35/15.88	Φ 9.52/15.88	Φ 9.52/15.88	Φ 9.52/15.88*3	Φ 9.52/15.88*3
Condensate Drain		VP25						
Approximate Packing Measurement	m3	0.23	0.23	0.23	0.23	0.23	0.37	0.37
Panel Model		P-N23DNA	P-N23DNA	P-N23DNA	P-N23DNA	P-N23DNA	P-N23DNA	P-N23DNA
Color		Neutral White						
Dimensions (HxWxD)	mm	30 x 1,100x 710	30 x 1,100x 710	30 x 1,100x 710	30 x 1,100x 710	30 x 1,100x 710	30 x 1,660x 710	30 x 1,660x 710
Net Weight	kg	6	6	6	6	6	8	8
Approximate Packing Measurement	m³	0.10	0.10	0.10	0.10	0.10	0.15	0.15

Notes: 1. The nominal cooling and heating capacity is the combined capacity of the HITACHI standard spilt system, and is based on the JIS standard B8616.

Cooling Operation Conditions
Indoor Air Inlet Temperature : 27°C DB (80°F DB)
*1) :19.5°C WB (67°F WB)
*2) :19.0°C WB (66.2°F WB)
Outdoor Air Inlet Temperature : 35°C DB (95°F DB) Piping Length : 7.5m Piping Lift : 0m

Heating Operation Conditions
Indoor Air Inlet Temperature : 20°C DB (68°F DB)
Outdoor Air Inlet Temperature : 7°C DB (45°F DB)
6°C WB (43°F WB)

2. The sound pressure level is based on following conditions.
1.5 Meters Beneath the Unit.Voltage of the power source for the indoor fan motor is 220V. In case of the power source of 240V, the sound pressure level increases by about 1dB.The above data was measured in an anechoic

Indoor Unit
Wall Type

(2.5~4.0HP)

DC-MOTOR

(2.0HP)

(1.0~1.5HP)

Main Functions

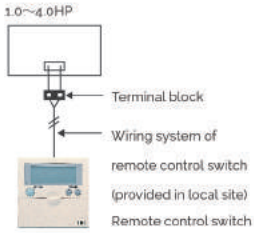
Optional parts						Maintaining construction			Control					Comfort				
Auto swing	Airflow angle option	3 sections of airflow adjustment	Dehumidification	High ceiling correspondence	Regular operation	Drain device	Filter cleaning display	*Alarm diagnosis function	Wireless remote control correspondence	Operation of 2 remote controls	Control of 1 remote control group	Remote distance correspondence	Centralized remote correspondence	Total heat corresponding cross-linked operation	Deodorizing filter	High purity filter	Antibacterial cleaning filter	Vertical moving decorative frame	External electronic expansion valve
●	●	●	●		●		●	●	●	●	●	●	●						●

Notes: "●" Operated only by wired remote control.

QUICK COMFORT

Remote Controlled Comfort

- The optical receiver kit can control the wireless remote control while the wired remote control can operate the indoor unit.
- One remote control can simultaneously operate multiple indoor units (for wireless remote controls, PC-ALHZ is necessary)
- Extra terminal block is provided for wired connection to simplify local wiring systems



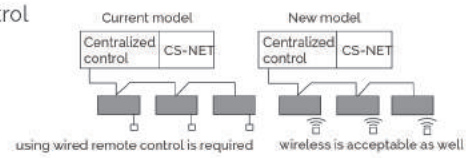
EASY INSTALLATION

Compact Package

Width of front end of the unit body is only 780mm, so the unit body can be fixed between narrow beams, and the size of the unit body is decreased by 25% less than current model.

Centralized Controller for Enhanced Experience

Centralized control mode allows you to control indoor units simultaneously using a single wireless control.



General Data

Model		RPK-1.0FSNSM3	RPK-1.5FSNSM3	RPK-2.0FSNSM3	RPK-2.5FSNSM3	RPK-3.0FSNSM3	RPK-4.0FSNSM3
Power Supply		AC1Φ, 220~240V/50Hz, 220V/60Hz					
Nominal Cooling Capacity *1)	kW	2.9	4.1	5.8	7.3	8.3	11.6
Nominal Cooling Capacity *2)	kW	2.8	4.0	5.6	7.1	8.0	11.2
Nominal Heating Capacity	kW	3.2	4.8	6.3	8.5	9.0	12.5
Sound Pressure Level (Hi2/Hi/Me/Lo)	dB(A)	39/35/32/30	46/40/36/33	42/40/38/33	49/43/40/36	49/43/40/36	51/49/46/41
Cabinet Color		White	White	White	White	White	White
Outer Dimensions (HxWxD)	mm	300x790x230	300x900x230	333x1,150x245	333x1,150x245	333x1,150x245	333x1,150x245
Net Weight	kg	10	11	17	18	18	18
Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A
Air Flow Rate (Hi2/Hi/Me/Lo)	m³/min.(cfm)	10/8/7/6.5 (353/282/247/230)	14/11/9/7.5 (494/388/318/265)	15/14/13/10 (530/494/459/353)	19/17/14/12 (671/600/494/424)	19/17/14/12 (671/600/494/424)	22/19/17/15 (777/671/600/530)
Motor Output	W	40	40	40	40	40	40
Connections		Flare-Nut Connection (With Flare Nuts)					
Liquid Line/Gas Line	mm	Φ6.35/Φ12.7	Φ6.35/Φ12.7	Φ6.35/Φ15.88	Φ9.52/Φ15.88	Φ9.52/Φ15.88	Φ9.52/Φ15.88
Condensate Drain		VP16	VP16	VP16	VP16	VP16	VP16
Approximate Packing Measurement	m³	0.09	0.11	0.14	0.14	0.14	0.14
Standard Accessories		Wall Mounting Bracket					

Notes: 1. The nominal cooling and heating capacity is the combined capacity of the HITACHI standard spilt system, and is based on the JIS standard B8616.
Cooling Operation Conditions
Indoor Air Inlet Temperature : 27℃ DB (80℉ DB)
*1) 19.5℃ WB (67℉ WB)
*2) 19.0℃ WB (66.2℉ WB)
Outdoor Air Inlet Temperature : 35℃ DB (95℉ DB) Piping Length : 7.5m Piping Lift : 0m

Heating Operation Conditions
Indoor Air Inlet Temperature : 20℃ DB (68℉ DB)
Outdoor Air Inlet Temperature : 7℃ DB (45℉ DB)
6℃ WB (43℉ WB)

2. The sound pressure level is based on following conditions.
1 Meter Beneath the Unit and 1 Meter from Air Inlet Grille
The above data was measured in an anechoic chamber so that reflected sound
be taken into consideration in the field.

FS Type

N Type

Main Functions

Optional parts	Vertical moving decorative frame	—
	Antibacterial cleaning filter	—
	High purity filter	●
	Durable filter	●
	Deodorizing filter	—
Control	Total heat corresponding cross-linked operation	●
	Centralized remote correspondence	●
	Remote distance correspondence	●
	Control of 1 remote control group	●
	Operation of 2 remote controls	●
	Wireless remote control correspondence	●
Maintaining construction	Alarm diagnosis function	●
	Filter cleaning display	●
	**Drain device (optional part)	—
Optional parts	Regular operation	●
	High ceiling correspondence	—
	Dehumidification	●
	*6 sections of airflow adjustments	●
	3 sections of airflow adjustment	●
	Airflow angle option	—
	Auto swing	—

Notes: "*" Only for matching with high-performance wired remote control switch (PC-ARFV)
Notes : "**" RPI-0.8-1.5FSN2 is built-in standard equipment.

QUICK COMFORT

Low Noise Levels 36dB(A) (2.5HP) (FS Type)

- Computational airflow analysis techniques are utilized to decrease ventilation impedance in each indoor unit.
- Noise value of 2.5 HP models are well along 36 dB(A), while 2 HP models are at 35 dB(A). Ideal for small spaces and enclosed rooms.

High quality air conditioning and more clean

Model	Returning box	Applicable filter
RPI-22~90N	Equipped	Silver nanoparticles anion filter (equipped) Durable filter (optional part)
RPI-112~160N	Equipped	High purity filter (optional part) Durable filter (optional part)

Note: For optional parts, please see P56

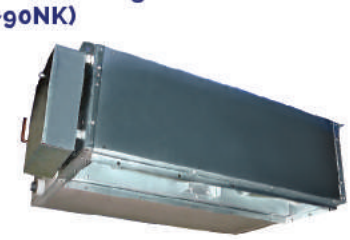
EASY INSTALLATION

Static pressure setting for indoor unit

Static setting (low, standard and high) for the indoor unit is available after construction via remote control based on the application of air duct on local site.

For under and back air returning (Only for RPI-22NC~90NK)

Back air returning



Under air returning

EASY INSTALLATION

Lightweight

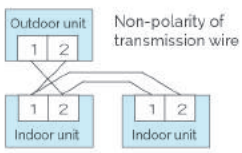
Because of its light weight, the unit can be set upward and be fixed easily on the ceiling.

Compact Design to Save Space

With the compact design, the area for installation is reduced hence saving material for the construction of the air duct.
4.0 HP – For inlet side: Height 306 mm x Width 833 mm (80% of old model) – For outlet side: Height 220 mm x Width 803 mm (75% of old model)

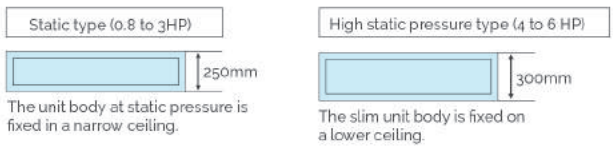
Simplified Wiring System

Non-polar two-core transmission wires are utilized to avoid connection errors and abnormal transmissions.



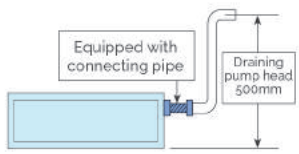
Slim Body and High Hydrostatic Pressure

Unit height at high static pressure is only at 300 mm while unit body a static pressure is 250 mm.



Built-in Drain Device

A high lift drain device is provided to expand a lift draining range up to 500 mm.



Lower Hanging Position

Lowered hanging position 100 mm above the body makes installation easier for 4 to 6 HP models.

General Data (FSNQH TYPE)

Model		RPI-0.8 FSNQH	RPI-1.0 FSNQH	RPI-1.3 FSNQH	RPI-1.5 FSNQH	RPI-1.8 FSNQH	RPI-2.0 FSNQH	RPI-2.3 FSNQH	RPI-2.5 FSNQH	RPI-3.0 FSNQH	RPI-3.3 FSNQH	RPI-4.0 FSNQH	RPI-5.0 FSNQH	RPI-6.0 FSNQH	RPI-8.0 FSNQ	RPI-10.0 FSNQ
Power Supply		AC1Φ, 220V~240V/50Hz, 220V/60Hz, [220V/50Hz]												AC1Φ, 220V/50Hz	AC3Φ, 380V~415V/50Hz	
Nominal Cooling Capacity*1)	kW	2.3	2.9	3.8	4.4	5.2	5.8	6.5	7.3	8.7	9.3	11.6	14.5	16.5	23.2	28.6
Nominal Cooling Capacity*2)	kW	2.2	2.8	3.6	4.3	5.0	5.6	6.3	7.1	8.4	9.0	11.2	14.2	16.0	22.4	28.0
Sound Pressure Level (Hi/Me/Lo)	dB(A)	35/33/31	35/33/31 [36/33/29]	35/33/31	35/33/31 [38/36/32]	35/33/31	35/33/31 [38/36/32]	36/34/32	36/34/32 [38/36/32]	42/39/35	42/39/35	43/40/36	44/41/37	45/41/37	50	52
Outer Dimensions (WxDxH)	mm	650x720x270	650x720x270	650x720x270	650x720x270	900x720x270	900x720x270	900x720x270	900x720x270	900x800x350	900x800x350	900x800x350	1,300x800 x350	1,300x800 x350	1,060x1,120 x470	1,250x1,120 x470
Net Weight	kg	26	26	26	26	35	35	35	35	46	46	46	58	58	85	95
	(lbs)	(57)	(57)	(57)	(57)	(77)	(77)	(77)	(77)	(101)	(101)	(101)	(128)	(128)	(211)	(238)
Refrigerant		R410A (Nitrogen-charged for Corrosion-resistance)														
Air Flow Rate (Hi/Me/Lo)	m³/min	8/7/6	8/7/6 [8.3/7.1/6.1]	13/11/9	13/11/9 [11/9.7/8.3]	15/13/11	15/13/11 [14.5/13/11]	16/14/12	16/14/12 [14.5/13/11]	25/21/17	25/21/17	27/23/19	37/31/25	38/35/29	58	72
Motor Output	W	35	35	60	60	75	75	75	75	120	120	120	200	280	650	900
Connections Refrigerant Piping		Flare-nut Connection (with Flare Nuts)													Brazing	
Liquid Line	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	(in.)	(1/4)	(1/4)	(1/4)	(1/4)	(1/4)	(1/4)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)
GasLine	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ19.05	Φ22.2
	(in.)	(1/2)	(1/2)	(1/2)	(1/2)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(3/4)	(7/8)
Condensate Drain		VP25 (Outer Diameter Φ32)														
External Static Pressure	Pa	50(80)	50(80)	50(80)	50(80)	50(80)	50(80)	50(80)	50(80)	120(90)	120(90)	120(90)	120(90)	120(90)	180	180
Approximate Packing Measurement	m³	0.21	0.21	0.21	0.21	0.27	0.27	0.27	0.27	0.38	0.38	0.38	0.52	0.52	0.90	1.08

Notes: The nominal cooling capacity is based on following conditions :
Indoor Air Inlet Temperature : 27℃ DB (80℉ DB)
*1) :19.5℃ WB (67℉ WB)
*2) :19.0℃ WB (66.2℉ WB)
Outdoor Air Inlet Temperature : 35℃ DB (95℉ DB)
Piping Length : 7.5m Piping Lift : 0m

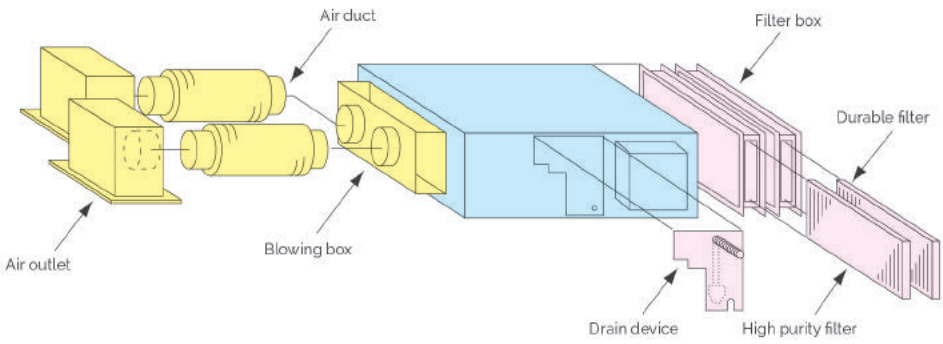
- The sound pressure level is based on following conditions. 1.5m beneath the unit. The above data was measured in an anechoic chamber so that reflected soundshould be taken into consideration in the field. When bottom air inlet is adopted, sound pressure will increase according to factors such as installation mode and the room structure.
- The data for external pressure indicates standard pressure setting values when air filter is not used.
- The figures between brackets [ ] are unique data for the models with metallic fan and fan casing. All models with capacity from 3.0 to 10HP are equipped with metallic fan and fan casing.

OPTIONAL PARTS

Creating high quality air-conditioning

Extra parts such as high purity filter and drain device are available.

Connection diagram of optional parts



Note: Remarked by pink color is optional part, and remarked by yellow color is standard part prepared in field.

(N Type)

Model			RPI-22NC	RPI-28NT	RPI-36NR	RPI-45NM	RPI-50NF	RPI-56NN
Power Supply			AC1Φ, 220V/60Hz					
Outer Dimensions (WxDxH)		mm	620 x 550 x 250	620x550x250	760x550x250	760x550x250	760x550x250	760x550x250
Nominal Cooling Capacity		kW	2.2	2.8	3.6	4.5	5.0	5.6
Nominal Heating Capacity		kW	2.6	3.3	4.1	5.2	5.6	6.5
Sound Pressure Level (Hi/Me/Lo)		dB(A)	36/32/29	36/32/29	34/30/26	36/32/27	36/32/27	36/32/27
Fan Device	Static Pressure (High / Standard/ Low)	Pa	50/30/10/5	50/30/10/5	70/50/30/10	70/50/30/10	70/50/30/10	70/50/30/10
	Air Flow (Hi/Me/Lo)	m^3/min	9/8/7	9/8/7	13/10/8	14/11/9	14/11/9	14/11/9
	Motor Output	W	30	30	45	50	50	50
Main Refrigerant Piping	Gas Line	mm	Φ12.7 (With nuts)	Φ12.7 (With nuts)	Φ12.7 (With nuts)	Φ12.7 (With nuts)	Φ15.88 (With nuts)	Φ15.88 (With nuts)
	Liquid Line	mm	Φ6.35 (With nuts)	Φ6.35 (With nuts)	Φ6.35 (With nuts)	Φ6.35 (With nuts)	Φ6.35 (With nuts)	Φ6.35 (With nuts)
Condensate Drain			3/4" MPT	3/4" MPT	3/4" MPT	3/4" MPT	3/4" MPT	3/4" MPT
Net Weight		kg	26	26	30	32	32	32
Refrigerant			R410A / R407C / R22	R410A / R407C / R22	R410A / R407C / R22	R410A / R407C / R22	R410A / R407C / R22	R410A / R407C / R22

Model			RPI-63NS	RPI-71NE	RPI-80NL	RPI-90NK	RPI-112NQ	RPI-140NZ	RPI-160NJ
Power Supply			AC1Φ, 220V/60Hz						
Outer Dimensions (WxDxH)		mm	940x550x250	940x550x250	940x550x250	940x550x250	900x800x350	1,300x800x350	1,300x800x350
Nominal Cooling Capacity		kW	6.3	7.1	8.0	9.0	11.2	14.2	16.0
Nominal Heating Capacity		kW	7.5	8.5	9.0	10.0	13.0	16.3	18.0
Sound Pressure Level (Hi/Me/Lo)		dB(A)	39/37/34	39/37/34	40/38/35	40/38/35	41-38-34	42/39/35	42/39/35
Fan Device	Static Pressure (High / Standard/ Low)	Pa	70/50/30/10	70/50/30/10	70/50/30/10	70/50/30/10	120/90	120/90	120/90
	Air Flow (Hi/Me/Lo)	m^3/min	15/13/11	15/13/11	19/16/13	19/16/13	27/23/19	37/31/25	37/31/25
	Motor Output	W	50	50	75	75	120	200	200
Main Refrigerant Piping	Gas Line	mm	Φ15.88 (With nuts)	Φ15.88 (With nuts)	Φ15.88 (With nuts)	Φ15.88 (With nuts)	Φ15.88 (With nuts)*3	Φ15.88 (With nuts)*3	Φ15.88 (With nuts)*3
	Liquid Line	mm	Φ9.53 (With nuts)	Φ9.53 (With nuts)	Φ9.53 (With nuts)	Φ9.53 (With nuts)	Φ9.53 (With nuts)	Φ9.53 (With nuts)	Φ9.53 (With nuts)
Condensate Drain			3/4" MPT	3/4" MPT	3/4" MPT	3/4" MPT	VP25	VP25	VP25
Net Weight		kg	37	37	37	37	46	58	58
Refrigerant			R410A/ R407C / R22	R410A / R407C / R22	R410A/ R407C / R22	R410A/ R407C / R22	R410A/ R407C / R22	R410A/ R407C / R22	R410A/R407C /R22

Notes: Data in Specification List is measured according to following conditions.

- Cooling : Indoor temperature is 27℃(DB) / 19.0℃(WB) Outdoor temperature is 35℃(DB)
- Heating : Indoor temperature is 20℃(DB) Outdoor temperature is 7℃(DB) / 6℃(WB)
- Piping Length : 7.5m
- Piping Lift : 0m
- Noise value is measured at 1.5m of distance away from a center portion of unit body.
- A noise value is measured in a standard state of external static pressure, air is blown in back side, and filter is not closed the unit body. If downward blowing air is fixed, noise value is raised to 5dB. If settings between external static pressure and unit body are not different, noise value may be increased.
- Noise value is measured in the silent room, noise value of local location is raised by installation environment and reflected noise.
- Tatic pressure is set in a standard state while shipment.
- If using R407C or R22 refrigerant system at "3 remarked positions"*", please match with pipe at Φ19.05.

Indoor Unit
Ceiling Type

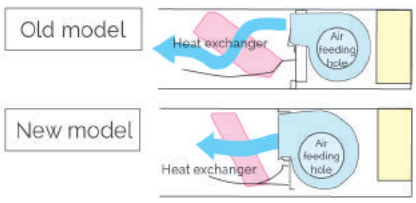
Main Functions

Optional parts	Vertical moving decorative frame	—
	Antibacterial cleaning filter	—
	High purity filter	●
	Deodorizing filter	—
Control	Total heat corresponding cross-linked operation	●
	Centralized remote correspondence	●
	Remote distance correspondence	●
	Control of 1 remote control group	●
	Operation of 2 remote controls	●
	Wireless remote control correspondence	●
Maintaining construction	Alarm diagnosis function	●
	Filter cleaning display	●
	Drain device (optional parts)	●
Comfort	Regular operation	●
	High ceiling correspondence	—
	Dehumidification	●
	3 sections of airflow adjustment	●
	Airflow angle option	—
	Auto swing	●

INSTANT COMFORT

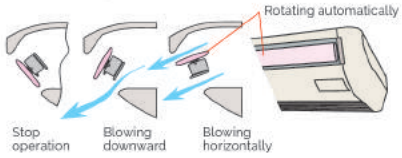
New Technology, Low Vibration, Low Noise

Large fan diameter improves ventilation efficiency, decreasing noise and vibrations greatly.



Large circular air outlet and automatic rotating device

The indoor unit features a large circular air outlet and an automatic rotating device to swing the blowing plate vertically. Upon stopping operation, the blowing plate automatically closes.

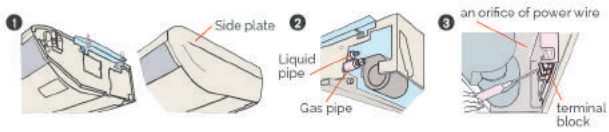


EASY INSTALLATION

Efficient Installation and Maintenance

30% faster installation time than old model.

1. The screw bolt is placed on one side of the indoor unit which makes adjusting the height convenient. The screw bolt is concealed into the side cover to enhance aesthetic appearance.
2. Accelerating installation time of the refrigerant pipe, and putting a protective cover that is open on one side for locking the indoor unit easily. Installation time for refrigerant pipe is cut short with an access through a protective cover on the side of the unit.
3. After wiring construction, the electric box should be left open to set and test operation.



OPTIONAL PARTS

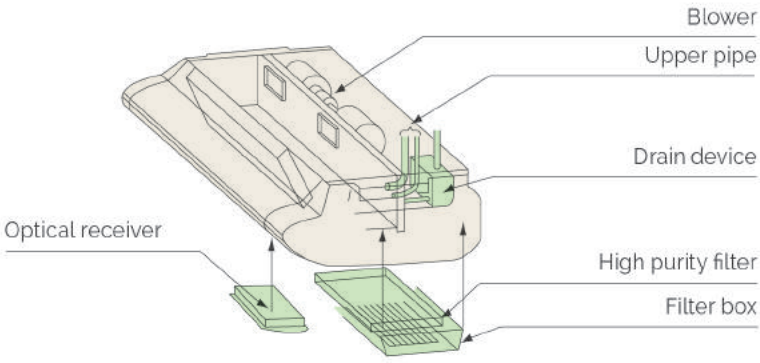
High Quality Additions

Extra accessories like high purity filter and drain device can be added

- An optical receiver can be used for wireless remote control for easy installation
- High purity filter can be added for cleaner comfort (extra filter box required)

Connection diagram of optional parts

Note: Remarked by green color is optional part



General Data

Model		RPC-1.5FSN3	RPC-2.0FSN3	RPC-2.5FSN3	RPC-3.0FSN3	RPC-4.0FSN3	RPC-5.0FSN3	RPC-6.0FSN3
Power Supply		AC1Φ, 220~240V/50Hz, 220V/60Hz						
Nominal Cooling Capacity *1)	kW	4.1	5.8	7.3	8.3	11.6	14.5	16.5
Nominal Cooling Capacity *2)	kW	4.0	5.6	7.1	8.0	11.2	14.0	16.0
Nominal Heating Capacity	kW	4.8	6.3	8.5	9.0	12.5	16.0	18.0
Sound Pressure Level (Hi2/Hi/Me/Lo)	dB(A)	37/35/31/28	38/35/31/28	38/35/32/29	40/37/33/29	44/42/37/32	48/45/41/35	49/47/42/36
Cabinet Color		Neutral White	Neutral White	Neutral White	Neutral White	Neutral White	Neutral White	Neutral White
Dimensions (HxWxD)	mm	235x960x690	235x960x690	235x1,270x690	235x1,270x690	235x1,580x690	235x1,580x690	235x1,580x690
Net Weight	kg	26	27	35	35	41	41	41
Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A
Air Flow Rate (Hi2/Hi/Me/Lo)	m³/min. (cfm)	15/13/11/9 (530/459/388/318)	15/13/11/9 (530/459/388/318)	19/16.5/14/11.5 (671/583/494/406)	21/18.5/15.5/12.5 (742/653/547/441)	30/26.5/22/17 (1,059/936/777/600)	35/31/25.5/20 (1,236/1,095/900/706)	37/32.5/27/21 (1,306/1,148/953/742)
Motor Output	W	50	50	80	80	160	160	160
Connections		Flare-Nut Connection (With Flare Nuts)						
Liquid Line/Gas Line	mm	Φ6.35/Φ12.7	Φ6.35/Φ15.88	Φ9.52/Φ15.88	Φ9.52/Φ15.88	Φ9.52/Φ15.88	Φ9.52/Φ15.88	Φ9.52/Φ15.88
Condensate Drain		VP20	VP20	VP20	VP20	VP20	VP20	VP20
Approximate Packing Measurement	m³	0.23	0.23	0.31	0.31	0.38	0.38	0.38

Notes: 1. The nominal cooling and heating capacity is the combined capacity of the HITACHI standard spilt system, and is based on the JIS standard B8616.

Cooling Operation Conditions
Indoor Air Inlet Temperature : 27℃ DB (80℉ DB)
*1) :19.5℃ WB (67℉ WB)
*2) :19.0℃ WB (66.2℉ WB)
Outdoor Air Inlet Temperature : 35℃ DB (95℉ DB) Piping Length : 7.5m Piping Lift : 0m

Heating Operation Conditions
Indoor Air Inlet Temperature : 20℃ DB (68℉ DB)
Outdoor Air Inlet Temperature : 7℃ DB (45℉ DB)
6℃ WB (43℉ WB)

2. The sound pressure level is based on following conditions.
1.5m Beneath the Unit.
The above data was measured in an anechoic chamber so that reflected sound. should be taken

Indoor Unit
Ceiling Type

Unique design and easy to install

INSTANT COMFORT

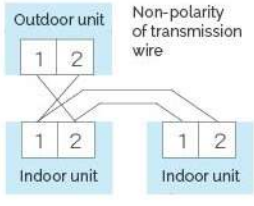
Low Noise

Computational airflow analysis techniques are utilized to decrease ventilation impedance in each indoor unit.

EASY INSTALLATION

Simple Installation and Maintenance

Non-polar two-core transmission wires are utilized to avoid connection errors and abnormal transmissions.



Main Functions

Comfort							Maintaining construction			Control						Optional parts				
Auto swing	Airflow angle option	3 sections of airflow adjustment	*6 sections of airflow	Dehumidification	High ceiling correspondence	Regular operation	Drain device (optional parts)	Filter cleaning display	Alarm diagnosis function	Wireless remote control correspondence	Operation of 2 remote controls	Control of 1 remote control group	Remote distance correspondence	Centralized remote correspondence	Total heat corresponding cross-linked operation	Deodorizing filter	Durable filter	High purity filter	Antibacterial cleaning filter	Vertical moving decorative frame
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Notes: "*" Only available by matching with high-performance wired remote control PC-ARFV.

Cleaner Air Conditioning

Model	Returning box	Applicable filter
RPCI-63DS RPCI-71DE	Equipped	Sliver nanoparticles anion filter (equipped) Durable filter (optional part)

Under and Back Air Return

Even with limited space, installation options are not limited with two air return designs.

Back air returning

Under air returning

General Data

Model			RPCI-63DS	RPCI-71DE
Power Supply			AC1Φ,220V/60Hz	AC1Φ,220V/60Hz
Outer Dimensions (WxDxH)		mm	1,130 X 550 X 250	1,130 X 550 X 250
Nominal Cooling Capacity		kW	6.3	7.1
Nominal Heating Capacity		kW	7.5	8.5
Sound Pressure Level	Hi/Me/Lo	dB(A)	41/38/35	41/38/35
	HH2/HH1/Hi/Me/Lo/Slo	dB(A)	41/40/38/37/36/35	41/40/38/37/36/35
Fan Device	Air Flow Hi/Me/Lo	m³/min	21/18/15	21/18/15
	Air Flow HH2/HH1/Hi/Me/Lo/Slo	m³/min	21/20/18/17/16/15	21/20/18/17/16/15
	Motor Output	W	96	96
Main Refrigerant Piping	Gas Line	mm	Φ15.88 (with nuts)	Φ15.88 (with nuts)
	Liquid Line	mm	Φ9.53 (with nuts)	Φ9.53 (with nuts)
Condensate Drain			3/4" MPT	3/4" MPT
Net Weight		kg	39	39
Refrigerant			R410A	R410A

Notes: Data in Specification List is measured according to following conditions.

- Cooling : Indoor temperature is 27℃(DB) / 19.0℃(WB) Outdoor temperature is 35℃(DB)
- Heating : Indoor temperature is 20℃(DB) Outdoor temperature is 7℃(DB) / 6℃(WB)
- Piping Length : 7.5m
- Piping Lift : 0m
- Noise value is measured at 1m of distance away from lower side of front end of unit body and 1m of distance away from air outlet of the unit body.
- A noise value is measured when blowing air in back side and installing the filter. If downward blowing air is fixed, the noise value is raised to 3dB(A).
- Noise value is measured in the silent room, noise value of local location is raised by installation environment and reflected noise.

Indoor Unit
Floor Type

Compact and slim design
that adds sophistication
to any space

Main Functions

Comfort						Maintaining construction			Control						Optional parts			
Auto swing	Airflow angle option	3 sections of airflow adjustment	Dehumidification	High ceiling correspondence	Regular operation	Drain device (optional parts)	Filter cleaning display	Alarm diagnosis function	Wireless remote control correspondence	Operation of 2 remote controls	Control of 1 remote control group	Remote distance correspondence	Centralized remote correspondence	Total heat corresponding cross-linked operation	Deodorizing filter	High purity filter	Antibacterial cleaning filter	Vertical moving decorative frame
		●	●		●		●	●	●	●	●	●	●	●				

EASY INSTALLATION

Compact Design

Slim 220 mm profile can virtually fit anywhere and sleek design adds a touch of class to every room.

Ideal for Spaces below Windows

Height of the unit is only 630 mm, taking minimal vertical space.

Integration into the Room Interior

Remote control is mounted in the blowing grids to add beauty to the room interior.

EASY MAINTENANCE

Efficient Design

Unit is meant to be placed next to a wall for easy filter removal and cleaning.

Removable Grids

Blowing grids and suction grids can be cleaned separately.

General Data

Model			RPF-1.0FSN2E	RPF-1.5FSN2E	RPF-2.0FSN2E	RPF-2.5FSN2E
Power Supply			AC1Φ, 220V/60Hz	AC1Φ, 220V/60Hz	AC1Φ, 220V/60Hz	AC1Φ, 220V/60Hz
Outer Dimensions (WxDxH)		mm	1,045x220x630	1,170x220x630	1,420 x 220 x 630	1,420x220x630
Nominal Cooling Capacity		kW	2.8	4.0	5.6	7.1
Nominal Heating Capacity		kW	3.2	4.8	6.3	8.5
Sound Pressure Level (Hi/Me/Lo)		dB(A)	35/32/29	38/35/31	39/36/32	42/38/34
Fan Device	Air Flow (Hi/Me/Lo)	m^3/min	8.5/7/6	12/10/9	1/14/11	16/14/11
	Motor Output	W	20	28	45	45
Main Refrigerant Piping	Gas Line	mm	Φ12.7 (With nuts)	Φ12.7 (With nuts)	Φ15.88 (With nuts)	Φ15.88 (With nuts)
	Liquid Line	mm	Φ6.35 (With nuts)	Φ6.35 (With nuts)	Φ6.35 (With nuts)	Φ9.53 (With nuts)
Condensate Drain		mm	Φ18.5OD	Φ18.5OD	Φ18.5OD	Φ18.5OD
Net Weight		kg	25	28	33	34
Refrigerant			R410A	R410A	R410A	R410A

Notes : Data in Specification List is measured according to following conditions.
- Cooling : Indoor temperature is 27℃(DB) / 19.0℃(WB) Outdoor temperature is 35℃(DB)
- Heating : Indoor temperature is 20℃(DB) Outdoor temperature is 7℃(DB) / 6℃(WB)
- Piping Length : 7.5m
- Piping Lift : 0m
- Noise value is measured at 1m of distance away from front end of unit body and 1m of distance away from the ground.
- Noise value is measured in the silent room, noise value of local location is raised by installation environment and reflected noise.

Indoor Unit
Inverter Slim Type Package

Highly Efficient, Power Saving.

QUICK COMFORT

Energy Efficiency

It uses minimal electricity to achieve maximum cooling and regulates a constant comfortable temperature for energy efficiency.

Power Saving

Ideal for office spaces and shops that have extended operating hours.

AION Filter

The indoor unit is equipped with high efficiency AION Air Filter Net that filters out germs and allergens such as dust, pollen and fungi.

EASY INSTALLATION

Compact size

The Hitachi IVX Inverter unit is designed to suit your preference and features a compact build to minimize floor area. More space dedicated for you and your business.

General Data

Model			RPS-140AN
Power Supply			AC Φ .230V/60Hz
Outer Dimensions (WxDxH)		mm	600 X 350 X 1,900
Nominal Cooling Capacity		kW	14.0
Nominal Air Flow (Hi/Me/Lo)		m^3/min	32/28/24
Fan Motor Output		kW x Q'ty	0.15x1
Main Refrigerant Piping	Gas Line	mm	Φ 15.88
	Liquid Line	mm	Φ 9.53
Net Weight		kg	68
Refrigerant			R410A

Indoor Temperature:
Maximum : 32℃ (DB) / 23℃ (WB)
Minimum : 21℃ (DB) / 15℃ (WB)

Total Heat Exchanger

Reduce 35% of the work load.
Control air conditioner and heat exchanger using H-LINK.

Y Type (Slim)

Y Type

Z Type (High static pressure)

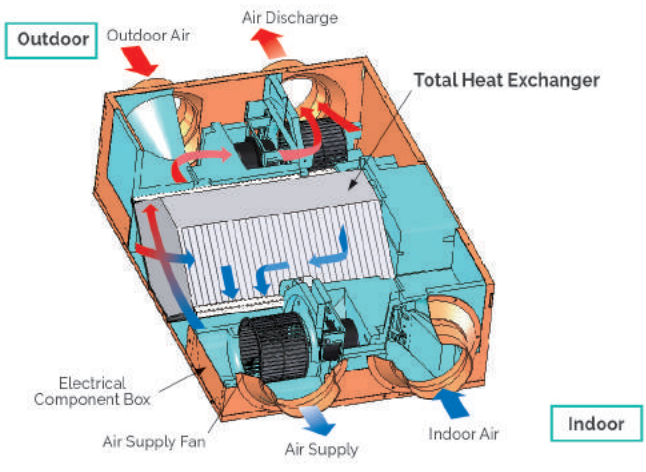
IMPROVE AIR QUALITY

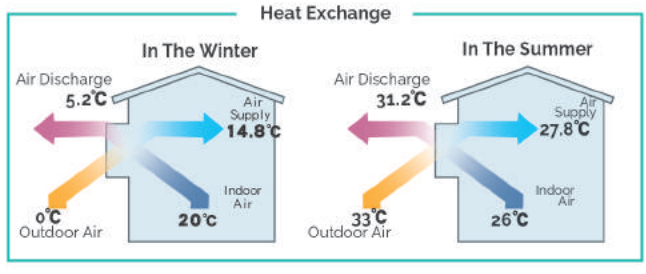
Some buildings are constructed to block sunlight out but in turn reduces quality of air indoors. Poor air quality may in turn cause bad performance from workers and even potential health problems.

ENERGY SAVING VENTILATION TECHNOLOGY

To maintain fresh air quality, the Hitachi Total Heat Exchanger exhausts air from the outside and guides cool air inside to lower the load of air conditioners.

1. Recycle loss of heat to minimize cooling waste
2. Reduced heat load minimizes air conditioning load.
3. Humidity is controlled and balanced between indoor and outdoor conditions for ultimate comfort.
4. Exhaust and air feeding is simultaneous for stable air flow.
5. Air duct and total heat exchanger has soundproofing properties to prevent outside noise coming in.

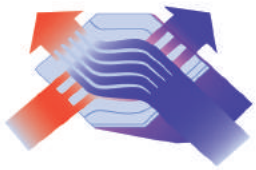




HIGH PERFORMANCE HEAT EXCHANGER

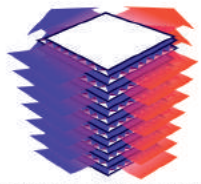
The Hitachi total heat exchanger features an inverse exchange board and cross-flow thin film to insulate air between outdoors and indoors and stops warm air from coming in.

Flowing directions of hot air and cold air are opposite.



"Inverse exchange board"heat exchanger
KPI-152Y-2002Y/KPI-152Z-652Z

Flowing directions of hot air and cold air are perpendicular to each other or at a certain angle.



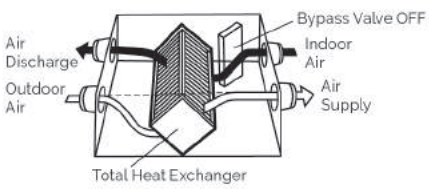
"cross-flow thin film"heat exchanger
KPI-102Y/KPI-802Z-2002Z

AUTOMATIC VENTILATION MODE

The most suitable ventilation mode is automatically determined depending on the temperature conditions outdoors and indoors to save energy.

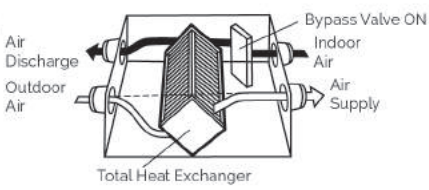
Total Heat Exchange Mode

Total heat exchange between outdoor and indoor conditions enhances indoor air quality by matching outdoor air temperature with room temperature.



Common Air Exchange Mode (Spring/Fall) (Only for 152 to 2002 type)

External air flows indoors for comfort



REMOTE CONTROL SETTING

Remote Control Function

The wired remote control can be used for the following functions:

- Turn the air conditioner and total heat exchanger on/off simultaneously
- Set individual operation setting for the total heat exchanger
- Set fan speed (Low to High)
- Set air exchange mode (Automatic / Total Heat Exchange / Common)
- Advance control for cooling and heating (30 min or 60 min delay start)
- On/Off Timer (from 30 minutes max of 24 hours)
- Enhance air flow (during Low and High operation)
- Check filter conditions

EASY INSTALLATION

Simplified Wiring System

Non-polar two-core transmission wires are utilized to avoid connection errors and abnormal transmissions.

Simplified Wiring System

Compact indoor unit can virtually fit in any narrow space.

Maintenance of parts Simplified Wiring System

Non-polar two-core transmission wires are utilized to avoid connection errors and abnormal transmissions.

Parts can be accessed through the service access panel on the side of the unit

Unit can be installed upside down (for 152 to 2002 type only)

POWER SAVING

Fixed Total Heat Exchanger

Fixed total heat exchanging device achieves higher efficiency and saves more energy compared to the conventional rotating-wheel heat exchanger.

Positive and Negative Pressure Setting

Wind velocity indoors is set higher than exhaust velocity for positive indoor pressure. When wind velocity indoors is lower than exhaust velocity, negative pressure forms indoors.

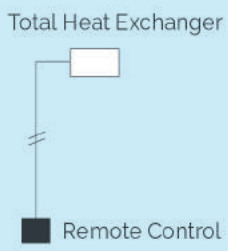
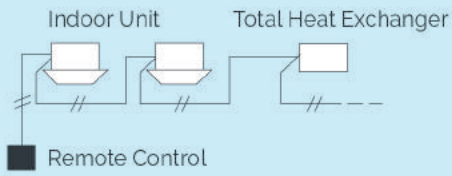
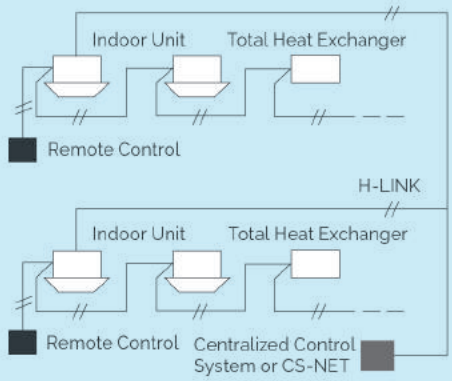
Retained Heat Elimination

Remote control keeps 3 minutes of operation to eliminate retained heat during stop operation.

CO2 Concentration Sensor

With a CO2 sensor (field supplied), Co2 concentration in the room can be reduced by increasing ventilation hence a more refreshing experience.

CONTROL EXAMPLE OF THE TOTAL HEAT EXCHANGER

Individual Use	Driving system with air conditioner	CS-NET or centralized control system
		

General Data (Y Type)

Model of Total Heat Exchanger			KPI-102Y	KPI-152Y	KPI-252Y	KPI-352Y	KPI-502Y	KPI-652Y	KPI-802Y	KPI-1002Y	KPI-1502Y	KPI-2002Y
Power Supply												
Outer Dimensions (WxDxH)		mm	610x500x210	580x808x264	599x882x270	804x882x270	904x962x270	884x1,222x340	884x1,322x388	1,134x1,322x388	884x1,322x785	1,134x1,322x785
Air Flow		m^3/h	100	150	250	350	500	650	800	1,000	1,500	2,000
External Static Pressure		Pa	80	75	85	90	100	70	120	85	75	60
Heat Recovery Efficiency	Cooling	%	55	63	63	66	62	62	65	65	65	65
	Heating	%	65	70	70	69	67	68	71	71	71	71
Temperature Efficiency		%	73.5	75	75	75	75	75	75	75	75	75
Sound Pressure Level		dB(A)	30.5	26	27	31	33	35	38	38	41	41
Motor Output		W	35	10x2	20x2	40x2	60x2	180x2	180x2	180x2	180x4	180x4
Net Weight		kg	20	25	29	37	43	64	71	83	165	189
Connecting Diameter of Air Duct		mm	Φ75	Φ144	Φ144	Φ144	Φ194	Φ194	Φ242	Φ242	□650x280	□650x280

(Z Type) High static pressure

Model of Total Heat Exchanger			KPI-152Z	KPI-252Z	KPI-352Z	KPI-502Z	KPI-652Z	KPI-802Z	KPI-1002Z	KPI-1502Z	KPI-2002Z
Power Supply			AC1Φ, 220V/60Hz								
Outer Dimensions (WxDxH)		mm	599x882x270	804x882x270	904x962x270	884x1,222x340	884x1,322x388	834x1,126x388	1,216x1,129x388	834x1,126x776	1,216x1,129x776
Air Flow		m^3/h	150	250	350	500	650	800	1,000	1,500	2,000
External Static Pressure		Pa	155	160	200	200	220	170	195	180	190
Heat Recovery Efficiency	Cooling	%	75	67	70	62	67	61	64	62	64
	Heating	%	76	73	73	69	73	67	72	68	72
Temperature Efficiency		%	79	76	75	74	76	74	77	74	77
Sound Pressure Level		dB(A)	28	29	33	34	36	38.5	38.5	41.5	41.5
Motor Output		W	20x2	40x2	60x2	180x2	180x2	200x2	200x2	200x4	200x4
Net Weight		kg	29	37	43	64	71	60	73	140	163
Connecting Diameter of Air Duct		mm	Φ144	Φ144	Φ194	Φ194	Φ242	Φ242	Φ242	□650x280	□650x280

Notes:

1. General date is based on following conditions:
   - Cooling:Indoor temperature is 27℃(DB)/20℃(WB) Outdoor temperature is 3 ℃(DB)/29℃(WB)
     Heating: Indoor temperature is 20℃(DB)/14℃(WB) Outdoor temperature is 5 ℃(DB)/2 ℃(WB)
   - Heat recovery efficiency is measured at standard external static pressure and under ratio of 7:1 when outdoor side is against indoor side.
   - Temperature efficiency: the average air-conditioning and heating.
   - The test is in compliance with JID standard andis measured at 1.5m below a center of each of indoor units.
2. Noise value is measured in the silent room, noise value of local location is raised by installation environment and reflected noise.
3. Noise value is measured at external static pressure (standard static pressure) listed above. If external static pressure and standard static pressure are different, noise value may be raised.
4. Noise in air outlet is around 8-11dB, when position of the air outlet is close to the unit body, the operating noises leaks out of air outlet via air duct, thereby making noise loudly. The larger air volume of unit model is, the louder noises make. If the indoor unit is fixed in silent space, such as classrooms or libraries, please have soundproofing construction, and some suggestions for soundproofing construction are listed as follows:
   - Installing silencer box and silencer tube.
   - Having soundproofing construction of ceiling.
   - Adjusting fixing position of unit body.
   - Wrapping soundproof material around audio position.
   - Arranging air outlets evenly.

LIST OF OPTIONAL PARTS

4-Way Cassette Type

NO	Optional Parts	Model	Applicable models	Notes
1.	Vertical moving decorative frame	P-G23WAU2	RCI-28DT~160DJ	
2.	Standard moving decorative frame	P-N23WA	RCI-1.0~5.0FSN2	Design for wide-angle airflow
		P-N23NAT	RCI-28DT~160DJ	
3.	Standard cleaning filter	F-23L4	RCI-1.0~5.0FSN1Q, RCI-28DT~160DJ	For replacing standard moving decorative frame
4.	Antibacterial cleaning filter	F-23L4-KS	RCI-1.0~2.5FSN1Q, RCI-28DT~56DN	
		F-23L4-K	RCI-3.0~5.0FSN1Q, RCI-63DS~160DJ	For Standard moving decorative frame
5.	High purity filter (Colorimetry 65%)	F-23M4	RCI-1.0~2.5FSN1Q, RCI-28DT~56DN	
		F-46M4	RCI-3.0~5.0FSN1Q, RCI-63DS~160DJ	Use for matching with filter box
6.	Antibacterial purity filter (Colorimetry 65%)	F-23M4-K	RCI-1.0~2.5FSN1Q, RCI-28DT~56DN	
		F-46M4-K	RCI-3.0~5.0FSN1Q, RCI-63DS~160DJ	Use for matching with filter box
7.	High purity filter (Colorimetry 90%)	F-23H4	RCI-1.0~2.5FSN1Q, RCI-28DT~56DN	
		F-46H4	RCI-3.0~5.0FSN1Q, RCI-63DS~160DJ	Use for matching with filter box
8.	Deodorizing filter	F-23L4-D	RCI-1.0~2.5FSN1Q, RCI-28DT~56DN	
		F-46L4-D	RCI-3.0~5.0FSN1Q, RCI-63DS~160DJ	Use for matching with filter box
9.	Filter box	B-23H4	RCI-1.0~5.0FSN1Q, RCI-28DT~160DJ	
10.	Electronic dust collector	FE-23I8S	RCI-1.0~2.5FSN1Q, RCI-28DT~56DN	
		FE-33I8	RCI-3.0~5.0FSN1Q, RCI-63DS~160DJ	Deodorizing filter is included
11.	Exchanger for Electronic dust collector	FE-23I8ESx1	RCI-1.0~2.5FSN1Q, RCI-28DT~56DN	For replacing electronic dust collector
		FE-33I8ESx2	RCI-3.0~5.0FSN1Q, RCI-63DS~160DJ	
12.	Shielding plate	PI-23LS5	RCI-1.0~5.0FSN1Q, RCI-28DT~160DJ	For air outlets

2-Way Cassette Type

NO	Optional Parts	Model	Applicable models	Notes
1.	Standard moving decorative frame	P-N23DNA	RCD-1.0~3.0FSN2	
		P-N46DNA	RCD-4.0~5.0FSN2	
2.	Standard cleaning filter	F-23LD3	RCD-1.0~3.0FSN2	
		F-46LD3	RCD-4.0~5.0FSN2	
3.	Antibacterial cleaning filter	F-23LD4-K	RCD-1.0~3.0FSN2	For replacing standard moving decorative frame
		F-46LD4-K	RCD-4.0~5.0FSN2	
4.	High purity filter (Colorimetry 65%)	F-23MD4-P	RCD-1.0~3.0FSN2	For Standard moving decorative frame
		F-46MD4-P	RCD-4.0~5.0FSN2	
5.	High purity filter (Colorimetry 65%)	F-23MD4	RCD-1.0~3.0FSN2	Use for matching with filter box
		F-46MD4	RCD-4.0~5.0FSN2	
6.	Antibacterial purity filter (Colorimetry 65%)	F-23MD4-K	RCD-1.0~3.0FSN2	Use for matching with filter box
		F-46MD4-K	RCD-4.0~5.0FSN2	
7.	High purity filter (Colorimetry 90%)	F-23HD4	RCD-1.0~3.0FSN2	Use for matching with filter box
		F-46HD4	RCD-4.0~5.0FSN2	
8.	Deodorizing filter	F-23LD4-D	RCD-1.0~3.0FSN2	Use for matching with filter box
		F-46LD4-D	RCD-4.0~5.0FSN2	
9.	Filter box	B-23HD4	RCD-1.0~3.0FSN2	
		B-46HD4	RCD-4.0~5.0FSN2	

In-the-Ceiling Type（N Type）

NO	Optional Parts	Model	Applicable Models	Notes
1.	Durable filter	F-S14	RPI-22NC~28NT	
		F-S15	RPI-36NR~56NN	
		F-S16	RPI-63NS~90NK	
		F-S9	RPI-112NQ	
		F-S10	RPI-140NZ、160NJ	
2.	High purity filter (Colorimetry 65%)	F-34MI3	RPI-112NQ	Do not use with High purity filter
		F-46MI3	RPI-140NZ、160NJ	
3.	High purity filter (Colorimetry 90%)	F-34HI3	RPI-112NQ	Use for matching with filter box
		F-46HI3	RPI-140NZ、160NJ	
4.	Filter box	B-34MI3	RPI-112NQ	Use for matching with filter box
		B-46MI3	RPI-140NZ、160NJ	
5.	Drain device	DP-C1	RPI-22NC~90NK	Built-in Installation
		DUPI-162	RPI-112NQ~160NJ	

LIST OF OPTIONAL PARTS

Controlling System

NO	Part Name	Model	Function Description
1.	Remote control switch	PC-AR	Individually or simultaneously (up to 16 items) controls indoor unit and monitoring LCD remote control.
2.	High-performance wired remote control switch	PC-ARF	Individually or simultaneously (up to 16 items) controls indoor unit and monitoring LCD remote control.
3.	Wired controller for Hotels	PC-ARH	Individually or simultaneously (up to 16 items) controls indoor unit and monitoring LCD remote control.
4.	Wireless remote control	PC-LH3A	Obtains various controls in a wireless manner, so wiring is not required.
5.	Optical receiver	PC-ALH	Receives wireless remote-control signal (applicable for 4-Way Cassette Type).
		PC-ALHD	Receives wireless remote-control signal (applicable for 2-Way Cassette Type).
		PC-ALHP	Receives wireless remote-control signal (applicable for Ceiling Type).
		PC-ALHZ	Receives wireless remote-control signal (applicable for In-the-ceiling Type and Wall Type).
6.	Centralized ON/OFF controller	PSC-A16RS	Individually or simultaneously operates 16 indoor units, and displays operation and fault of each indoor unit.
7.	Central station	PSC-A64S	Controls up to 160 indoor units of 64 groups in 4 interval spaces, and individually or simultaneously operates each group, and displays operation and fault of each indoor unit.
8.	Standard centralized controller	PSC-5S (H-LINK II Non-correspondence)	Controls up to 128 indoor units of 16 groups, and individually or simultaneously operates each group, and displays operation and fault of each indoor unit.
9.	7 days timer	PSC-AIT	Matches with wired remote control and centralized controller to set daily operating schedule in a week, and sets three times of operation in a day.
10.	Central station controller EZ	PSC-A64GT	Has 8.5-inch touch screen, controls up to 160 indoor units of 64 groups in 4 interval spaces, and individually or simultaneously operates each group, and displaying operation and fault of each indoor unit.
11.	H-LINK relay	PSC-5HR	Relays more than 1,000 m of H-LINK wiring
12.	Remote control interface	PSC-5RA	Output unit signal for monitoring host of building management
13.	Central station controller DX DX management software	PSC-A128WX + PSC-AS2048WXB	Controls 160 indoor units via local area network, individually or simultaneously operates each indoor unit (including calculating use ratio of easy air conditioner).
14.	Air conditioner control interface	HARC70-P1	Lonworks® for integrated management of BMS Building air conditioning system (less management point)
		HC-A64BNP	BACnet® for integrated management of BMS Building air conditioning system
		HC-A32MB	MODbus for integrated management of BMS Building air conditioning system
		HC-A8LAN	Ethernetnet® for integrated management of BMS Building air conditioning system
		HARC-BX	Lonworks® for integrated management of BMS Building air conditioning system (more management point)
15.	Shielded twist pair cable	—	Prevents operating error resulting from noises (specification: UL2990#18×2C+AEB)

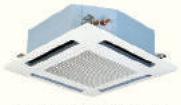
Others

NO	Part Name	Model	Applicable Model (for first multi-kit and uniform piping)	Notes
1.	Multi-Kit (ᚴ Type)	E-NP282S	RAM- 8 ~10MQ(D), RAM-125,RAM-140FPS(B)	For high-powered models, determine pipe quantity according to total capacity of indoor unit.
		E-NP452S	RAM-12~18MQ(D) RAM-200~270FPS(D)	
		E-NP692S	Modular 20~24MQ(D)	
		E-NP902S	Modular 26~54MQ(D)	
2.	Multi-Kit (Y Type)	MW-102AN	6~10HP	
		MW-162AN	12~18HP	
		MW-242AN	Modular 20~24MQ(D)	
		MW-302AN	Modular 26~54MQ(D)	
3.	Lock-Type Multi-Kit	E-NP224N	RAM-8MQ(D)	
4.	Baffle	AG-335AT	RAM-125~140FPS(B) RAM-200~270FPS(D)	2PC/units

HITACHI Indoor Units

Indoor Units

6 types with 75 models to meet different room requirements.

Capacity (HP)	0.8	1.0	1.3	1.5	1.8	2.0	2.3	2.5	3.0	3.3	4.0	5.0	6.0	8.0	10.0
 4-Way Cassette Type **RCI-FSN1Q**		RCI-1.0FSN1Q		RCI-1.5FSN1Q		RCI-2.0FSN1Q		RCI-2.5FSN1Q	RCI-3.0FSN1Q		RCI-4.0FSN1Q	RCI-5.0FSN1Q	RCI-6.0FSN1Q		
 4-Way Cassette Type **RCI-D**		RCI-28DT		RCI-36DR	RCI-40DH	RCI-45DM	RCI-50DF	RCI-56DN	RCI-63DS	RCI-71DE	RCI-80DL	RCI-90DK	RCI-112DQ	RCI-140DZ	RCI-160DJ		
 2-Way Cassette Type **RCD-FS (Japan Original)**		RCD-1.0FSN2		RCD-1.5FSN2		RCD-2.0FSN2		RCD-2.5FSN2	RCD-3.0FSN2		RCD-4.0FSN2	RCD-5.0FSN2			
	RPI-0.8 FSNQH	RPI-1.0 FSNQH		RPI-1.3 FSNQH	RPI-1.5 FSNQH	RPI-1.8 FSNQH	RPI-2.0 FSNQH	RPI-2.3 FSNQH	RPI-2.5 FSNQH	RPI-3.0 FSNQH	RPI-3.3 FSNQH	RPI-4.0 FSNQH	RPI-5.0 FSNQH	RPI-6.0 FSNQH	RPI-8.0 FSNQ	RPI-10.0 FSNQ
 In-The-Ceiling Type **RPI-FSNQH**															
 In-The-Ceiling Type **RPI-N**	RPI-22NC	RPI-28NT		RPI-36NR	RPI-45NM	RPI-50NF	RPI-56NN	RPI-63NS	RPI-71NE	RPI-80NL	RPI-90NK	RPI-112NQ	RPI-140NZ	RPI-160NJ		
 Floor Type **RPF-FS**		RPF-1.0FSN2E		RPF-1.5FSN2E		RPF-2.0FSN2E		RPF-2.5FSN2E							
		RPF-1.0FSN2E		RPF-1.5FSN2E		RPF-2.0FSN2E		RPF-2.5FSN2E							
				RPC-1.5FSN3		RPC-2.0FSN3		RPC-2.5FSN3	RPC-3.0FSN3		RPC-4.0FSN3	RPC-5.0FSN3	RPC-6.0FSN3		
 Ceiling Type **RPC-FS (Japan Original)**															
 Ceiling Type **RPCI-D**								RPCI-63DS	RPCI-71DE						
 Wall Type **RPK-FSNSM3**		RPK-1.0 FSNSM3		RPK-1.5 FSNSM3		RPK-2.0 FSNSM3		RPK-2.5 FSNSM3	RPK-3.0 FSNSM3		RPK-4.0 FSNSM3				

Full Range of Products

Total Heat Exchanger

Fan Speed (m^3/h)	100	150	250	350	500	650	800	1,000	1,500	2,000
 KPI-Y Type (Slim)	KPI-102Y									
 KPI-Y Type		KPI-152Y	KPI-252Y	KPI-352Y	KPI-502Y	KPI-652Y	KPI-802Y	KPI-802Y	KPI-1502Y	KPI-2002Y
 KPI-Z Type (High static pressure)		KPI-152Z	KPI-252Z	KPI-352Z	KPI-502Z	KPI-652Z	KPI-802Z	KPI-1002Z	KPI-1502Z	KPI-2002Z

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Specifications in this catalog are subject to change without notice, in order that HITACHI may bring the latest innovations to our customers.

HITACHI

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