

HITACHI

 Hitachi Appliances, Inc.

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Distributed By:

HHEFSNY8Q 1311



HITACHI

Inspire the Next



Inverter-driven Multi-split
Heat Pump Central Air Conditioning System

SET-FREE

FSNY8Q Series



Introducing a new addition to Hitachi's SET-FREE range of VRF air conditioning units Hitachi SET-FREE FSNY8Q Series

Hitachi continues to propose unique product lines in order to meet demands for various types of air conditioning systems. The Hitachi FSNY8Q series is a new energy-saving generation of Hitachi VRF Multi-split Air Conditioning System, completely integrate latest technical breakthroughs in a unique product-enhancing efficiency and user experience, which successfully meets installer and customer demands-offering greater functionality, control and cost savings.

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Needs of End Users

- Energy efficient
- Greater user control
- Flexibility to extend system



Needs of Consultants

- Time saving with equipment layout design
- Flexible, modular system designs
- Intelligent controls

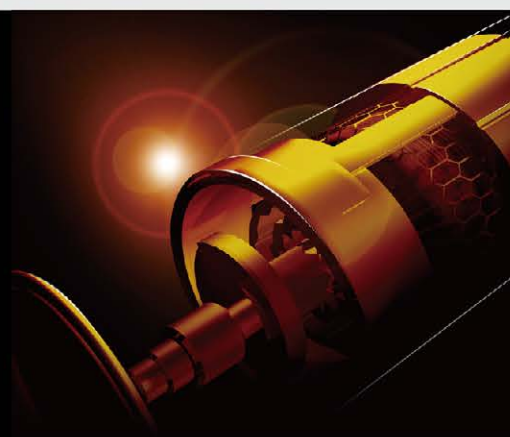


Needs of Contractor and installer

- Modular and lightweight for quicker (or phased) installations
- Increased piping lengths for flexibility

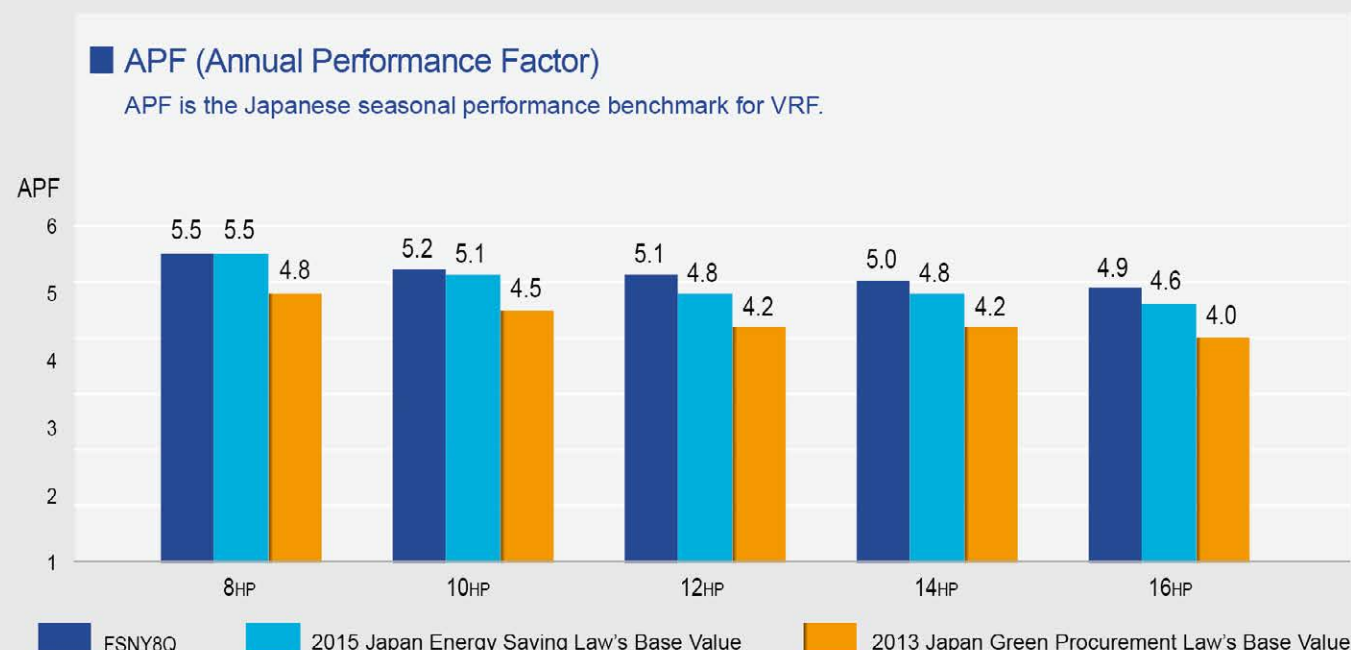
Core Technologies

The Source Power of Continuous Innovation



High Efficiency and Energy Saving

Improvement of APF



What is APF ?

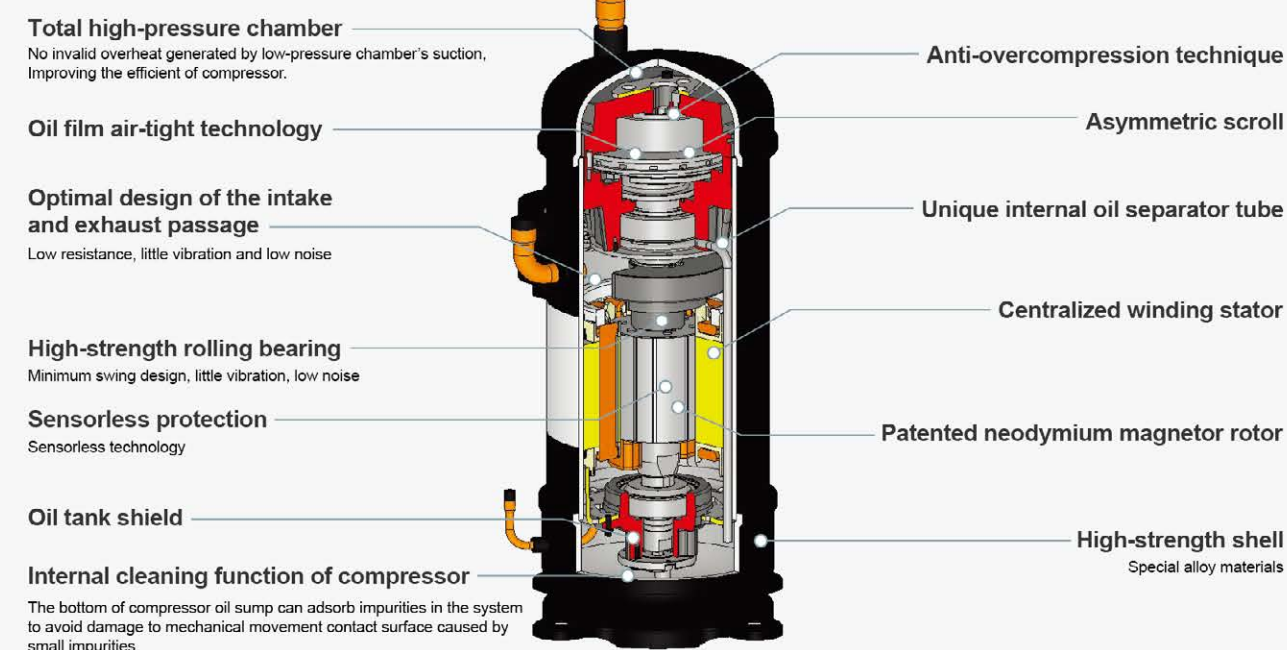
APF is meant for cooling/heating capacity per 1kW of operating power consumption under certain conditions throughout the year.

$$APF = \frac{\text{Accumulated cooling/heating loads (kWh)}}{\text{Accumulated power input in cooling/heating (kWh)}}$$

NOTE:
The APF is calculated value when operating Japanese domestic base unit under below conditions, and is based on JIS B 8616:2006, JRA4048:2006 and JRA4048:2009 (Supplement 1).
The evaluated indoor units are adopted to Japanese domestic standard.

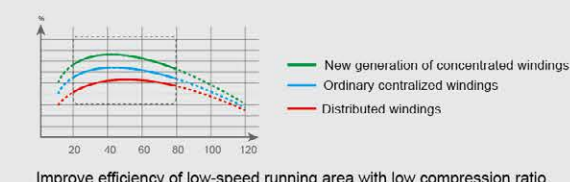
Area : Tokyo Usage : Office Operating hours : 8:00 - 20:00
Operating period : Cooling 16/April - 8/November, Heating 14/December - 23/March

The Hitachi Patented High Efficiency Scroll Compressor



New type DC compressor motor

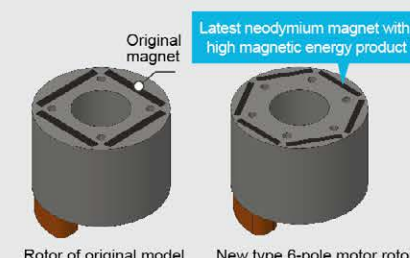
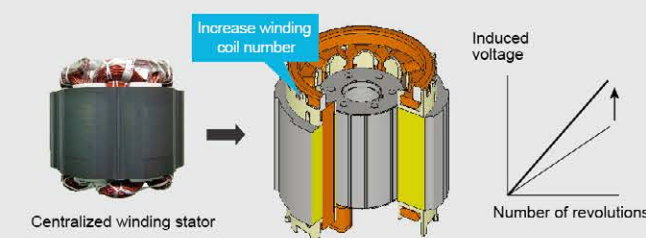
Hitachi FSNY8Q series use new type DC motor (centralized winding), the performance is greatly improved at 20-80Hz where the operation time of the inverter compressor is longest, thereby increasing overall system performance with medium and low load.



New generation of centralized winding stator

New type motor stator adopts centralized windings with increased number of coils, the induced voltage is set to a higher value (lower current), motor efficiency is increased at low speeds.

Centralized coil windings are wound directly, so that the coils through the end face of the stator core are reduced, compared with distributed windings, the coil circumference is significantly reduced. Therefore, the use of thicker wires for high-density winding significantly reduces winding resistance, particularly by the decrease in primary copper loss, the motor efficiency in low-speed field is improved.



6-pole neodymium magnetor rotor with high magnetic energy product

Application of more efficient Nd-Fe-B permanent magnet materials

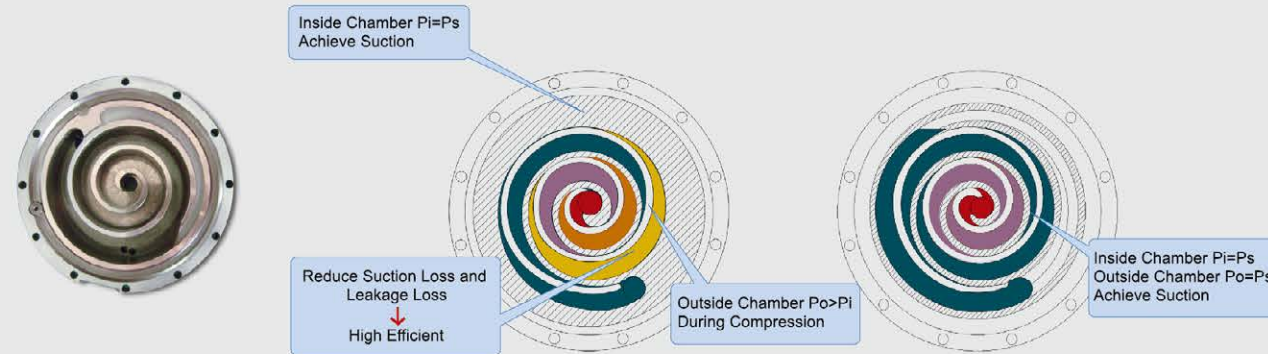
The driving motor rotor used in new generation compressor adopt Hitachi's latest Nd-Fe-B permanent magnet materials with high magnetic energy product and multipolar structure, the optimal rotor shape design is more efficient in all rotary speed control.

Exclusive Asymmetric scroll Technology

The asymmetric scroll structure of Hitachi compressor effectively helps reduce the refrigerant gas leakage loss in the process of suction and compression, enhances operating efficiency and reliability.

Asymmetric scroll: the time difference between the suction of outside chamber and inside chamber is 180°. The pressures of outside chamber and inside chamber are different. The pressure distribution in compressing chambers are asymmetric.

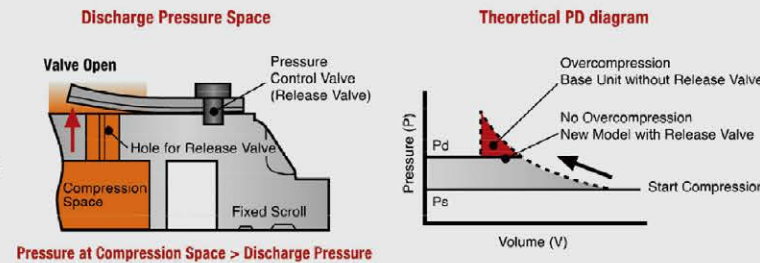
Symmetric scroll: the outside chamber and inside chamber end gas suction at the same time, the pressures of outside chamber and inside chamber are equal. The pressure distribution in compressing chamber are symmetric.



Anti-overcompression technique

Hitachi's high pressure chamber scroll compressor adopts patented Release Valve Technique, which effectively prevents the overcompression when compressor is in partial load operation and drastically promotes the intermediate pressure performance.

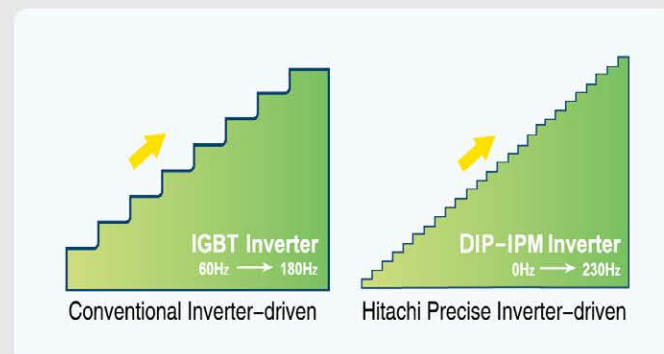
- Orbiting Scroll Lifting Force Optimization is improved
- Leakage Loss Reduction
- Improved Intermediate Pressure Performance



Precise Inverter Technology

The Hitachi Patented Precise Inverter Technique

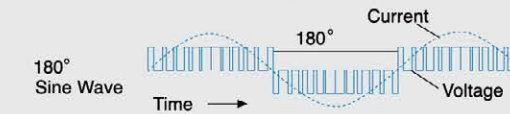
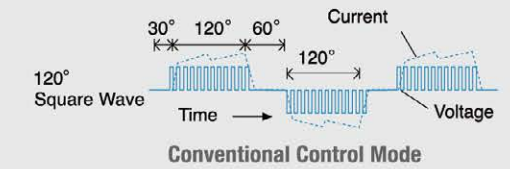
The operating speed of DC motor in compressor can be adjusted continuously in 1Hz increment and freely relating to the variability of system capacity. This technique integrated with auto-adaptive control technique automatically adjusts capacity output according to actual air conditioning load in order to achieve a smoother curve of temperature fluctuation to satisfy higher requirements of coziness.



The Latest 180° Sine Wave DC Inverter Driven Technique

The application of advanced sensorless three phase vectoring control technique on permanent magnetism synchronous motor ensures the output current of DIP-IPM DC inveter to be a smooth sine wave curve, and accordingly enables motor to operate smoothly with efficiency dramatically increased. At the same time, both harmonic current and electromagnetic noise are suppressed.

DIP-IPM inverter makes a significant improvement on heat emission. It achieves smaller thermal drift which reduces the impact on control precision and increases stability and lifespan of the air-conditioning system.



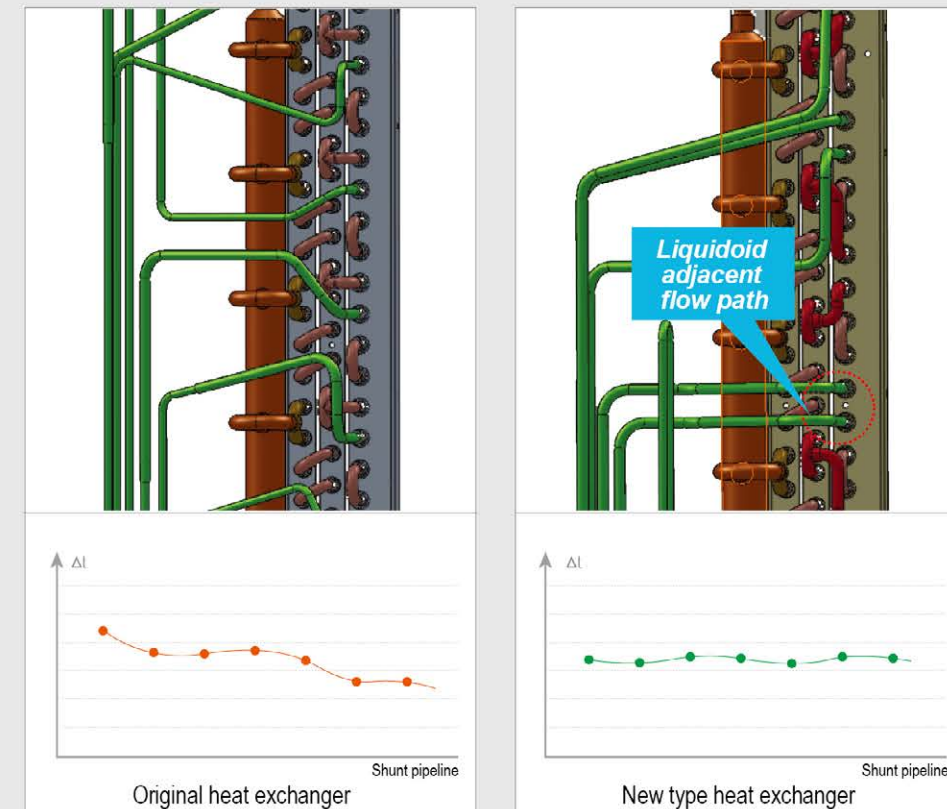
DIP-IPM DC Inverter

New Type High Efficient Heat Exchanger

New type high efficient heat exchanger reduces the air-flow resistance, making heat exchange more uniform and more sufficient, further improving heat exchange efficiency.

Optimized design of Refrigerant Circuit

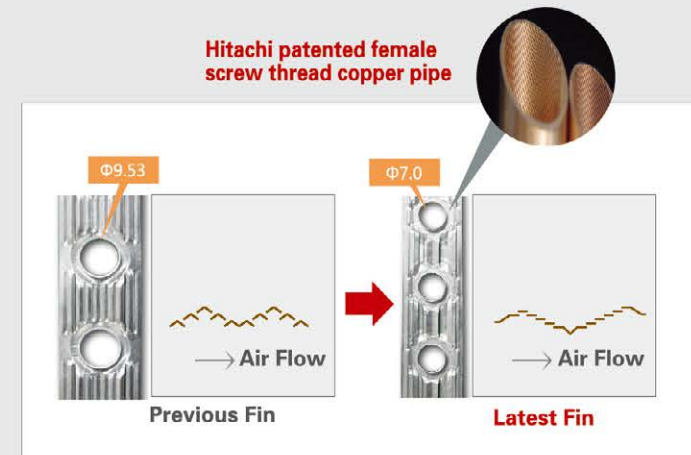
Through heat exchanger pipeline homogenization and liquidoid flow path adjacent design, it can avoid the influence of high temperature gas pipe flow path on the liquidoid flow path, the heat exchanger can achieve more uniform heat exchange, and reduce the temperature deviation of liquidoid piping outlets, there by improving energy efficiency by 3%.



Note: Δt stands for refrigerant temperature difference between inlet and outlet of heat exchanger shunt pipelines.

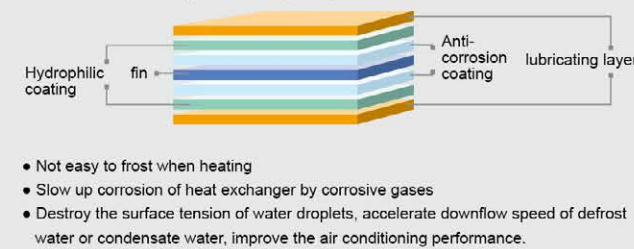
Newly Developed Fin

New fin and copper pipe contribute to promote heat transfer efficiency.



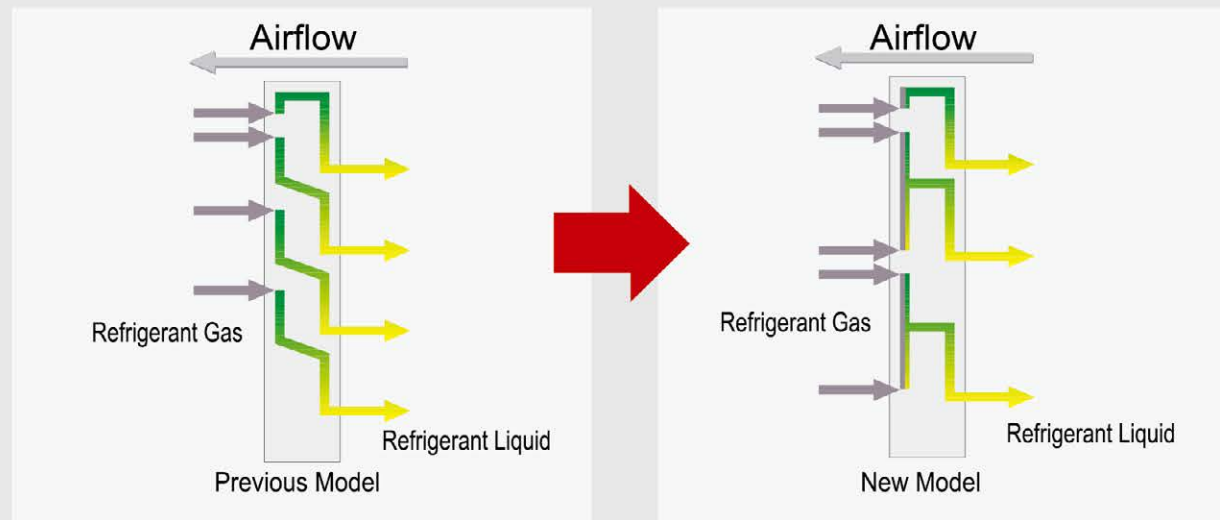
Internal screwed pipe is 7 pipe, the side heat exchange efficiency of refrigerant in copper pipe is improved, the number of copper pipe rows and the heat exchange area are increased.

Hierarchical diagram of hydrophilic aluminum foil

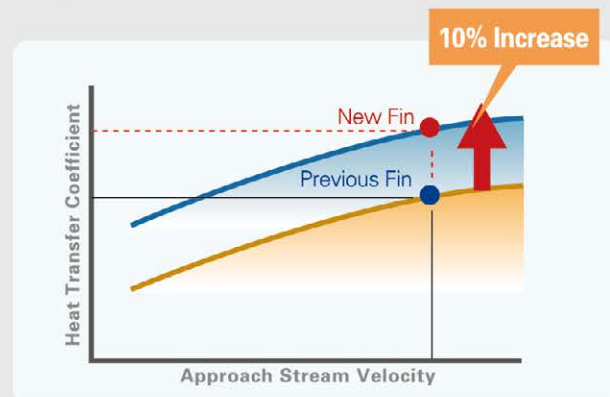


"2-1" refrigerant circuit

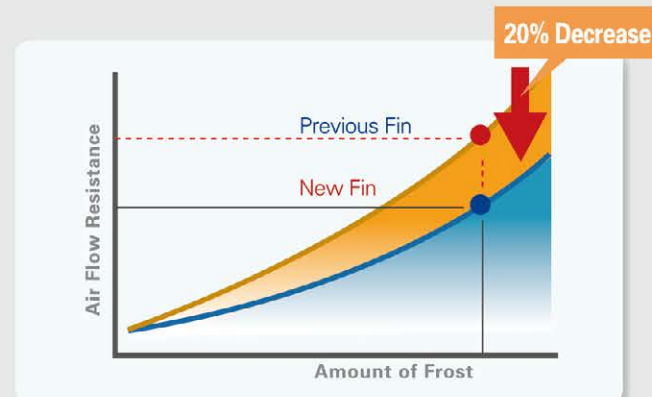
The special "2-1" refrigerant flow, Optimizes the efficiency of heat exchanger.



Improvement of Heat Transfer



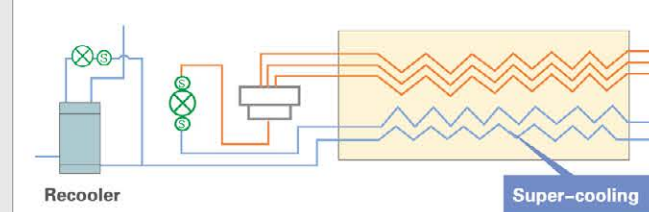
Reduction of Air Flow Resistance



Two-stage Super-cooling Circulation Technique Improves Cooling Capacity and Total Piping Length

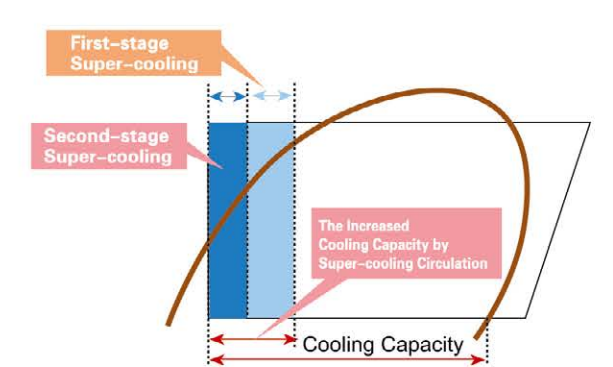
A sub-cooling section in the heat exchanger of outdoor unit is designed to realize the first-stage super-cooling. Furthermore, a high efficient recooling is applied to achieve the second-stage super-cooling. The total undercooling can reach up to 27 degree (taking 14 HP as an example).

Two-stage Super-cooling Cyclic Graph



- Two-stage super-cooling circulation enhances cooling capacity
- Pressure loss of refrigerant flowing in pipe is reduced
- Improved undercooling contributes to stable operation of EEV
- Improved undercooling allows extension of total piping length

Two-stage Super-cooling Pressure-enthalpy Graph

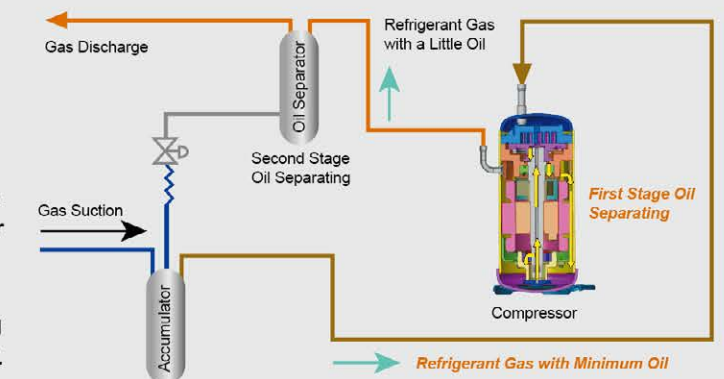


High Efficiency Oil-control Technology

The Originated 2-Stage Oil Separating Technique

The originated 2-stage oil separating technique adopts Hitachi proprietary compressor which has high efficient function on oil separating to conduct the first stage oil separation.

There is only a small proportion of refrigeration oil which is circulated together with refrigerant gas to oil separator and then separated as the second stage oil separating. Therefore, much less oil enters refrigerating circulation, accordingly enough oil can be guaranteed for lubricating compressor. The system can operate safely and reliably.



Oil-equalization Control Technology Between Outdoor Units

Synthetic application of scroll compressor with internal oil separating function, efficient external oil separator, accumulator, and intelligent oil level control technology regulates the oil level within the proper range, ensures oil balance between outdoor units, and guarantees system stability and reliability.

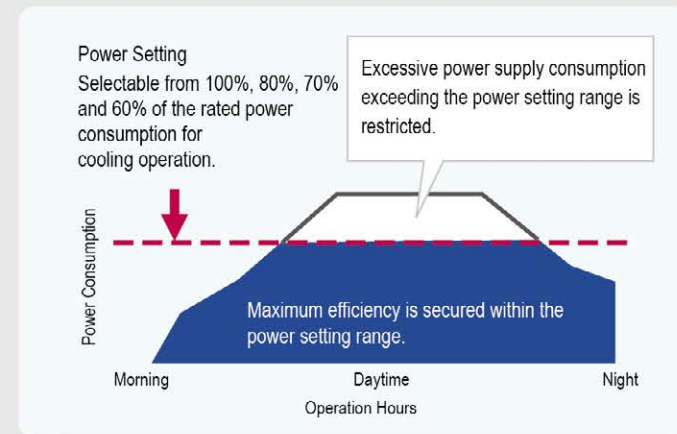


Intelligent Control Technology

Self-demand Control

A newly developed self-demand function has largely improved energy-saving effects.

Since the current is self-detected and demand control is performed automatically, no signal wiring work is required. Conventional demand control using demand signals is also available, and you can select various operations as required.



Wave Mode

Wave mode turns demand control ON and OFF alternately at intervals of about 20 min or 10 min.

While power is always saved, temperature changes are also minimized to maintain a comfortable room temperature.



Double Back-up Operation Function

The Backup Operation Function prevents the system from coming to a complete stop when outdoor unit failure occurs.

1. As one of outdoor units breaks down, the rest of outdoor units in the same refrigerant system can turn to operate urgently (more than 18HP system practicable).

2. As one compressor is failed, the other compressor in the same outdoor unit can be set to emergency operation mode.

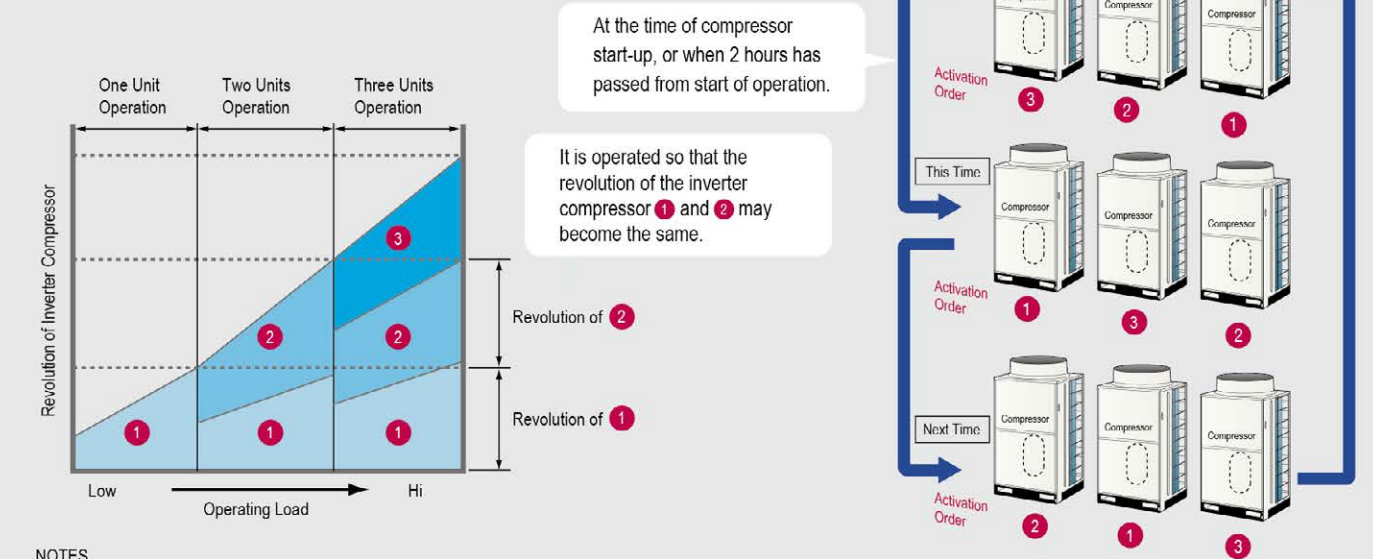


Rotational Operation^{*1} to Distribute Load of Outdoor Units

Regulating the operation time of each outdoor unit leads to load reduction on compressors.^{*2}

During multiple unit operation, the same rotation frequency of inverter compressor results in an equivalent load on each compressor. Therefore, outdoor unit endurance is improved.

Inverter Compressor Rotation Frequency Control (Example)



NOTES

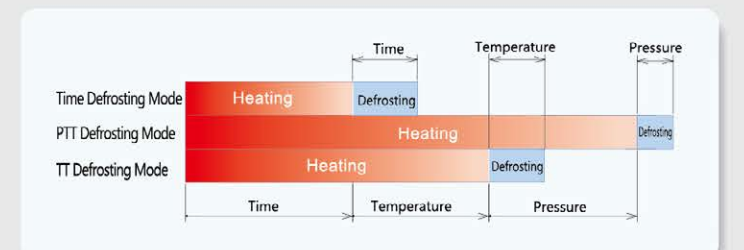
*1: At least 2 outdoor units are required for this function.

*2: Comparison between rotation operation function and non-rotation operation function based on the same system.

Intelligent Defrosting Enables More Effective Heating

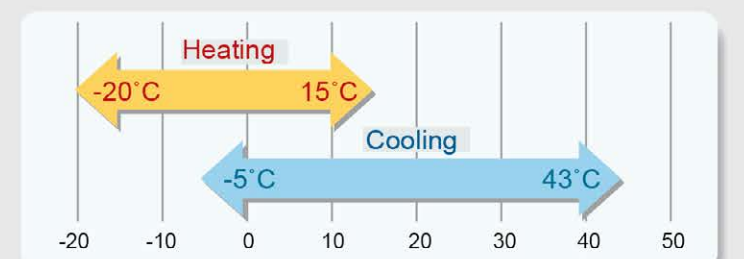
Pressure Defrosting Mode

FSNY8Q series adopts Hitachi patented pressure defrosting mode (PTT defrosting mode), accordingly frosting doesn't occur frequently and the short defrosting time ensures heating effect in winter.



Wide Working Range

SET-FREE FSNY8Q can handle a wide range of outside air conditions, thus extending the flexibility of installation space and climatic environment.

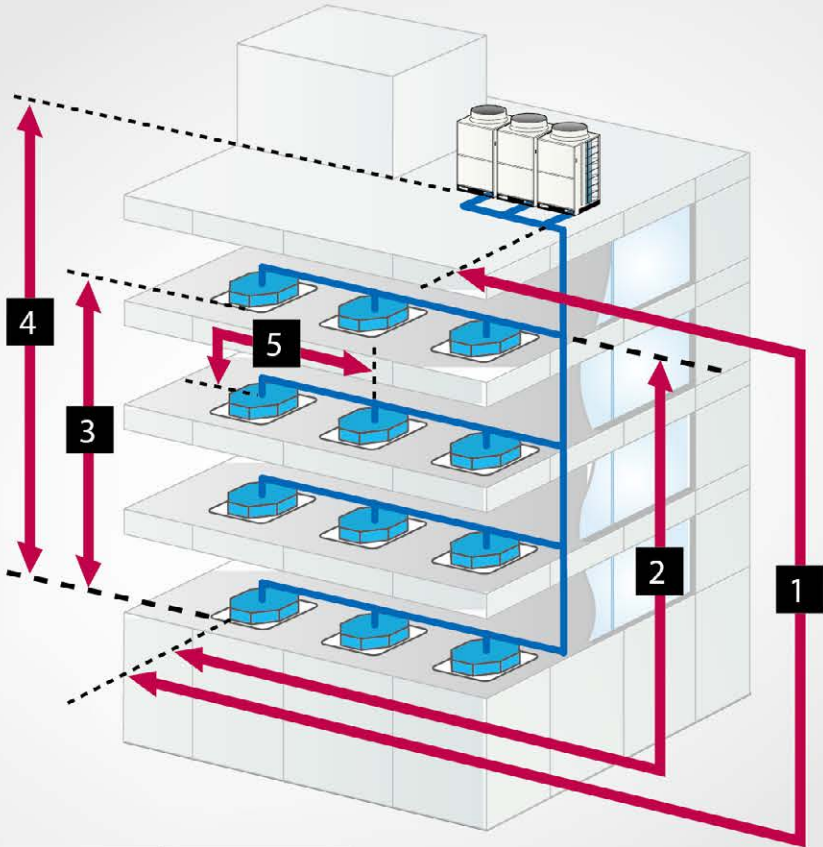


Design and Installation

System Configuration Suitable for Design and Installation

More Flexible Refrigerant Piping Work

Improved flexibility of design by increasing the total pipe length to 1,000 m max.



	FSNY8Q	FSN6Q
1 Max. piping length	165 m ^{*1}	165 m ^{*1}
2 Between first branch and indoor unit	90m or less ^{*2}	90m or less ^{*2}
3 Height difference between highest and lowest indoor units	30m or less	15m or less
4 Height difference between outdoor and indoor units	50m ^{*3}	50m ^{*3}
Sales on order	90m or less ^{*2, *4}	—
5 Max. length between branch from indoor units	40m	40m

NOTES

*1: For 100m or more, the pipe diameter will be one size larger.

*2: There're restrictions for connectable indoor units and refrigerant amount. Please refer to technical manual for details.

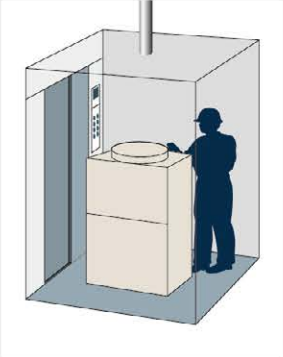
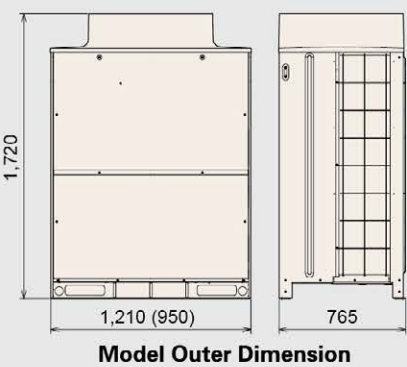
*3: In case the outdoor unit is installed at a higher level than indoor units. If the outdoor unit is installed lower than indoor units, the maximum height difference is 40m.

*4: In case the outdoor unit is installed at a higher level than indoor units, and only when it is a base unit (8~16HP).

Compact and Lightweight Design, Save Space

Ease and flexibility of installation are further enhanced by adopting the outdoor unit's lightweight and compact design.

The elevator can be used to uplift the base unit (Max.16HP) separately.



Connectable to 64 Indoor Units Max.

The number of connectable indoor units has been increased to 64 maximum. Thus, the system can be used in buildings where there are many indoor units to be connected.

Outdoor units Capacity (HP)		8	10	12	14	16	18	20	22	24	26	28	30
Max. Number of Connectable Indoor Units	FSNY8Q Series	13	16	19	23	26	26	33	36	40	43	47	50

Connection Capacity: 50 to 130%

Outdoor units Capacity (HP)		32	34	36	38	40	42	44	46	48	50	52	54
Max. Number of Connectable Indoor Units	FSNY8Q Series	53	56	59	64	64	64	64	64	64	64	64	64

NOTES

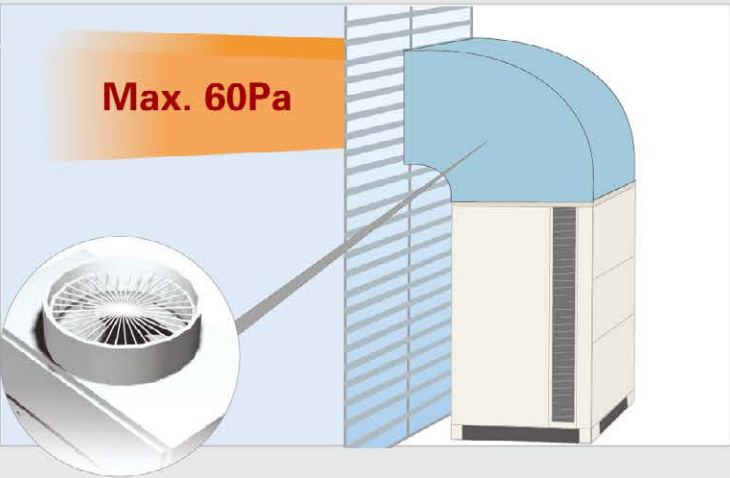
*: For a system in which all indoor units are operated simultaneously, the max. total capacity will be 100%. Determine the number of Indoor Units carefully so that a problem such as decreased outlet air temperature will not occur. Refer to Technical Catalog for more details.

*: Compared to indoor units of over 1.5HP, indoor units of 0.8 and 1.0HP are set with higher air flow. Make sure to select appropriate indoor units when installing indoor units where cold draft may occur during heating operation. Determine the usage environment and installation location carefully.

Wide Range of External Static Pressure of Outdoor Units

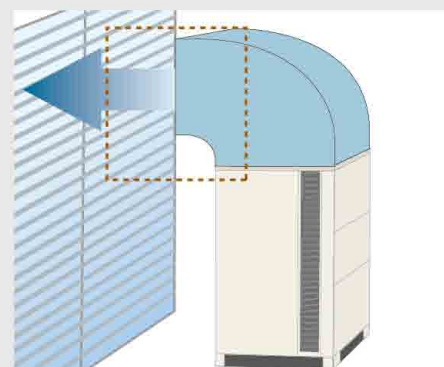
High efficient axial fan designed with computer fluid analysis, finite element method and aerodynamic simulation analysis owns optimized inlet and outlet angle, as well as a special flared outlet, which results in higher external static pressure allowance and sound air circulation.

- Application of efficient fan lowers motor power consumption
- External static pressure: 60Pa

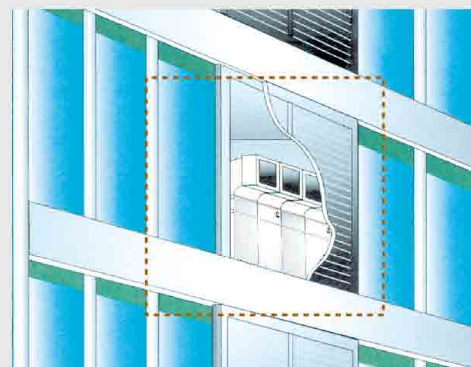


Layer Installation for Highrise Building

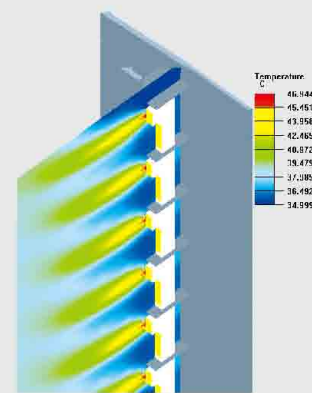
The use of exhaust duct allows layered installation of outdoor units. Outdoor fan motor can provide a higher external static pressure and a long distance air supply, which prevents air return from short-cut in an effective way, then ensures a sound ventilation and heat transfer.



Exhaust Duct Installation



Layered Installation



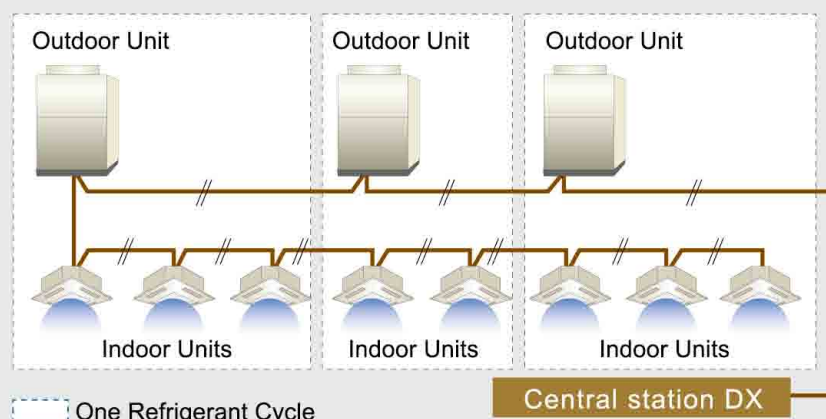
Air Distribution

Simple and Convenient Wiring Work

Communication between multiple outdoor units and indoor units is via H-LINK II system, per H-LINK II can support up to **64** outdoor units and **160** indoor units.

Non-polarity Twisted-pair Wire

Transmission cable adopts non-polarity twisted-pair wire which can avoid the polarity mismatching between anode and cathode.

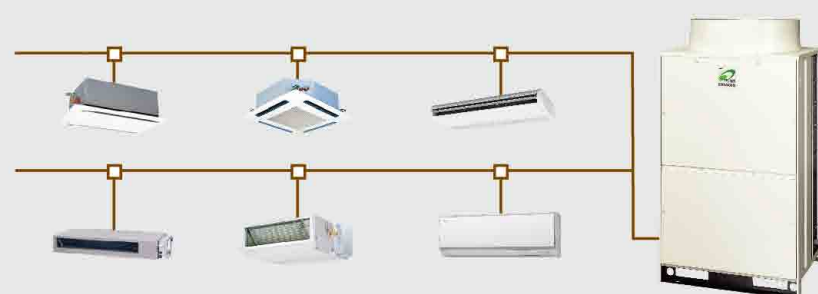


One Refrigerant Cycle

Central station DX

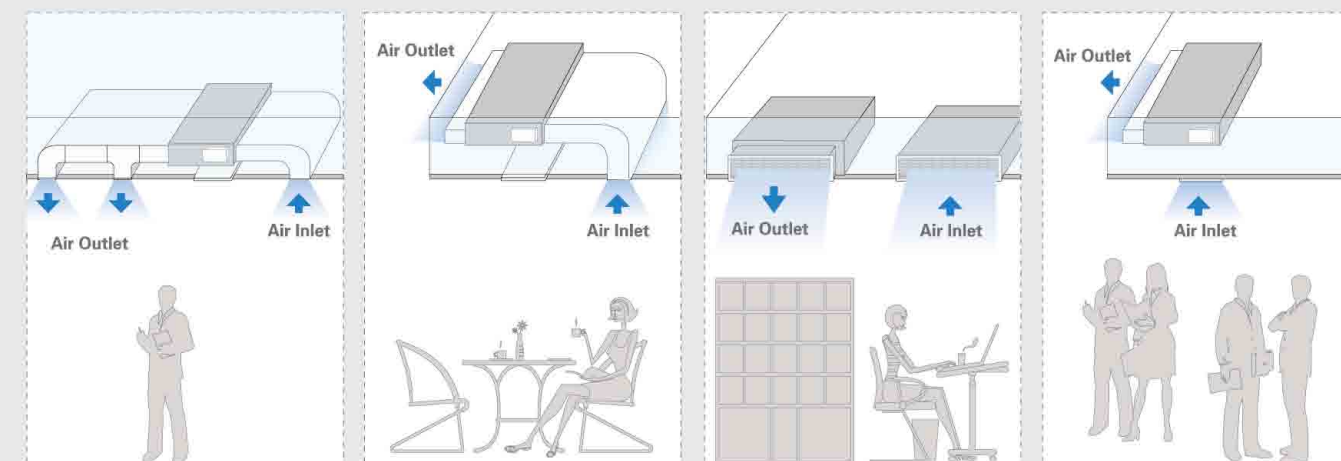
Various Model Types Easily Match Different Spatial Layout

Wide capacity range of outdoor units enables free model combination relating to the actual condition of building. There are **82** models in **10** types of indoor units for selection. Planner can choose appropriate type and capacity of indoor units according to interior decoration and functions.



Flexible Ways of Air Supply and Air Return

User and designer can select from different ways of duct layout to suit different construction structure and interior decoration, which meets various personalized requirement of customers.



① Ceiling Supply Ceiling Return

② Side Supply Ceiling Return

③ Side Supply Side Return

④ Side Supply Bottom Return, Suspended Ceiling Air Return*

NOTES *: When bottom air inlet is adopted, sound pressure will increase 5~8 dB(A).

Self-diagnosis and Intelligent Operation Inspection

Through remote controller or 7-segment LED displays on outdoor units, self-diagnosing error code and information can be easily got to monitor the system operating status which makes both operation management and maintenance more convenient.



Remote Control Switch



7-Segment Display

Alarm Code

Code No.	Category	Content of Abnormality	Leading Cause
01	Indoor Unit	Tripping of protection device	Failure of fan motor, drain discharge PCB, relay
02	Outdoor Unit	Tripping of protection device	Activation of PSH
03	Transmission	Abnormality between indoor and outdoor(or indoor)	Incorrect wiring, failure of PCB, tripping of fuse
04	Inverter	Inverter trip of outdoor unit	Failure in transmission of PCB for inverter
05	Transmission	Abnormality of power source wiring	Reverse phase incorrect wiring
06	Voltage Drop	Voltage drop in outdoor unit excessively low or high voltage to outdoor unit	Voltage drop, incorrect wiring, tripping of fuse

Service Checker is designed to quickly inspect the units operating status. Problems can be found out as early as possible, then solution can be taken accordingly.



Comfortable, Healthy and Low Carbon

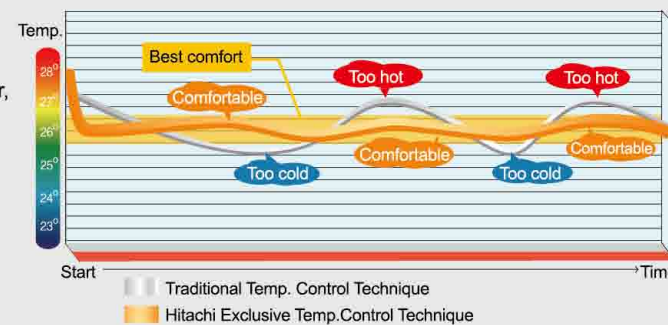
Ultimate User Experience



Focus on Comfort, Harmony Between People and Air

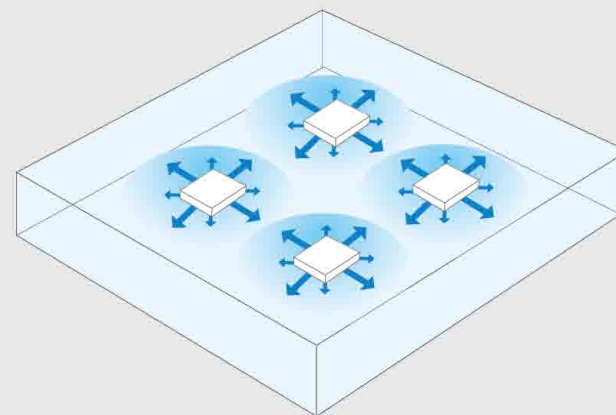
Particular Outlet Air Temperature Sensor Designed for Temperature Control

Compared with indoor temperature control in conventional air conditioning according to temperature sensors placed on air inlet and wireless controller, FSNY8Q series adds an outlet air temperature sensor, adjusts refrigerant flow by controlling high-precision EEV, thus achieving a temperature control precision of 0.5°C and satisfying users' comfort need.



4-Way Cirulating Airflow Causes Temperature Uniformity

Hitachi 4-way cassette type distributes the airflow to every corner of the room by 360° air supply and adjustment of louver position. All-directional circulating airflow contributes to avoid the dead air in corner, creates the most comfortable space with uniform temperature.



The quietest in the Industry

Highest Level in Noise Reduction



Adoption of Hitachi High
Pressure Chamber Scroll
Compressor



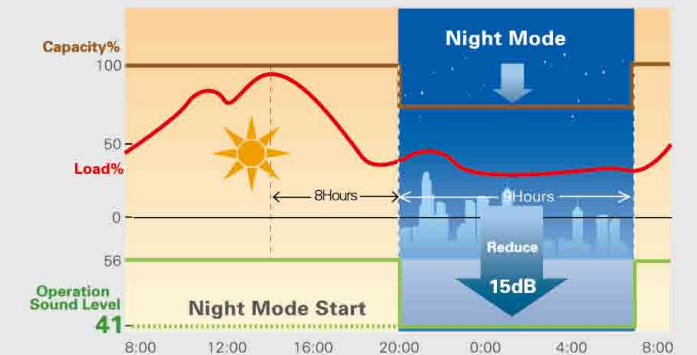
Adoption of DIP-IPM
Inverter



Noise Deadening of
Fan Motor

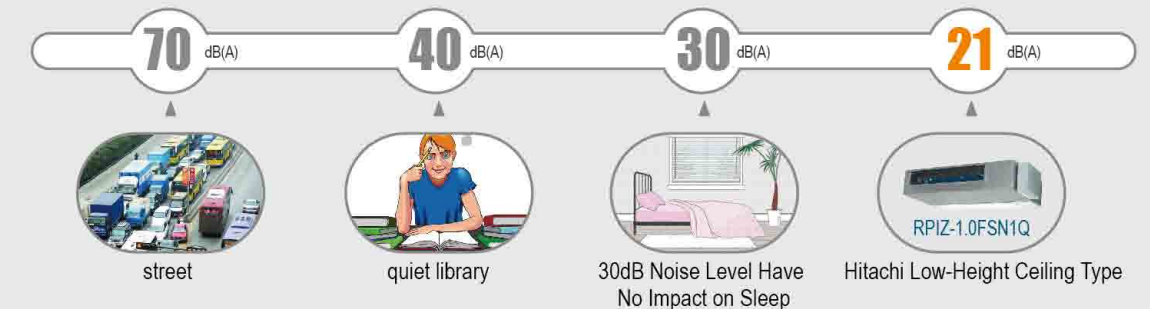
Silent Mode at Night

The outdoor unit has a peculiar function of night-shift setting, which reduces the noise level by max. 15 dB (8HP) when in full-load operation.



Indoor Unit Noise Control

In accordance with application situation and structure, Hitachi has been studying the technical means and installation methods for noise reduction of indoor units from various aspects of fan motor, fan blade and air duct layout, which provides customers with the quietest air conditioned environment.



Focus on Environmentally Friendly, Create Low Carbon Life Space

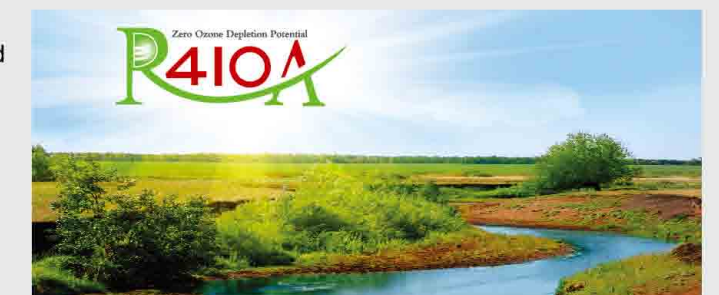
RoHS Reaction

Actively respond to Europe RoHS directive, control the use of hazardous substance strictly.



R410A Environmentally Friendly Refrigerant, Protect Ozone Layer

R410A is a new non-toxic and harmless environmentally friendly refrigerant which has been worldwide affirmed and applied. Hitachi's newly launched FSNY8Q series adopts R410A refrigerant that doesn't destroy the environment, brings temperature, humidity, freshness and health to every inch of space as well as saving energy.



Intelligent Control

More Humanized System and More Convenient Operation



Network Systems

H-LINK . . .

Hitachi's proprietary high-performance transmission system for connecting control wires between indoor and outdoor units, and between a centralized control system and indoor/outdoor units, across two or more refrigerant systems.

Flexible Wiring Routes

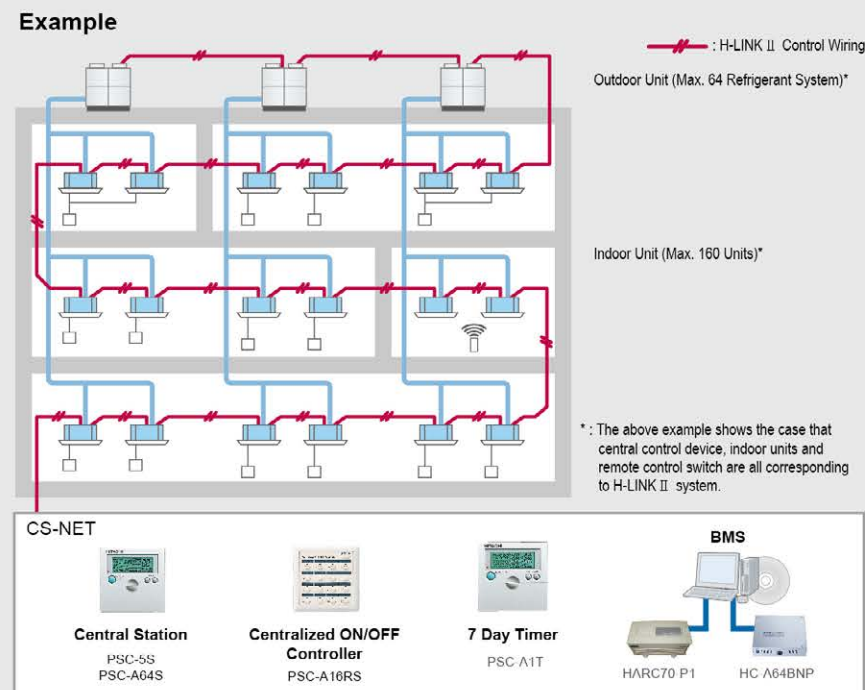
Absolutely no restrictions on the order of wiring, the wiring route and the number of branches. Simply connect to the adjacent units or the terminal block of a centralized control system.

Regardless of Multi-Split System for Buildings or Packaged System for Commercial Use

By providing a common control function and wiring method, a multi-split air conditioning system for buildings and a packaged air conditioning system for commercial use are simultaneously used in the same system, and so are the EHP and GHP air conditioning systems. Just connect all the systems with twin core cables by crossover connection. Adapters or other appliances are not required.

H-LINK II

The H-LINK transmission system for connection between outdoor and indoor units provides an extended system configuration and improved functions without sacrificing workability and the flexibility.



Compare with H-LINK System

Item	H-LINK	H-LINK II
Max. Number of Refrigerant Group / System	16	64
Address Setting Range of Indoor Units / Refrigerant Group	0 to 15	0 to 63
Max. Number of Indoor Unit / System	128	160
Total Number of Devices in the same H-LINK	145	200
Max. Wiring Length	Total 1,000m (5,000m)*	

* : In case 4 units of PSC-5HR are used.

Mixture of H-LINK and H-LINK II

The models supporting H-LINK II can be mixed with the models supporting H-LINK in the same system without any adaptor.

Control System Device	Outdoor Unit Indoor Unit	1(One) H-LINK (II) System	
		Outdoor Units (Number of Ref. Groups)	Indoor Units
H-LINK II	H-LINK II	64	160
	H-LINK II / H-LINK Mixed	16*	128
H-LINK	H-LINK II	16	128
	H-LINK II / H-LINK Mixed	16	128

* : A maximum 16 refrigerant groups can be connected in one H-LINK system under the following conditions.

• Outdoor unit corresponding to H-LINK

• Outdoor unit corresponding to H-LINK II connected with the indoor unit corresponding to H-LINK

More than 17 indoor units can be connected with the 1 outdoor unit depending on the outdoor unit capacity. In that case, 2 ref. groups are required for 1 outdoor unit.

System Configuration

Outdoor Unit	SET-FREE FSNY8Q Series H-LINK			SET-FREE FSNY8Q Series H-LINK II		
Indoor Unit	H-LINK II or H-LINK	H-LINK	H-LINK II	H-LINK II or H-LINK	H-LINK	H-LINK II
Remote Control Switch	H-LINK	H-LINK II	H-LINK II	H-LINK	H-LINK II	H-LINK II
Setting Range of Refrigerant Group* ¹⁾	0 to 15			0 to 15		
Setting Range of Address* ¹⁾	0 to 15	0 to 15	0 to 15	0 to 15	0 to 15	0 to 63
Automatic Reset of Setting Temperature* ²⁾	×	●	●	×	●	●
Operation Lock* ²⁾	×	●	●	×	●	●
Limitation of Setting Temperature Range* ³⁾	×	●	●	×	●	●
ON / OFF Timer Setting (72Hr.)* ²⁾	×	●	●	×	●	●
Different Operation Mode Indication* ³⁾	×	×	●	×	×	●
Indoor Unit Hot-Start Indication* ³⁾	×	×	●	×	×	●
Change of Indoor Unit Ref. Group No. and Address* ²⁾	×	×	●	×	×	●
Outdoor Unit Comp. Pre-heating Indication / Cancel* ²⁾	×	×	×	×	×	●
Emergency Operation from Remote Control Switch* ⁴⁾	×	×	×	×	×	●

*¹⁾: The range of ref. group setting and address setting is 0 to 15 when H-LINK corresponding central controller is used.

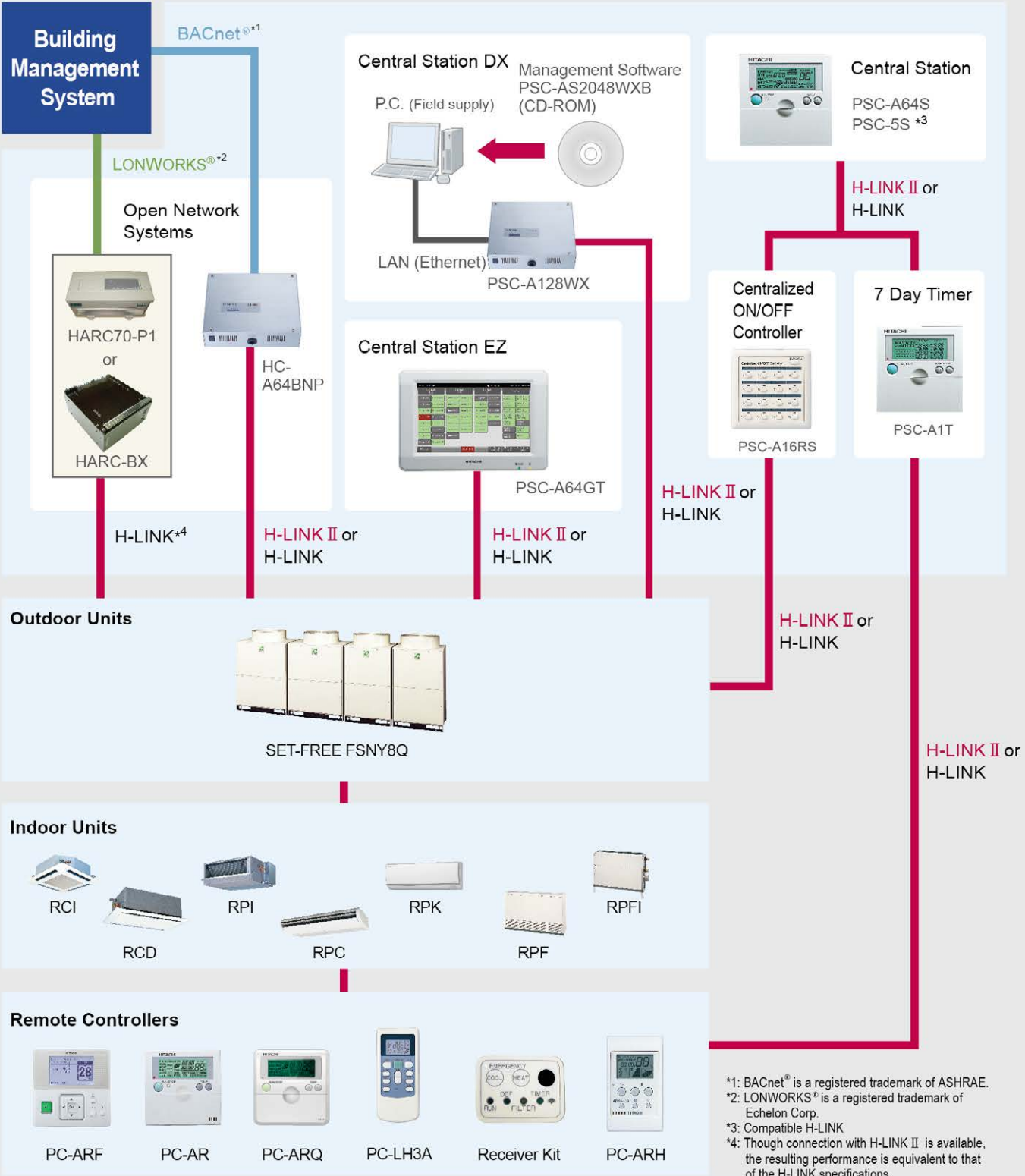
*²⁾: These functions can be set by wired remote control switch (PC-AR) only.

*³⁾: These functions can be set by wired remote control switch (PC-AR) and half size remote control switch (PC-ARH) only.

*⁴⁾: This function is not available depending on the outdoor unit type.

CS-NET

CS-NET is Hitachi's control network system for the SET-FREE FS series, SET-FREE FSNM and UTOPIA ranges. The flexibility of the SET-FREE system allows the internal data to be easily accessed and controlled by the user, with features including temperature, mode and fan speed setting and groupings.



*1: BACnet® is a registered trademark of ASHRAE.
*2: LONWORKS® is a registered trademark of Echelon Corp.
*3: Compatible H-LINK
*4: Though connection with H-LINK II is available, the resulting performance is equivalent to that of the H-LINK specifications.

Interface

You can select the air conditioner control interface depending on your needs to create a comfortable space.

HC-A64BNP (for BACnet®)



Connecting the HC-A64BNP to an H-LINK (communication line between machines) allows control of up to 64 indoor units. Up to eight HC-A64BNP can be connected to the same H-LINK.

HARC70-P1 (for LONWORKS®)



By using the HARC70-P1 adapter for LONWORKS® to connect air conditioners to the total building control system, air conditioners can be centrally controlled.

HARC-BX (for LONWORKS®)



A HARC-BX can connect to multiple H-LINK with H-LINK transmission terminal to 8 PCB.

Points for control and monitor have been increased to meet more points. (Points for control and monitor is 8 times larger than HARC70P-1.)

You can select the number of controls, monitor, and what to control in the indoor unit from three choices (Standard, Option A and Option B) as needed.

Connection Method to Upper System	• Connection by IEEE802.3 Compliance (100BASE-TX/10BASE-T) to BACnet Network	
Quantity of Connection	• Up to 64 Indoor Units per BACnet® Adaptor	
Control Item at Upper System	• RUN/STOP • Operation Mode Setting • Temperature Setting • Fan Speed Setting	• Available / Not Available for Operation by Remote control Switch • Filter Sign Reset
Monitoring Item at Upper System	• RUN/STOP State Notification • Alarm Signal Notification • Operation Mode State Notification • Fan Speed State Notification	• Indoor Suction Temperature Notification • Alarm Code Notification • Communication Abnormality Notification • Filter Sign

Connection Method to Upper System	• Connection by SNVT (Standard Network Variable Type) to LONWORKS® Network	
Quantity of Connection	• 8 Remote Control Groups (Max. 120 indoor Units)	
Control Item at Upper System	• On/Off Order • Operation Mode Setting	• Temperature Setting • All On/Off Order
Monitoring Item at Upper System	• On/Off State & Alarm • Operation Mode State	• Temperature Setting • Individual Thermostat State

■ HARC-BX E (Standard)

Connection Method to Upper System	• Connection by SNVT (Standard Network Variable Type) to LONWORKS® Network	
Quantity of Connection	• 64 Indoor Units	
Control Item at Upper System	• On/Off Order • Operation Mode Setting	• Temperature Setting • All On/Off Order
Monitoring Item at Upper System	• On/Off State & Alarm • Operation Mode State	• Temperature Setting • Individual Thermostat State

■ HARC-BX E (Option A)

Connection Method to Upper System	• Connection by SNVT (Standard Network Variable Type) to LONWORKS® Network	
Quantity of Connection	• 64 Indoor Units	
Control Item at Upper System	• On/Off Order • Operation Mode Setting	• Temperature Setting • All On/Off Order • Fan Speed Setting • R.C.Sw Permission/Prohibition
Monitoring Item at Upper System	• On/Off State & Alarm • Inlet Air Temperature	

■ HARC-BX E (Option B)

Connection Method to Upper System	• Connection by SNVT (Standard Network Variable Type) to LONWORKS® Network	
Quantity of Connection	• 32 Indoor Units	
Control Item at Upper System	• On/Off Order • Operation Mode Setting • Temperature Setting	• Fan Speed Setting • R.C.Sw Permission /Prohibition • All On/Off Order • Louver Position Setting
Monitoring Item at Upper System	• On/Off State & Alarm • Operation Mode State • Fan Speed Setting	• Temperature Setting • Louver Position • Alarm Code • Inlet Air Temperature • Outlet Air Temperature • Outdoor Air Temperature

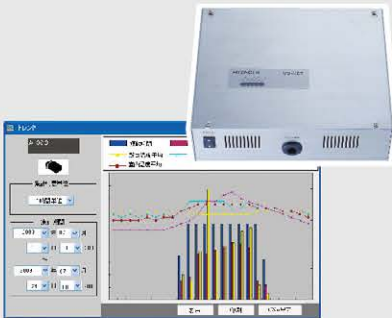
Central Station

Central Station EZ PSC-A64GT



Eazy control with 8.5 inch color touch panel
Its down-to-detail control functionalities,
such as Weekly Scheduling, Accumulated Work
Hours, etc., help you save energy.
Up to 64 remote-controlled groups and up to 160
indoor units can be connected to the single
air-conditioning system.

Central Station DX PSC-A128WX + PSC-AS2048WXB



Managing maximum 2,048 groups of
air-conditioners. Up to 2560 units of indoor units can
be controlled and monitored with
just one computer.
Advanced functions but easy control for huge
air-conditioning system.

■ Specification for Management Computer

Communication Unit	Units of Adopting for H-LINK II				
Communication Line	Non-Polar 2-Wire				
Communication Method	Half-Duplex Communication				
Synchro System	Asynchronous (start-stop synchronous communication)				
Communication Speed	9,600bps				
Wiring Length	1,000m (Total Length)				
Connecting Unit Number*		Outdoor Unit	Indoor Unit	Central Controller	Total Unit Number
	H-LINK II	64	160	8	200
	H-LINK	16	128	8	145

*: Connecting unit quantity indicates the maximum unit numbers which is possible to connect in the same H-LINK (Control Wiring).

■ Functions

Monitor Function	<ul style="list-style-type: none"> Run/Stop/Abnormality Setting Temperature RCS Operation Prohibited Setting Accumulated Operating Time
Control Function	<ul style="list-style-type: none"> Run/Stop* Operation Mode Fan Speed Louver RCS Operation Prohibited Filter Sign Reset

*: "All Groups Run/Stop" command signal exception function for selected groups is available by "Exception of Run/Stop Ope." function.

■ Specification for Management Computer

OS	Windows® XP (English version 32 bit)
CPU	CPU Intel® Core™ 2Duo 1.8GHz or more
Memory	2GB or more
Free Space in Hard Disk Drive	Minimum 5GB for each H-LINK + 0.3GB for each additional REFGN Cycle. (Further additional 16GB or more is required for Check-Unit data collection.)
Display Resolution	1,280 x 1,024
Drive	CD-ROM Drive (for upon installation only)
Interface	IEEE 802.3 (10BASE-T/100BASE-TX) (With wake-on-LAN function*2)
	USB RS-232C (*2)

- *1: Use the management computer exclusively to this system.
*2: LAN with wake on LAN function or RS-232 Interface is required for UPS.
*3: Management computer is assumed to be always ON. It is strongly recommended to use computer for server or industrial use and/or to create hard disk mirror.
*4: Durable period for management computer may differ from that of air conditioners.
Update periodically and discuss updating procedure in advance.

■ Functions

Energy Saving Function	<ul style="list-style-type: none"> Run/Stop Shifting Set Temperature (For Cool/Dry to Fan and Stop during Heating) Switching Mode (Cool/Dry to Fan and Stop during Heating) Outdoor Unit Capacity Control (Only if supported) (0, 40, 50, 60, 70, 80, 90, 100%)
Facility Control and Monitor Function (Level Signal Only)	<ul style="list-style-type: none"> Control <ul style="list-style-type: none"> Run/Stop Emergency Stop (Only for Indoor Units Supporting this function) Monitor <ul style="list-style-type: none"> Run/Stop Alarm State

Various Controllers

Remote Control Switch PC-ARF

Compatible with the H-LINK II

- The newly-adopted LED-backlit LCD provides enhanced legibility. Large, clear character display is realized by Full Dot Matrix LCD.
- The newly-adopted directional key provides optimized operation. The manual operation is facilitated by reducing number of switch buttons from 13 to 9.
- "Schedule Timer" provides the timer operations for "Run/Stop" and "Temperature Setting". The weekly management is available by using this function. In addition "Holiday Setting" and "Schedule ON/OFF" setting are available.

- 4 type of menus are offered for flexible use as follows:
Menu: Contains "Schedule", "Elevating Grill", etc. for users.
Help Menu: Contains information provided by this remote control switch for users such as "About Indication", "Contact Information", etc.
Test Run Menu: This menu provides the functions installation of this remote control switch.
Check Menu: This menu provides the functions for service and maintain

Remote Control Switch PC-AR PC-ARQ

Compatible with the H-LINK II

- The PC-AR has a design that matches the interior.
- The new large LCD display permits users to see the operating conditions and settings.
- The timer can be set at half-hour intervals up to 72 hours.
- All the functions can be selected by remote control switches.
- The PC-AR monitors the operating conditions in the system and an alarm is issued if a problem occurs.
- A "self-diagnosis function" checks for problems on printed boards in indoor and outdoor units.
- Equipped with energy-saving functions such as a preset temperature range limiting function for preventing excessive cooling/heating and a preset temperature automatic reset function, as well as an operation locking mechanism and the capability to prevent users from forgetting to turn off the system. (Function selection setting is required)

Wireless Remote Control Switch PC-LH3A

Compatible with the H-LINK II

- One-touch handy operation, no wiring work required.
- Two or more units can be operated simultaneously by remote control.
* Receiver kit is required.

Half-size Remote Control Switch PC-ARH

Compatible with the H-LINK II

- The main function of this easy-to-use remote control system is temperature setting.
- Operation modes can be switched over (when function selection setting is made).
- Suitable for facilities used by various people, such as hotels.
- "2 remote control" or "group control" (up to 16 max.) can be used.
- If a problem occurs, an alarm code immediately shows the details of the problem.

7 Day Timer PSC-A1T

Compatible with the H-LINK II

- By using PSC-A1T with PSC-5S, PSC-A64S or PC-AR controllers, the air conditioners controlled by them can be operated according to a schedule.
- The timer can be set at 7-day intervals, and operation/stop can be set 3 times daily.
- Remote control can be prohibited in accordance with the OFF time (when used with PSC-5S, PSC-A64S and PC-AR).
- Two types of weekly schedule (A and B) can be set, and can easily be changed for summer and winter.
- Settings are all digitally displayed, allowing operations and settings to be checked easily.
- The power failure backup function prevents the timer from being stopped by a power failure lasting up to 2 weeks.

Central Station PSC-A64S

Compatible with the H-LINK II

Up to 160 indoor units

Up to 64 remote control groups

PSC-5S*

Up to 128 indoor units

Up to 16 remote control groups

- By connecting to the H-LINK, up to 64 remote control groups and 160 indoor units can be controlled.
Up to 8 units can be connected to the H-LINK.
- In addition to basic controls such as settings for operation/stop, the operation mode and temperature, the air quantity and auto louver can be set.
If a problem occurs, an alarm code immediately shows the details of the problem.
- An external input terminal is provided as standard. External signals enable the following functions:
central operation/stop, demand control, emergency stop, central operation output, and central alarm output.
- Can be used in combination with the One-touch Controller.

Centralized ON/OFF Controller PSC-A16RS

Compatible with the H-LINK II

Up to 160 indoor units

Up to 16 remote control groups

- Only performs operation/stop control per remote control group.
- By connecting to the H-LINK, up to 16 remote control groups and 160 indoor units can be controlled.
Up to 8 units can be connected to the H-LINK.
- An external input terminal is provided as standard. External signals enable the following functions:
central operation/stop, emergency stop, central operation output, central alarm output
- Can be used in combination with the Central Station.

* Make sure to use it with a remote control switch. Indoor units cannot be used without a remote control switch.
* There are restrictions on remote group registration. Please contact our sales staff for more information.

Indoor Units & Outdoor Units



Indoor units

Type	Model	0.8HP	1.0HP	1.3HP	1.5HP	1.8HP	2.0HP	2.3HP	2.5HP	3.0HP	3.3HP	4.0HP	5.0HP	6.0HP	8.0HP	10HP
In-the-ceiling(Low Static Pressure)	 RPI-FSNQL/3Q	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
In-the-ceiling(High Static Pressure)	 RPI-FSNQ(H)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Low-Height In-the-ceiling	 RPIZ-FSN1Q	●	●	●	●	●	●	●	●							
Slim In-the-ceiling	 RPIZ-FSNQS	●	●	●	●											
4-Way Cassette	 RCH-SN1Q		●	●	●	●	●	●	●	●	●	●	●			
2-Way Cassette	 RCD-I-SN2		●		●		●		●	●		●	●			
Wall	 RPK-I-SNQS	●	●	●	●	●	●	●	●							
Ceiling	 RPC-FSN3				●		●		●	●		●	●	●		
Floor	 RPF-FSN2E		●		●											
Floor Concealed	 RPI-FSNQ		●		●		●		●							

Outdoor Units Combination

HP	Model	Nominal Cooling Capacity (kW)	Combination				Connectable Indoor Units
8HP	RAS-8FSNY8Q	22.4	RAS-8FSNY8Q				13
10HP	RAS-10FSNY8Q	28.0	RAS-10FSNY8Q				16
12HP	RAS-12FSNY8Q	33.5	RAS-12FSNY8Q				19
14HP	RAS-14FSNY8Q	40.0	RAS-14FSNY8Q				23
16HP	RAS-16FSNY8Q	45.0	RAS-16FSNY8Q				26
18HP	RAS-18FSNY8Q	50.0	RAS-8FSNY8Q	RAS-10FSNY8Q			26
20HP	RAS-20FSNY8Q	56.0	RAS-8FSNY8Q	RAS-12FSNY8Q			33
22HP	RAS-22FSNY8Q	61.5	RAS-8FSNY8Q	RAS-14FSNY8Q			36
24HP	RAS-24FSNY8Q	69.0	RAS-10FSNY8Q	RAS-14FSNY8Q			40
26HP	RAS-26FSNY8Q	73.0	RAS-12FSNY8Q	RAS-14FSNY8Q			43
28HP	RAS-28FSNY8Q	80.0	RAS-14FSNY8Q	RAS-14FSNY8Q			47
30HP	RAS-30FSNY8Q	85.0	RAS-14FSNY8Q	RAS-16FSNY8Q			50
32HP	RAS-32FSNY8Q	90.0	RAS-16FSNY8Q	RAS-16FSNY8Q			53
34HP	RAS-34FSNY8Q	95.0	RAS-10FSNY8Q	RAS-12FSNY8Q	RAS-12FSNY8Q		56
36HP	RAS-36FSNY8Q	100.0	RAS-12FSNY8Q	RAS-12FSNY8Q	RAS-12FSNY8Q		59
38HP	RAS-38FSNY8Q	109.0	RAS-12FSNY8Q	RAS-12FSNY8Q	RAS-14FSNY8Q		64
40HP	RAS-40FSNY8Q	112.0	RAS-12FSNY8Q	RAS-12FSNY8Q	RAS-16FSNY8Q		64
42HP	RAS-42FSNY8Q	118.0	RAS-12FSNY8Q	RAS-14FSNY8Q	RAS-16FSNY8Q		64
44HP	RAS-44FSNY8Q	125.0	RAS-12FSNY8Q	RAS-16FSNY8Q	RAS-16FSNY8Q		64
46HP	RAS-46FSNY8Q	132.0	RAS-14FSNY8Q	RAS-16FSNY8Q	RAS-16FSNY8Q		64
48HP	RAS-48FSNY8Q	136.0	RAS-16FSNY8Q	RAS-16FSNY8Q	RAS-16FSNY8Q		64
50HP	RAS-50FSNY8Q	140.0	RAS-10FSNY8Q	RAS-12FSNY8Q	RAS-14FSNY8Q	RAS-14FSNY8Q	64
52HP	RAS-52FSNY8Q	145.0	RAS-12FSNY8Q	RAS-12FSNY8Q	RAS-14FSNY8Q	RAS-14FSNY8Q	64
54HP	RAS-54FSNY8Q	150.0	RAS-12FSNY8Q	RAS-12FSNY8Q	RAS-14FSNY8Q	RAS-16FSNY8Q	64

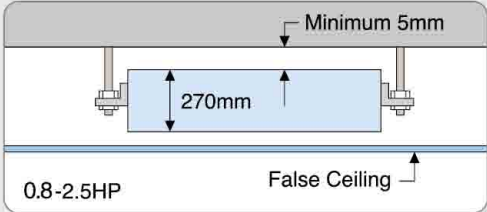
In-the-ceiling Type (Low Static Pressure)



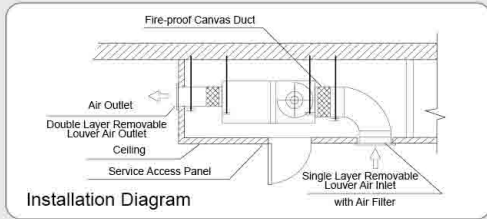
SET FREE-RPI Technique Features

Installation Space-saving

Less than 270mm in height can be easily fit into the limited space in the false ceiling (0.8HP to 2.5HP).



Flexibly Satisfy Varied Requests on Installation



NOTE:
When bottom air inlet is adopted, sound pressure will increase according to factors such as installation mode and the room structure.

Fresh Indoor Air

By introducing fresh outdoor air and being equipped with air filter to keep indoor air clean.

Excellent Air Flow

Cooling/heating air is distributed from the unit to indoor space through ducts, which creates a comfortable environment.

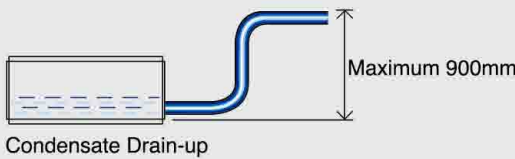
Quiet Operation

Far less noise , much quieter operation.

Model	High Fan Speed	Low Fan Speed
RPI-0.8FSNQL	29.5dB	24.5dB
RPI-1.0FSNQL	29.5dB	24.5dB
RPI-1.3FSNQL	34dB	30dB
RPI-1.5FSNQL	34dB	30dB
RPI-1.8FSNQL	34dB	30dB
RPI-2.0FSNQL	34dB	30dB
RPI-2.3FSNQL	35dB	31dB
RPI-2.5FSNQL	35dB	31dB
RPI-3.0FSNQL	40dB	33dB
RPI-3.3FSNQL	40dB	33dB
RPI-4.0FSNQL	41.5dB	35dB
RPI-5.0FSNQL	42dB	35dB
RPI-6.0FSNQL	43dB	37dB
RPI-8FSNQ	50dB	
RPI-10FSNQ	52dB	

Optional Parts

Drain-up mechanism can be supplied as optional part.



Indoor Unit			In-the-ceiling Type (Low Static Pressure)														
Model		RPI-0.8 FSNQL	RPI-1.0 FSNQL	RPI-1.3 FSNQL	RPI-1.5 FSNQL	RPI-1.8 FSNQL	RPI-2.0 FSNQL	RPI-2.3 FSNQL	RPI-2.5 FSNQL	RPI-3.0 FSNQL	RPI-3.3 FSNQL	RPI-4.0 FSNQL	RPI-5.0 FSNQL	RPI-6.0 FSNQL	RPI-8 FSN3Q	RPI-10 FSN3Q	
Power Supply		AC1Φ,220V~240V/50Hz,220V/60Hz														AC3Φ,380V~415V/50Hz, 380V/60Hz	
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	
	kcal/h	2,000	2,500	3,300	3,800	4,500	5,000	5,600	6,300	7,500	8,000	10,000	12,500	14,200	20,000	24,600	
	Btu/h	7,800	9,900	13,000	15,000	17,700	19,800	22,200	24,900	29,700	31,700	39,600	49,500	56,300	79,200	97,600	
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	
	kcal/h	1,900	2,400	3,100	3,700	4,300	4,800	5,400	6,100	7,200	7,700	9,600	12,200	13,800	19,300	24,100	
	Btu/h	7,500	9,600	12,300	14,700	17,100	19,100	21,500	24,200	28,700	30,700	38,200	48,500	54,600	76,500	95,600	
Nominal Heating Capacity	kW	2.8	3.3	4.2	4.9	5.6	6.5	7.5	8.5	9.6	10.0	13.0	16.3	18.0	25.0	31.5	
	kcal/h	2,400	2,800	3,600	4,200	4,800	5,600	6,500	7,300	8,300	8,600	11,200	14,000	15,500	21,500	27,100	
	Btu/h	9,600	11,300	14,300	16,700	19,100	22,200	25,600	29,000	32,800	34,100	44,400	55,600	61,400	85,300	107,500	
Sound Pressure Level (High/Medium/Low)	dB(A)	29.5-26-24.5	29.5-26-24.5	34-32-30	34-32-30	34-32-30	34-32-30	35-33-31	35-33-31	40-37-33	40-37-33	41.5-39-35	42-39-35	43-39-37	50	52	
Outer Dimensions	H	mm	270	270	270	270	270	270	270	350	350	350	350	350	470	470	
	W	mm	650+75	650+75	650+75	650+75	900+75	900+75	900+75	900+75	900+75	900+75	900+75	1300+75	1300+75	1060	1250
	D	mm	720	720	720	720	720	720	720	720	800	800	800	800	800	1120	1120
Net Weight	kg	26	26	26	26	35	35	35	35	46	46	46	58	58	96	108	
	(lbs)	(57)	(57)	(57)	(57)	(77)	(77)	(77)	(77)	(101)	(101)	(101)	(128)	(128)	(211)	(238)	
Refrigerant	R410A(Nitrogen-charged for Corrosion-resistance)																
Indoor Fan Air Flow Rate (High/Medium/Low)	m³/min	8/7/6	8/7/6	13/11/9	13/11/9	15/13/11	15/13/11	16/14/12	16/14/12	25/21/17	25/21/17	27/23/19	37/31/25	38/35/29	58	72	
Motor Power	W	20	20	40	40	45	45	45	45	100	100	100	160	180	500	750	
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)	
Gas Line	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	30	30	30	30	30	30	30	30	60	60	60	60	60	100	100	
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	0.90	

- NOTES:
- The nominal cooling capacity and heating capacity are based on following conditions:
 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: 7.5 Meters Piping Lift: 0 Meter
 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)
 - 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.
 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.

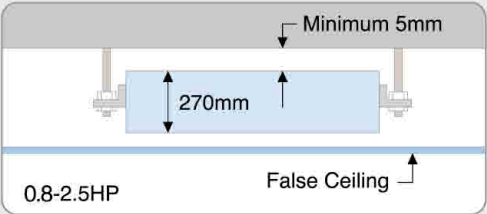
In-the-ceiling Type (High Static Pressure)



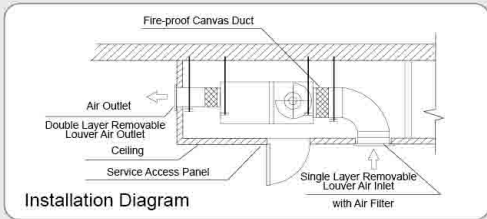
SET FREE-RPI Technique Features

Installation Space-saving

Less than 270mm in height can be easily fit into the limited space in the false ceiling (0.8HP to 2.5HP).



Flexibly Satisfy Varied Requests on Installation



NOTE:
When bottom air inlet is adopted, sound pressure will increase according to factors such as installation mode and the room structure.

Higher External Static Pressure

Better installation flexibility at site, longer ducts can be connected.

Quiet Operation

Far less noise , much quieter operation.

Model	High Fan Speed	Low Fan Speed
RPI-0.8FSNQH	35dB	31dB
RPI-1.0FSNQH	35dB	31dB
RPI-1.3FSNQH	35dB	31dB
RPI-1.5FSNQH	35dB	31dB
RPI-1.8FSNQH	35dB	31dB
RPI-2.0FSNQH	35dB	31dB
RPI-2.3FSNQH	36dB	32dB
RPI-2.5FSNQH	36dB	32dB
RPI-3.0FSNQH	42dB	35dB
RPI-3.3FSNQH	42dB	35dB
RPI-4.0FSNQH	43dB	36dB
RPI-5.0FSNQH	44dB	37dB
RPI-6.0FSNQH	45dB	37dB
RPI-8FSNQ	50dB	
RPI-10FSNQ	52dB	

Optional Parts

Drain-up mechanism can be supplied as optional part.



Condensate Drain-up

Higher Fireproof Grade

The models equipped with metallic fan and fan casing are also provided to meet UK standard towards higher fireproof grade.
(The models between brackets [] are UK standard type)

Indoor Unit		In-the-ceiling Type (High Static Pressure)																
Model		RPI-0.8 FSNQH	RPI-1.0 FSNQH [RPI-1.0 FSN4QH]	RPI-1.3 FSNQH	RPI-1.5 FSNQH [RPI-1.5 FSN4QH]	RPI-1.8 FSNQH	RPI-2.0 FSNQH [RPI-2.0 FSN4QH]	RPI-2.3 FSNQH	RPI-2.5 FSNQH [RPI-2.5 FSN4QH]	RPI-3.0 FSNQH	RPI-3.3 FSNQH	RPI-4.0 FSNQH	RPI-5.0 FSNQH	RPI-6.0 FSNQH	RPI-8 FSNQ	RPI-10 FSNQ		
Power Supply			AC1Φ,220V~240V/50Hz,220V/60Hz,[220V/50Hz]														AC3Φ,380V~415V/50Hz, 380V/60Hz	
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		
	kcal/h	2,000	2,500	3,300	3,800	4,500	5,000	5,600	6,300	7,500	8,000	10,000	12,500	14,200	20,000	24,600		
	Btu/h	7,800	9,900	13,000	15,000	17,700	19,800	22,200	24,900	29,700	31,700	39,600	49,500	56,300	79,200	97,600		
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		
	kcal/h	1,900	2,400	3,100	3,700	4,300	4,800	5,400	6,100	7,200	7,700	9,600	12,200	13,800	19,300	24,100		
	Btu/h	7,500	9,600	12,300	14,700	17,100	19,100	21,500	24,200	28,700	30,700	38,200	48,500	54,600	76,500	95,600		
Nominal Heating Capacity	kW	2.8	3.3	4.2	4.9	5.6	6.5	7.5	8.5	9.6	10.0	13.0	16.3	18.0	25.0	31.5		
	kcal/h	2,400	2,800	3,600	4,200	4,800	5,600	6,500	7,300	8,300	8,600	11,200	14,000	15,500	21,500	27,100		
	Btu/h	9,600	11,300	14,300	16,700	19,100	22,200	25,600	29,000	32,800	34,100	44,400	55,600	61,400	85,300	107,500		
Sound Pressure Level (High/Medium/Low)	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	H	mm	270	270	270	270	270	270	270	350	350	350	350	350	470	470		
	W	mm	650+75	650+75	650+75	650+75	900+75	900+75	900+75	900+75	900+75	900+75	1300+75	1300+75	1060	1250		
	D	mm	720	720	720	720	720	720	720	720	800	800	800	800	800	1120	1120	
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)																
Indoor Fan Air Flow Rate (High/Medium/Low)	m ³ /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 Power	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)		
Gas Line	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	m ³	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	1.06		

- NOTES:
- The nominal cooling capacity and heating capacity are based on following conditions:
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: 7.5 Meters Piping Lift: 0 Meter
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)
 - 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.
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.

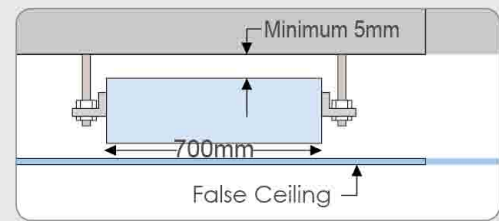


Slim In-the-ceiling Type

SET FREE-RPIZ Technical Features

Installation Space-saving

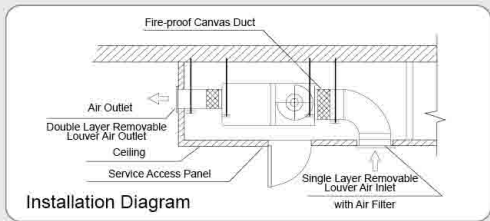
With a width of 700mm may be easily installed inside narrow residential ceiling.



Broad Range of External Static Pressure

10Pa(or30pa), flexibly supports a wide range of installation conditions at site, e.g. longer ducts and shorter ducts supplied.

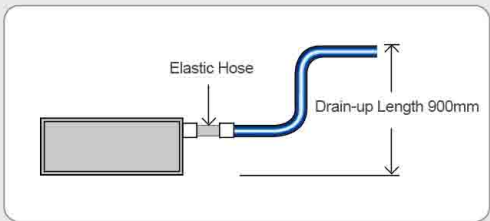
Flexibly Satisfy Varied Requests on Installation



NOTE:
When bottom air inlet is adopted,sound pressure will increase according to factors such as installation mode and the room structure.

Drain-up Mechanism as Standard Part

Drain-up length achieves 900mm which enables convenient drain piping and enlarges the flexibility of installation.



Indoor Unit		Slim In-the-ceiling Type			
Model		RPIZ-0.8FSNQS	RPIZ-1.0FSNQS	RPIZ-1.3FSNQS	RPIZ-1.5FSNQS
Power Supply		AC1Φ,220V~240V/50Hz			
Nominal Cooling Capacity *1)	kW	2.3	2.9	3.8	4.4
	kcal/h	2,000	2,500	3,300	3,800
	Btu/h	7,800	9,900	13,000	15,000
Nominal Cooling Capacity *2)	kW	2.2	2.8	3.6	4.3
	kcal/h	1,900	2,400	3,100	3,700
	Btu/h	7,500	9,600	12,300	14,700
Nominal Heating Capacity	kW	2.8	3.3	4.2	4.9
	kcal/h	2,400	2,800	3,600	4,200
	Btu/h	9,600	11,300	14,300	16,700
Sound Pressure Level (High/Medium/Low)	dB(A)	28-25-22	28-25-22	32-30-28	32-30-28
Outer Dimensions	H	mm	192	192	192
	W	mm	700	700	700
	D	mm	602	602	602
Net Weight	kg	21	21	21	21
	(lbs)	(46)	(46)	(48)	(48)
Refrigerant		R410A(Nitrogen-charged for Corrosion-resistance)			
Indoor Fan Air Flow Rate (High/Medium/Low)	m³/min	8/7/6	8/7/6	10/8/7	10/8/7
Motor Power	W	50	50	60	60
Connections Refrigerant Piping		Flare-nut Connection(with Flare Nuts)			
Liquid Line	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	(in.)	(1/4)	(1/4)	(1/4)	(1/4)
Gas Line	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7
	(in.)	(1/2)	(1/2)	(1/2)	(1/2)
Condensate Drain		VP25			
External Static Pressure	Pa	10(30)	10(30)	10(30)	10(30)
Approximate Packing Measurement	m³	0.15	0.15	0.15	0.15

- NOTES:
- The nominal cooling capacity and heating capacity are based on following conditions:

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: 7.5 Meters Piping Lift: 0 Meter

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)
 - 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.
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 steel fan and fan casing.

4-Way Cassette Type



SET FREE-RCI Technique Features

Extremely Quiet Operation

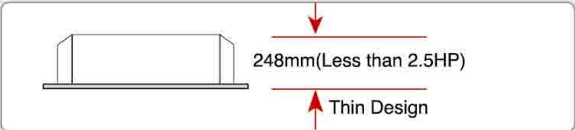
By employing a super-high-stream turbo fan (Three-dimensional twisted wing large bore and high efficiency), the wind flow efficiency has been improved. with the under damping slit mounted near the center of the revolving shaft, the abnormal noise which is unique to DC motors caused by the number of magnetic poles and revolution speed of the motor, is reduced.

Unified Panel Sizes

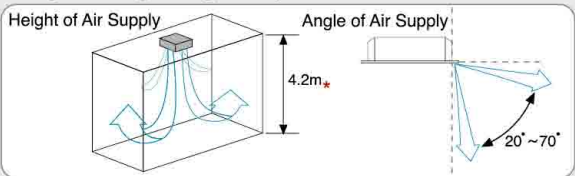
Panel sizes are unified to a 950mm square, neat and elegance, and well harmonized with decoration.

Compact and Thin

The height of the unit is just 248mm(Less than 2.5HP), so it can be installed in a small space inside a ceiling.



With broad range of air supply, is suitable to be used in high ceiling and great space



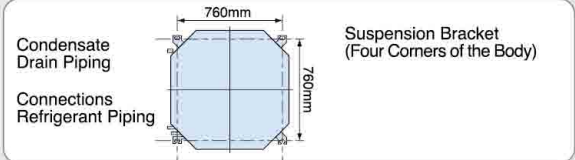
* When indoor unit model is RCI-3.0~6.0FSN1Q.
When indoor unit model is RCI-1.0~2.5FSN1Q, the value is 3.5m.

Input power reduced by applying of new developed DC fan motor.

Employed several new technologies such as a ferritic magnetic surface-mounted rotor, centralized winding system and split core system, the motor efficiency is improved in all aspects, smaller and lighter.

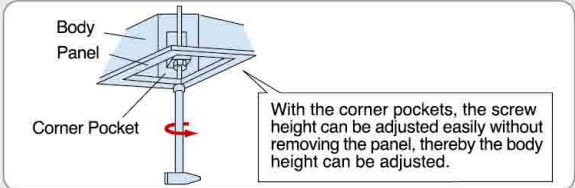
Flexible Refrigerant Piping

Suspending brackets are at the square corners of the body with pitch size of 760mm. The direction of the body can be changed easily according to the pipe-out opening without change the bolt position which makes installation much easier.

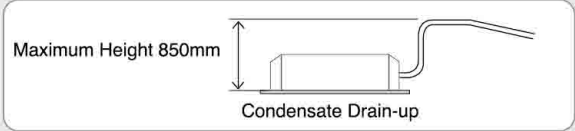


Body height easily adjustable in the corner pockets

A pocket is provided for each of the four panel corners, so that the body height can be adjusted easily without removing the panel.



Drain-up Mechanism as Standard Part



Indoor Unit		4-Way Cassette 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
	kcal/h	2,500	3,300	3,800	4,500	5,000	5,600	6,300	7,500	8,000	10,000	12,500	14,200
	Btu/h	9,900	13,000	15,000	17,700	19,800	22,200	24,900	29,700	31,700	39,600	49,500	56,300
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
	kcal/h	2,400	3,100	3,700	4,300	4,800	5,400	6,100	7,200	7,700	9,600	12,200	13,800
	Btu/h	9,600	12,300	14,700	17,100	19,100	21,500	24,200	28,700	30,700	38,200	48,500	54,600
Nominal Heating Capacity	kW	3.3	4.2	4.9	5.6	6.5	7.5	8.5	9.6	10.0	13.0	16.3	18.0
	kcal/h	2,800	3,600	4,200	4,800	5,600	6,500	7,300	8,300	8,600	11,200	14,000	15,500
	Btu/h	11,300	14,300	16,700	19,100	22,200	25,600	29,000	32,800	34,100	44,400	55,600	61,400
Sound Pressure Level (High/Medium/Low)	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(H)	mm	248	248	248	248	248	248	248	298	298	298	298	298
	(in.)	(9-3/4)	(9-3/4)	(9-3/4)	(9-3/4)	(9-3/4)	(9-3/4)	(9-3/4)	(11-3/4)	(11-3/4)	(11-3/4)	(11-3/4)	(11-3/4)
Outer Dimensions(W)	mm	840	840	840	840	840	840	840	840	840	840	840	840
	(in.)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)
Outer Dimensions(D)	mm	840	840	840	840	840	840	840	840	840	840	840	840
	(in.)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)
Net Weight	kg	23	23	23	24	24	24	24	26	26	29	29	29
	(lbs)	(51)	(51)	(51)	(53)	(53)	(53)	(53)	(57)	(57)	(64)	(64)	(64)
Refrigerant		R410A(Nitrogen-charged for Corrosion-resistance)											
Indoor Fan Air Flow Rate (High/Medium/Low)	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 Power	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	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	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)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)
Gas Line	mm	Φ12.7	Φ12.7	Φ12.7	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88
	(in.)	(1/2)	(1/2)	(1/2)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)
Condensate Drain		VP25(Outer Diameter Φ32)											
Approximate Packing Measurement	m ³	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(H)	mm	37	37	37	37	37	37	37	37	37	37	37	37
	(in.)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)
Outer Dimensions(W)	mm	950	950	950	950	950	950	950	950	950	950	950	950
	(in.)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)
Outer Dimensions(D)	mm	950	950	950	950	950	950	950	950	950	950	950	950
	(in.)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)
Net Weight	kg	6	6	6	6	6	6	6	6	6	6	6	6
	(lbs)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)
Approximate Packing Measurement	m ³	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 and heating capacity are based on following conditions:

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: 7.5 Meters Piping Lift: 0 Meter

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.1.5m beneath the unit.

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

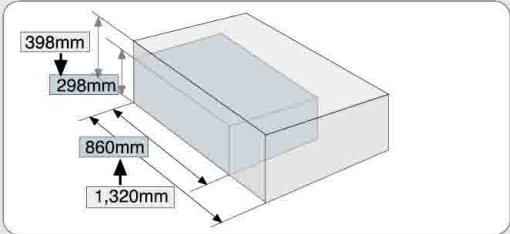
2-Way Cassette Type



SET FREE-RCD Technique Features

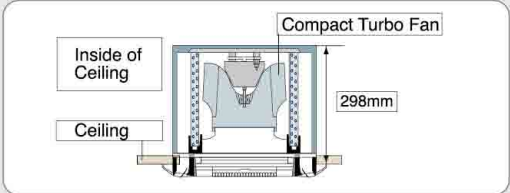
Downsizing and weight reduction simplify handling for easier renewal

The length of the 3.0HP is shortened from 1,320mm to 860mm, the height is also shortened, and the volume is reduced by about 50%. The reduced weight of 30kg also makes handling much easier.



Low-profile design allows installation in a small space inside of ceiling

A compact turbo fan simplifies the structure and reduces the height to 298mm,for easy installation.



Top-class noise control thanks to compact turbo fan

The three-dimensional twisted wings of the compact turbo fan greatly reduce noise, and electromagnetic disturbance is minimized by fan motor absorber.

Hard to get dirty, easy to clean

Auto-louvers are not flocked, thus the unit hardly gets dirty and is easy to clean.

Speed-up tap ensures comfortable air conditioning even when installed as in the high ceiling

Even rooms with a high ceiling can be comfortably air-conditioned by setting the speed-up tap with the remote controll switch.

*Anti-mold filter as standard accessory

Indoor Unit		2-Way Cassette Type							
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,220V~240V/50Hz,220V/60Hz							
Nominal Cooling Capacity *1)	kW	2.9	4.1	5.8	7.3	8.3	11.6	14.5	
	kcal/h	2,500	3,550	5,000	6,300	7,100	10,000	12,500	
	Btu/h	9,900	14,100	19,800	25,000	28,200	39,700	49,600	
Nominal Cooling Capacity *2)	kW	2.8	4.0	5.6	7.1	8.0	11.2	14.0	
	kcal/h	2,400	3,400	4,800	6,100	6,900	9,600	12,000	
	Btu/h	9,600	13,600	19,100	24,200	27,300	38,200	47,800	
Nominal Heating Capacity	kW	3.2	4.8	6.3	8.5	9.0	12.5	16.0	
	kcal/h	2,800	4,100	5,400	7,300	7,700	10,700	13,800	
	Btu/h	10,900	16,400	21,500	29,000	30,700	42,600	54,600	
Sound Pressure Level (High/Medium/Low)	dB(A)	34-32-30	35-32-30			38-34-31		40-36-33	43-40-36
Outer Dimensions(H)	mm	298	298	298	298	298	298	298	
	(in.)	(11-3/4)	(11-3/4)	(11-3/4)	(11-3/4)	(11-3/4)	(11-3/4)	(11-3/4)	
Outer Dimensions(W)	mm	860	860	860	860	860	1420	1420	
	(in.)	(33-7/8)	(33-7/8)	(33-7/8)	(33-7/8)	(33-7/8)	(55-7/8)	(55-7/8)	
Outer Dimensions(D)	mm	620	620	620	620	620	620	620	
	(in.)	(24-7/16)	(24-7/16)	(24-7/16)	(24-7/16)	(24-7/16)	(24-7/16)	(24-7/16)	
Net Weight	kg	27	27	27	30	30	48	48	
	(lbs)	(60)	(60)	(60)	(66)	(66)	(106)	(106)	
Refrigerant		R410A(Nitrogen-charged for Corrosion-resistance)							
Indoor Fan Air Flow Rate (High/Medium/Low)	m ³ /min	10/9/8	13/11/9	15/13/11	19/16/14	19/16/14	29/24/21	34/29/25	
Motor Power	W	35	35	35	55	55	35×2	55×2	
Connections Refrigerant Piping		Flare-nut Connection(with Flare Nuts)							
Liquid Line	mm	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53	Φ9.53	Φ9.53	
	(in.)	(1/4)	(1/4)	(1/4)	(3/8)	(3/8)	(3/8)	(3/8)	
Gas Line	mm	Φ12.7	Φ12.7	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	
	(in.)	(1/2)	(1/2)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	
Condensate Drain		VP25							
Approximate Packing Measurement	m ³	0.23	0.23	0.23	0.23	0.23	0.37	0.37	
Panel Model		P-N23DNA					P-N46DNA		
Cabinet Color		Neutral White							
Outer Dimensions(H)	mm	30	30	30	30	30	30	30	
	(in.)	(1-3/16)	(1-3/16)	(1-3/16)	(1-3/16)	(1-3/16)	(1-3/16)	(1-3/16)	
Outer Dimensions(W)	mm	1100	1100	1100	1100	1100	1660	1660	
	(in.)	(43-5/16)	(43-5/16)	(43-5/16)	(43-5/16)	(43-5/16)	(65-3/8)	(65-3/8)	
Outer Dimensions(D)	mm	710	710	710	710	710	710	710	
	(in.)	(27-15/16)	(27-15/16)	(27-15/16)	(27-15/16)	(27-15/16)	(27-15/16)	(27-15/16)	
Net Weight	kg	6	6	6	6	6	8	8	
	(lbs)	(13)	(13)	(13)	(13)	(13)	(18)	(18)	
Approximate Packing Measurement	m ³	0.1	0.1	0.1	0.1	0.1	0.15	0.15	

NOTES:

1.The nominal cooling capacity and heating capacity are based on following conditions:

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: 7.5 Meters Piping Lift: 0 Meter

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.

1.5m 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 chamber so that reflected sound should be taken into consideration in the field.



Wall Type



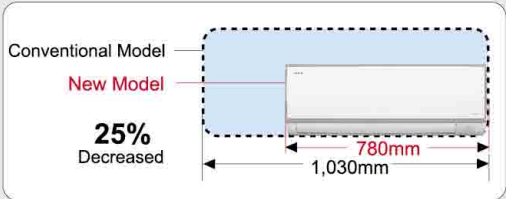
SET FREE-RPK Technique Features

Easy Installation

The installation of remote control switches has been improved. A terminal board for the use of wired remote control switches has been added, along with a change over switch allowing easy selection between wired and wireless remote control switches.

Industry-leading Compactness

With a width of 780 mm, it can be installed in a small room between pillars. Compared with conventional model the width is about 25% less, for greater flexibility of installation in about 900mm.



Light Weight Design

Units weight has been vastly reduced.

Model	
HP	Weight(kg)
0.8~1.5	10
1.8~2.5	13.5

Wireless Remote Controller as Standard Part

Units are equipped with wireless remote switch (standard) and remote control switch can be supplied as optional part which can meet various central control needs in many cases.



Easy Troubleshooting

An alarm code function has been added to the front panel LEDs enabling the alarm code to be checked when using the wireless remote control switch.

Indoor Unit		Wall Type							
Model		RPK-0.8FSNQS	RPK-1.0FSNQS	RPK-1.3FSNQS	RPK-1.5FSNQS	RPK-1.8FSNQS	RPK-2.0FSNQS	RPK-2.3FSNQS	RPK-2.5FSNQS
Power Supply		AC1Φ,220V~240V/50Hz,220V/60Hz							
Nominal Cooling Capacity*1)	kW	2.3	2.9	3.8	4.1	5.2	5.8	6.5	7.3
	kcal/h	2,000	2,500	3,300	3,550	4,500	5,000	5,600	6,300
	Btu/h	7,800	9,900	13,000	14,100	17,700	19,800	22,200	24,900
Nominal Cooling Capacity*2)	kW	2.2	2.8	3.6	4.0	5.0	5.6	6.3	7.1
	kcal/h	1,900	2,400	3,100	3,450	4,300	4,800	5,400	6,100
	Btu/h	7,500	9,600	12,300	13,600	17,000	19,100	21,500	24,200
Nominal Heating Capacity	kW	2.5	3.3	4.0	4.5	5.6	6.3	7.1	8.0
	kcal/h	2,150	2,800	3,450	3,900	4,800	5,400	6,100	6,900
	Btu/h	8,500	11,100	13,600	15,300	19,100	21,500	24,200	27,300
Sound Pressure Level (High/Medium/Low)	dB(A)	38/36/32	38/36/32	40/36/34	41/38/35	41/38/35	41/38/35	44/41/38	44/41/38
Outer Dimensions(H)	mm	280	280	280	280	290	290	290	290
	(in.)	11	11	11	11	12	12	12	12
Outer Dimensions(W)	mm	780	780	780	780	1,050	1,050	1,050	1050
	(in.)	31	31	31	31	41	41	41	41
Outer Dimensions(D)	mm	220	220	220	220	220	220	220	220
	(in.)	9	9	9	9	9	9	9	9
Net Weight	kg	10	10	10	10	13.5	13.5	13.5	13.5
	(lbs)	22	22	22	22	30	30	30	30
Refrigerant		R410A(Nitrogen-charged for Corrosion-resistance)							
Indoor Fan Air Flow Rate (Cooling/Heating)	m³/min	510/450/390	510/450/390	550/450/400	600/510/450	720/620/520	720/620/520	820/720/620	820/720/620
Motor Power	W	30	30	30	40	50	50	60	60
Connections Refrigerant Piping		Flare-nut Connection(with Flare Nuts)							
Liquid Line	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	(in.)	(1/4)	(1/4)	(1/4)	(1/4)	(1/4)	(1/4)	(1/4)	(1/4)
Gas Line	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.88	Φ15.88	Φ15.88	Φ15.88
	(in.)	(1/2)	(1/2)	(1/2)	(1/2)	(5/8)	(5/8)	(5/8)	(5/8)
Condensate Drain		VP16	VP16	VP16	VP16	VP16	VP16	VP16	VP16
Approximate Packing Measurement	m³	0.12	0.12	0.12	0.12	0.15	0.15	0.15	0.15

- NOTES:

1.The nominal cooling capacity and heating capacity are based on following conditions:
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: 7.5 Meters Piping Lift: 0 Meter

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 Meters Beneath the Unit and 1 Meters from Inlet Grille.
Voltage of the power source for the indoor fan motor is 220V.
The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

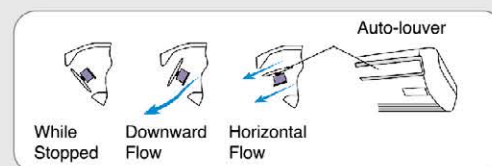
Ceiling Type



SET FREE-RPC Technique Features

Amenity improved by auto-louver at air opening

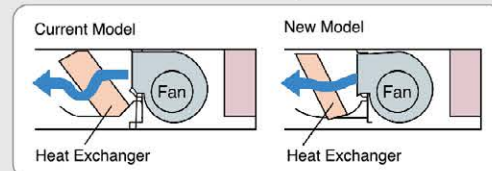
The round, lower part of the air opening complements the gentle, quiet operation. The auto-louver in the upper part of the opening automatically controls upward and downward motion of air flow, while the grille serves as a shutter when stopped.



Noise and vibration drastically reduced by our original design

The large fan and improved resistance of the air-flow path lower the r.p.m. of the blower, thus reducing noise and vibration.

- Improved resistance of air-flow path

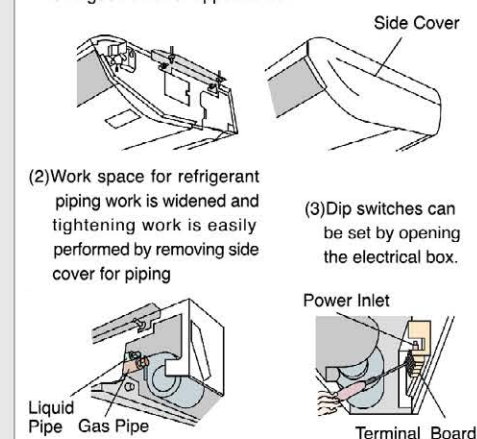


Simple Installation and Maintenance

- Installation time is much shorter
- A long-filter (Mildew-proof) is fitted as standard. No maintenance is required for about 2,500 hours of operation

*For ordinary offices

(1) Unit suspension bolts are fitted externally for easy adjustment of suspending height, and are covered with side-covers for a good exterior appearance.



Indoor Unit		Ceiling Type						
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,220V~240V/50Hz,220V/60Hz						
Nominal Cooling Capacity*1)	kW	4.1	5.8	7.3	8.3	11.6	14.5	16.5
	kcal/h	3,550	5,000	6,300	7,100	10,000	12,500	14,200
	Btu/h	14,100	19,800	25,000	28,200	39,700	49,600	56,300
Nominal Cooling Capacity*2)	kW	4.0	5.6	7.1	8.0	11.2	14.0	16.0
	kcal/h	3,400	4,800	6,100	6,900	9,600	12,000	13,800
	Btu/h	13,600	19,100	24,200	27,300	38,200	47,800	54,600
Nominal Heating Capacity	kW	4.8	6.3	8.5	9.0	12.5	16.0	18.0
	kcal/h	4,100	5,400	7,300	7,700	10,700	13,800	15,500
	Btu/h	16,400	21,500	29,000	30,700	42,600	54,600	61,400
Sound Pressure Level (High2/High/Medium/Low)	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						
Outer Dimensions(H)	mm	235	235	235	235	235	235	235
Outer Dimensions(W)	mm	960	960	1270	1270	1580	1580	1580
Outer Dimensions(D)	mm	690	690	690	690	690	690	690
Net Weight	kg	26	27	35	35	41	41	41
	(lbs)	(57)	(59)	(77)	(77)	(90)	(90)	(90)
Refrigerant		R410A (Nitrogen-charged for Corrosion-resistance)						
Indoor Fan Air Flow Rate (High2/High/Medium/Low)	m³/min	15/13/11/9	15/13/11/9	19/16.5/14/11.5	21/18.5/15.5/12.5	30/26.5/22/17	35/31/25.5/20	37/32.5/27/21
	(cfm)	(530/459/388/318)	(530/459/388/318)	(671/583/494/406)	(742/653/547/441)	(1059/936/777/600)	(1236/1095/900/706)	(1306/1148/953/742)
Motor Power	W	50	50	80	80	160	160	160
Connections Refrigerant Piping		Flare-nut Connection (with Flare Nuts)						
Liquid Line	mm	Φ6.35	Φ6.35	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	(in.)	(1/4)	(1/4)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)
Gas Line	mm	Φ12.7	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88
	(in.)	(1/2)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)
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
Standard Accessories		Wall Mounting Bracket						

- NOTES:**
- The nominal cooling capacity and heating capacity are based on following conditions:

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: 7.5 Meters Piping Lift: 0 Meter	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)
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 - The sound pressure level is based on following conditions.
 1 Meters Beneath the Unit and 1 Meters from Inlet Grille.
 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 1~2dB.
 The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

Floor Type Floor Concealed Type



SET FREE-RPF/RPFI Technique Features

Floor Type

Slim design for perimeter zone air conditioning

Space-saving slim unit, only 220mm in depth

Slim line design only 220 mm in depth, allowing it to be installed without spoiling the style or beauty of the room.

Effective use of space by window

With a height of 630 mm, may be installed by a window leaving plenty of window space. Best installed in a perimeter zone.

Floor Concealed Type

Compact design for limited space inside of perimeter wall

So compact that it fits into even a tiny space

Special emphasis placed on interior design compatibility as well as space saving design, allowing it to fit perfectly into the space below a bay window.

Indoor Unit		Floor Type		Floor Concealed Type			
Model		RPF-1.0FSN2E	RPF-1.5FSN2E	RPFI-1.0FSNQ	RPFI-1.5FSNQ	RPFI-2.0FSNQ	RPFI-2.5FSNQ
Power Supply		AC1Φ,220V~240V/50Hz,220V/60Hz		AC1Φ,220V~240V/50Hz,220V/60Hz			
Nominal Cooling Capacity*1)	kW	2.9	4.1	2.9	4.4	5.8	7.3
	kcal/h	2,500	3,500	2,500	3,500	5,000	6,300
	Btu/h	9,900	14,000	9,900	14,000	19,800	24,900
Nominal Cooling Capacity*2)	kW	2.8	4.0	2.8	4.3	5.6	7.1
	kcal/h	2,400	3,400	2,400	3,700	4,800	6,100
	Btu/h	9,600	13,700	9,600	14,700	19,100	24,200
Nominal Heating Capacity	kW	3.2	4.8	3.3	4.9	6.5	8.5
	kcal/h	2,800	4,100	2,800	4,200	5,600	7,300
	Btu/h	10,900	16,400	11,300	16,700	22,200	29,000
Sound Pressure Level (High/Medium/Low)	dB(A)	35-32-29	38-35-31	37-34-31	40-38-35	42-38-36	45-43-40
Cabinet Color		Silky White		—			
Outer Dimensions(H)	mm	630	630	620	620	620	620
	(in.)	(24-13/16)	(24-13/16)	(24-7/16)	(24-7/16)	(24-7/16)	(24-7/16)
Outer Dimensions(W)	mm	1045	1170	900	900	1170	1170
	(in.)	(41-1/8)	(46-1/16)	(35-7/16)	(35-7/16)	(46-1/16)	(46-1/16)
Outer Dimensions(D)	mm	220	220	202	202	202	202
	(in.)	(8-11/16)	(8-11/16)	(7-15/16)	(7-15/16)	(7-15/16)	(7-15/16)
Net Weight	kg	25	28	25	26	31	31
	(lbs)	(55)	(62)	(55)	(57.2)	(68.2)	(68.2)
Refrigerant		R410A (Nitrogen-charged for Corrosion-resistance)		R410A(Nitrogen-charged for Corrosion-resistance)			
Indoor Fan Air Flow Rate (High/Medium/Low)	m ³ /min	8.5/7/6	12/10/9	8/7/6	10/8/7	14.5/12.5/10.5	16/14/12
	(cfm)	(300/247/212)	(424/353/318)	(282/247/212)	(353/282/247)	(512/441/370)	(565/494/424)
Motor Power	W	20	28	16	25	40	50
Connections Refrigerant Piping		Flare-nut Connection(with Flare Nuts)		Flare-nut Connection(with Flare Nuts)			
Liquid Line	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53
	(in.)	(1/4)	(1/4)	(1/4)	(1/4)	(1/4)	(3/8)
Gas Line	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.88	Φ15.88
	(in.)	(1/2)	(1/2)	(1/2)	(1/2)	(5/8)	(5/8)
Condensate Drain		18.5OD	18.5OD	VP25	VP25	VP25	VP25
Approximate Packing Measurement	m ³	0.26	0.29	0.19	0.19	0.23	0.23

- NOTES:
- 1.The nominal cooling capacity and heating capacity are based on following conditions:
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: 7.5 Meters Piping Lift: 0 Meter

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.
Floor type: 1.5 meters from floor level.
Floor concealed type: 1.5 meters from the unit and 1.5 meters from the floor level.
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 1~2dB.
The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

Out Units Parameter

Model		RAS-8FSNY8Q	RAS-10FSNY8Q	RAS-12FSNY8Q	RAS-14FSNY8Q	RAS-16FSNY8Q
Power Supply		AC 3Φ,380V~415V/50Hz,380V/60Hz				
Nominal Cooling Capacity	kW	22.4	28.0	33.5	40.0	45.0
Nominal Heating Capacity	kW	25.0	31.5	37.5	45.0	50.0
EER(Cooling COP)		4.12	3.98	3.30	3.30	3.28
COP(Heating COP)		4.08	4.08	3.79	3.62	3.12
Sound Pressure Level	dB	58	58	60	62	64
Cabinet Color		ivory white				
Outer Dimensions (H×W×D)	mm	1720×950×765			1720×1210×765	
Net Weight	kg	215	227	230	315	320
Gross Weight	kg	230	245	250	330	335
Refrigerant Category		R410A				
Refrigerant Flow Control		Micro-Computer Control Expansion Valve				
Compressor Model		DA50PHD	DA65PHD	DA65PHD	DA65PHD +E655DH	DA65PHD +E655DH
Compressor Quantity		1	1	1	1+1	1+1
Compressor Output(Pole)	kW	4.8(6)	6.0(6)	7.2(6)	4.8(6)+4.4(2)	6.0(6)+4.4(2)
Heat Exchanger		Multi-Pass Cross-Finned Tube				
Condenser Fan Quantity		1	1	1	1	1
Air Flow Rate	m³/min	155	170	175	195	210
Motor Output(Pole)	kW	0.33(8)	0.44(8)	0.49(8)	0.66(8)	0.91(8)
Refrigerant Piping		Flare-Nut Connection(With Flare Nuts)				
Liquid Line	mm	Φ9.53	Φ9.53	Φ12.7	Φ12.7	Φ12.7
Gas Line	mm	Φ19.05	Φ22.2	Φ25.4	Φ25.4	Φ28.6
Refrigerant Charge	kg	5.4	6.4	7.3	8.5	9.5
Holes For Power Supply Wiring	mm	Φ52	Φ52	Φ52	Φ52	Φ52
Holes For Control Line Wiring	mm	Φ26	Φ26	Φ26	Φ26	Φ26
Approximate Packing Measurement	m³	1.57	1.57	1.57	1.97	1.97
Max. number of connectable I.U.		13	16	19	23	26
Recommended number of connectable I.U		8	10	10	16	16

NOTES:

- 1.The nominal cooling capacity and heating capacity are based on following conditions:

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: 7.5 Meters Piping Lift: 0 Meter

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.1.5m beneath the unit.

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

Model		RAS-18FSNY8Q	RAS-20FSNY8Q	RAS-22FSNY8Q	RAS-24FSNY8Q
Combination		RAS-8FSNY8Q RAS-10FSNY8Q	RAS-8FSNY8Q RAS-12FSNY8Q	RAS-8FSNY8Q RAS-14FSNY8Q	RAS-10FSNY8Q RAS-14FSNY8Q
Power Supply		AC 3Φ,380V~415V/50Hz,380V/60Hz			
Nominal Cooling Capacity	kW	50.0	56.0	61.5	469.0
Nominal Heating Capacity	kW	56.0	63.0	69.0	77.5
EER(Cooling COP)		4.05	3.59	3.58	3.54
COP(Heating COP)		4.09	3.90	3.80	3.78
Sound Pressure Level	dB	61	63	64	64
Cabinet Color		ivory white			
Outer Dimensions (H×W×D)	mm	(1720×950×765)+(1720×950×765)		(1720×950×765)+(1720×1210×765)	
Net Weight	kg	442	445	530	542
Gross Weight	kg	475	480	560	575
Refrigerant Category		R410A			
Refrigerant Flow Control		Micro-Computer Control Expansion Valve			
Compressor Model		DA50PHD+DA65PHD		DA50PHD+DA65PHD+E655DH	
Compressor Quantity		1+1	1+1	1+1+1	1+1+1
Compressor Output(Pole)	kW	4.8(6)+6.0(6)	4.8(6)+7.2(6)	4.8(6)+4.8(6)+4.4(2)	6.0(6)+4.8(6)+4.4(2)
Heat Exchanger		Multi-Pass Cross-Finned Tube			
Condenser Fan Quantity		2	2	2	2
Air Flow Rate	m³/min	155+170	155+175	155+195	170+195
Motor Output(Pole)	kW	0.33(8)+0.44(8)	0.33(8)+0.49(8)	0.33(8)+0.66(8)	0.44(8)+0.66(8)
Refrigerant Piping		Flare-Nut Connection(With Flare Nuts)			
Liquid Line	mm	Φ15.88	Φ15.88	Φ15.88	Φ15.88
Gas Line	mm	Φ28.6	Φ28.6	Φ28.6	Φ28.6
Refrigerant Charge	kg	11.8	12.7	13.9	14.9
Holes For Power Supply Wiring	mm	Φ52	Φ52	Φ52	Φ52
Holes For Control Line Wiring	mm	Φ26	Φ26	Φ26	Φ26
Approximate Packing Measurement	m³	1.97	-	-	-
Max. number of connectable I.U.		26	33	36	40
Recommended number of connectable I.U		16	18	20	26

NOTES:

- 1.The nominal cooling capacity and heating capacity are based on following conditions:

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: 7.5 Meters Piping Lift: 0 Meter

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.1.5m beneath the unit.

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

Out Units Parameter

SET-FREE
FSNY8Q Series

Model		RAS-26FSNY8Q	RAS-28FSNY8Q	RAS-30FSNY8Q	RAS-32FSNY8Q
Combination		RAS-12FSNY8Q RAS-14FSNY8Q	RAS-14FSNY8Q RAS-14FSNY8Q	RAS-14FSNY8Q RAS-16FSNY8Q	RAS-16FSNY8Q RAS-16FSNY8Q
Power Supply		AC 3Φ,380V~415V/50Hz,380V/60Hz			
Nominal Cooling Capacity	kW	73.0	80.0	85.0	90.0
Nominal Heating Capacity	kW	82.5	90.0	95.0	100.0
EER(Cooling COP)		3.31	3.30	3.29	3.28
COP(Heating COP)		3.70	3.62	3.34	3.12
Sound Pressure Level	dB	65	65	66	66
Cabinet Color		Ivory white			
Outer Dimensions (H×W×D)	mm	(1720×950×765)+(1720×1210×765)	(1720×1210×765)+(1720×1210×765)		
Net Weight	kg	545	630	635	640
Gross Weight	kg	580	660	665	670
Refrigerant Category		R410A			
Refrigerant Flow Control		Micro-Computer Control Expansion Valve			
Compressor Model		DA65PHD+DA65PHD+E665DH	DA65PHD+E665DH+DA65PHD+E665DH		
Compressor Quantity		1+1+1	1+1+1+1	1+1+1+1	1+1+1+1
Compressor Output(Pole)	kW	7.2(6)+4.8(6)+4.4(2)	4.8(6)+4.4(2)+4.8(6)+4.4(2)	4.8(6)+4.4(2)+6.0(6)+4.4(2)	6.0(6)+4.4(2)+6.0(6)+4.4(2)
Heat Exchanger		Multi-Pass Cross-Finned Tube			
Condenser Fan Quantity		2	2	2	2
Air Flow Rate	m³/min	175+195	195+195	195+210	210+210
Motor Output(Pole)	kW	0.49(8)+0.66(8)	0.66(8)+0.66(8)	0.66(8)+0.91(8)	0.91(8)+0.91(8)
Refrigerant Piping		Flare-Nut Connection(With Flare Nuts)			
Liquid Line	mm	Φ19.05	Φ19.05	Φ19.05	Φ19.05
Gas Line	mm	Φ31.75	Φ31.75	Φ31.75	Φ31.75
Refrigerant Charge	kg	15.8	17.0	18.0	19.0
Holes For Power Supply Wiring	mm	Φ52	Φ52	Φ52	Φ52
Holes For Control Line Wiring	mm	Φ26	Φ26	Φ26	Φ26
Approximate Packing Measurement	m³	-	-	-	-
Max. number of connectable I.U.		43	47	50	53
Recommended number of connectable I.U		26	32	32	32

NOTES:

- 1.The nominal cooling capacity and heating capacity are based on following conditions:

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: 7.5 Meters Piping Lift: 0 Meter

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.1.5m beneath the unit.

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

Model		RAS-34FSNY8Q	RAS-36FSNY8Q	RAS-38FSNY8Q	RAS-40FSNY8Q	RAS-42FSNY8Q	RAS-44FSNY8Q
Combination		RAS-10FSNY8Q RAS-12FSNY8Q RAS-12FSNY8Q	RAS-12FSNY8Q RAS-12FSNY8Q RAS-12FSNY8Q	RAS-12FSNY8Q RAS-12FSNY8Q RAS-14FSNY8Q	RAS-12FSNY8Q RAS-12FSNY8Q RAS-16FSNY8Q	RAS-12FSNY8Q RAS-14FSNY8Q RAS-16FSNY8Q	RAS-12FSNY8Q RAS-16FSNY8Q RAS-16FSNY8Q
Power Supply		AC 3Φ,380V~415V/50Hz,380V/60Hz					
Nominal Cooling Capacity	kW	95.0	100.0	109.0	112.0	118.0	125.0
Nominal Heating Capacity	kW	106.0	112.0	118.0	125.0	132.0	140.0
EER(Cooling COP)		3.47	3.31	3.29	3.29	3.30	3.28
COP(Heating COP)		3.88	3.81	3.78	3.49	3.47	3.26
Sound Pressure Level	dB	65	65	66	67	67	68
Cabinet Color		Ivory white					
Outer Dimensions (H×W×D)	mm	(1720×950×765)+(1720×950×765) +(1720×950×765)		(1720×950×765)+(1720×950×765) +(1720×1210×765)		(1720×950×765)+(1720×1210×765) +(1720×1210×765)	
Net Weight	kg	687	690	775	780	865	870
Gross Weight	kg	730	750	830	835	915	920
Refrigerant Category		R410A					
Refrigerant Flow Control		Micro-Computer Control Expansion Valve					
Compressor Model		DA65PHD+DA65PHD+DA65PHD		DA65PHD+DA65PHD+DA65PHD+E665DH		DA65PHD+DA65PHD+E665DH+DA65PHD+E665DH	
Compressor Quantity		1+1+1	1+1+1	1+1+1+1	1+1+1+1	1+1+1+1+1	1+1+1+1+1
Compressor Output(Pole)	kW	6.0(6)+7.2(6) +7.2(6)	7.2(6)+7.2(6) +7.2(6)	7.2(6)+7.2(6) +4.8(6)+4.4(2)	7.2(6)+7.2(6) +6.0(6)+4.4(2)	7.2(6)+4.8(6)+4.4(2) +6.0(6)+4.4(2)	7.2(6)+6.0(6)+4.4(2) +6.0(6)+4.4(2)
Heat Exchanger		Multi-Pass Cross-Finned Tube					
Condenser Fan Quantity		3	3	3	3	3	3
Air Flow Rate	m³/min	170+175+175	175+175+175	175+175+195	175+175+210	175+195+210	175+210+210
Motor Output(Pole)	kW	0.44(8)+0.49(8) +0.49(8)	0.49(8)+0.49(8) +0.49(8)	0.49(8)+0.49(8) +0.66(8)	0.49(8)+0.49(8) +0.91(8)	0.49(8)+0.66(8) +0.91(8)	0.49(8)+0.91(8) +0.91(8)
Refrigerant Piping		Flare-Nut Connection(With Flare Nuts)					
Liquid Line	mm	Φ19.05	Φ19.05	Φ19.05	Φ19.05	Φ19.05	Φ19.05
Gas Line	mm	Φ31.75	Φ38.1	Φ38.1	Φ38.1	Φ38.1	Φ38.1
Refrigerant Charge	kg	21.0	21.9	23.1	24.1	25.3	26.3
Holes For Power Supply Wiring	mm	Φ52	Φ52	Φ52	Φ52	Φ52	Φ52
Holes For Control Line Wiring	mm	Φ26	Φ26	Φ26	Φ26	Φ26	Φ26
Approximate Packing Measurement	m³	-	-	-	-	-	-
Max. number of connectable I.U.		56	59	64	64	64	64
Recommended number of connectable I.U		32	32	38	38	38	38

NOTES:

- 1.The nominal cooling capacity and heating capacity are based on following conditions:

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: 7.5 Meters Piping Lift: 0 Meter

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.1.5m beneath the unit.

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

Out Units Parameter

Model		RAS-46FSNY8Q	RAS-48FSNY8Q	RAS-50FSNY8Q	RAS-52FSNY8Q	RAS-54FSNY8Q
Combination		RAS-14FSNY8Q RAS-16FSNY8Q RAS-16FSNY8Q	RAS-16FSNY8Q RAS-16FSNY8Q RAS-16FSNY8Q	RAS-10FSNY8Q RAS-12FSNY8Q RAS-14FSNY8Q RAS-14FSNY8Q	RAS-12FSNY8Q RAS-12FSNY8Q RAS-14FSNY8Q RAS-14FSNY8Q	RAS-12FSNY8Q RAS-12FSNY8Q RAS-14FSNY8Q RAS-16FSNY8Q
Power Supply		AC 3Φ,380V~415V/50Hz,380V/60Hz				
Nominal Cooling Capacity	kW	132.0	136.0	140.0	145.0	150.0
Nominal Heating Capacity	kW	145.0	150.0	155.0	160.0	165.0
EER(Cooling COP)		3.28	3.28	3.43	3.32	3.31
COP(Heating COP)		3.26	3.12	3.81	3.78	3.61
Sound Pressure Level	dB	68	69	67	68	68
Cabinet Color		Ivory white				
Outer Dimensions (H×W×D)	mm	(1720×1210×765)+(1720×1210×765) +(1720×1210×765)		(1720×950×765)+(1720×950×765) +(1720×1210×765)+(1720×1210×765)		
Net Weight	kg	955	960	1087	1090	1095
Gross Weight	kg	1000	1005	1155	1160	1165
Refrigerant Category		R410A				
Refrigerant Flow Control		Micro-Computer Control Expansion Valve				
Compressor Model		DA65PHD+E655DH+DA65PHD +E655DH+DA65PHD+E655DH				
Compressor Quantity		1+1+1+1+1+1	1+1+1+1+1+1	1+1+1+1+1+1	1+1+1+1+1+1	1+1+1+1+1+1
Compressor Output(Pole)	kW	4.8(6)+4.4(2)+6.0(6) +4.4(2)+6.0(6)+4.4(2)	6.0(6)+4.4(2)+6.0(6) +4.4(2)+6.0(6)+4.4(2)	6.0(6)+7.2(6)+4.8(6) +4.4(2)+4.8(6)+4.4(2)	7.2(6)+7.2(6)+4.8(6) +4.4(2)+4.8(6)+4.4(2)	7.2(6)+7.2(6)+4.8(6) +4.4(2)+6.0(6)+4.4(2)
Heat Exchanger		Multi-Pass Cross-Finned Tube				
Condenser Fan Quantity		3	3	4	4	4
Air Flow Rate	m³/min	195+210+210	210+210+210	170+175+195+195	175+175+195+195	175+175+195+210
Motor Output(Pole)	kW	0.66(8)+0.91(8) +0.91(8)	0.91(8)+0.91(8) +0.91(8)	0.44(8)+0.49(8) +0.66(8)+0.66(8)	0.49(8)+0.49(8) +0.66(8)+0.66(8)	0.49(8)+0.49(8) +0.66(8)+0.91(8)
Refrigerant Piping		Flare-Nut Connection(With Flare Nuts)				
Liquid Line	mm	Φ19.05	Φ19.05	Φ19.05	Φ19.05	Φ19.05
Gas Line	mm	Φ38.1	Φ38.1	Φ38.1	Φ38.1	Φ38.1
Refrigerant Charge	kg	27.5	28.5	30.7	31.6	32.6
Holes For Power Supply Wiring	mm	Φ52	Φ52	Φ52	Φ52	Φ52
Holes For Control Line Wiring	mm	Φ26	Φ26	Φ26	Φ26	Φ26
Approximate Packing Measurement	m³	-	-	-	-	-
Max. number of connectable I.U.		64	64	64	64	64
Recommended number of connectable I.U		38	38	38	38	38

NOTES:

1.The nominal cooling capacity and heating capacity are based on following conditions:
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: 7.5 Meters Piping Lift: 0 Meter

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.

Optional Parts

SET-FREE
FSNY8Q Series

Control System

Model		RPI-FSNQL/H	RPIZ-FSN1Q	RCI-FSN1Q	RPK-FSNQS	RPC-FSN3	RCD-FSN2
Remote Control Switch	PC-AR/PC-ARQ (Without Cable) *1	○	○	○	○	×	○
	PC-ARF	○	○	○	○	○*4	○
Wireless Remote Control Switch	PC-LH3A	○	○	○	○	×	○
Half-size Remote Control Switch	PC-ARH	○	○	○	○	×	○
7-Day Timer	PSC-A1T*2	○	○	○	○	○	○
Central Station	PSC-5S,PSC-A64S*3	○	○	○	○	○	○
P/C Network System	CS-NET	○	○	○	○	○	○

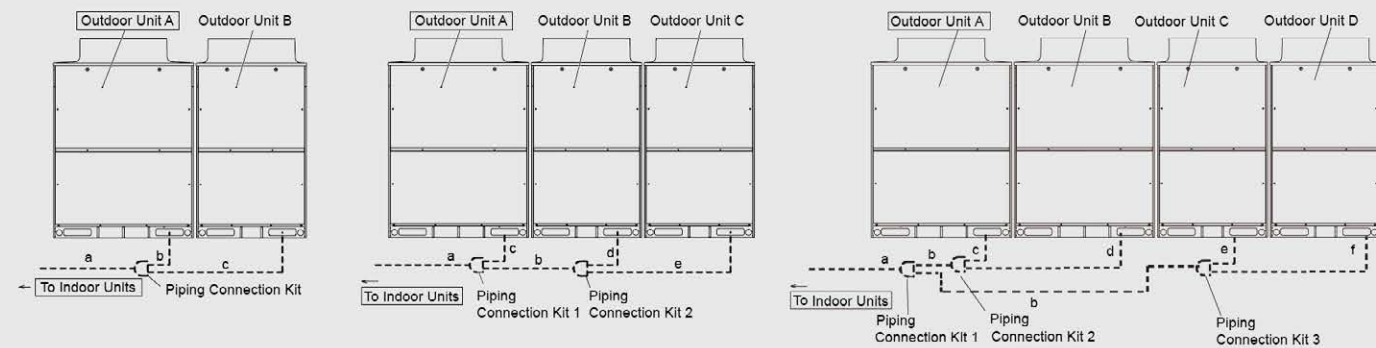
○ : Applicable × : Not Applicable
*1:As the PC-AR/PC-ARQ does not include a remote control cable,prepare one in the field.
*2:Scheduled operation is possible by using PSC-A1T with PSC-5S,PSC-A64S or PC-AR/PC-ARQ controllers.
*3:Supply 220V or 240V.
*4:When FSN3 type indoor unit is used with the remote control switch,PC-ARF must be used.

First Multi-kit

Outdoor Unit HP	8 and 10	12 to 16	18 to 24	26 to 54
Multi-kit	E-102SN	E-162SN	E-242SN	E-302SN

Piping Connection Kit (for combined system)

Outdoor Unit	RAS-18~24FSNY8Q	RAS-26~32FSNY8Q	RAS-34~40FSNY8Q	RAS-42~48FSNY8Q	RAS-50~54FSNY8Q
Piping Connection Kit 1	M-20SNQ	M-30SNQ	M-30SNQ	M-30SNQ	M-30SNQ
Piping Connection Kit 2			M-20SNQ	M-30SNQ	M-30SNQ
Piping Connection Kit 3					M-20SNQ



First Multi-kit ~ Last Multi-kit

Total Indoor Unit HP	Lower than 6	6 to 8.99	9 to 11.99	12 to 15.99	16 to 17.99	18 to 25.99	26 to 35.99	Over 36
Gas (Φmm)	Φ15.88	Φ19.05	Φ22.2	Φ25.4	Φ28.6	Φ28.6	Φ31.75	Φ38.1
Liquid (Φmm)	Φ9.53	Φ9.53	Φ9.53	Φ12.7	Φ12.7	Φ15.88	Φ19.05	Φ19.05
Multi-kit		E-102SN		E-162SN		E-242SN		E-302SN

Last Multi-kit ~ Indoor Unit

Indoor Unit	Pipe Size (Φmm)		Max. Liquid Pipe Length
	Gas Pipe	Liquid Pipe	
0.8HP-1.5HP	12.7	6.35	15
1.8HP-2.0HP	15.88	6.35*1	15
2.3HP-6.0HP	15.88	9.53	40
8HP	19.05	9.53	40
10HP	22.2	9.53	40

NOTES: 1.When liquid pipe length of indoor unit(0.8-2.0HP) is more than 15m,please change the liquid pipe dimension from Φ6.35 into Φ9.53.

Create comfortable and healthy indoor environment

Create a comfortable and healthy indoor environment by introducing fresh outdoor air. By heating or cooling fresh outdoor air to almost the same temperature as room temperature, fresh ambient air can be adapted and then introduced into indoor room. Besides, after filtered, fresh outdoor air in transition seasons can be drawn to indoor room directly with no need of heating or cooling operation. While fresh outdoor air is introduced, other indoor units don't bear fresh air load.

Advanced control

Can be interfaced to H-LINKII system. easy electrical wiring design and installation.

Flexible line-up to set-free series

All fresh air indoor unit is applicable to SET-FREE outdoor units. both SET-FREE indoor units and all fresh air indoor unit can be used in SET-FREE system.

Higher external static pressure

Better installation flexibility at site, longer duct can be connected.

General Date for All Fresh Air Indoor Unit

Model			RPI-5.0KFNQ		RPI-8.0KFNQ			RPI-10.0KFNQ		
Power Supply			AC1 φ ,220V/50Hz	AC1 φ ,240V/50Hz	AC1 φ ,220V/50Hz	AC1 φ ,240V/50Hz	AC1 φ ,220V/60Hz	AC1 φ ,220V/50Hz	AC1 φ ,240V/50Hz	AC1 φ ,220V/60Hz
Combined Outdoor Unit Model			SET-FREE FSNY8Q Series							
Cooling Capacity		kW	14.0		22.4			28.0		
Cooling Power Input		kW	0.30	0.31	0.48	0.50	0.60	0.50	0.58	0.70
Nominal Cooling Current		A	1.4	1.3	2.2	2.1	2.7	2.3	2.4	3.2
Heating Capacity		kW	13.7		21.9			24.5		
Heating Power Input		kW	0.30	0.31	0.48	0.50	0.60	0.50	0.58	0.70
Nominal Heating Current		A	1.4	1.3	2.2	2.1	2.7	2.3	2.4	3.2
Outer Dimensions	H	mm	370		486			486		
	W	mm	1,320		1,270			1,270		
	D	mm	800		1,069			1,069		
Sound Pressure Level (Overall A Scale)		dB	42		44			45		
Net Weight		kg	60		97			97		
Refrigerant			R410A							
Indoor Fan Air Flow Rate		m³/min	18		28			35		
External Static Pressure		Pa	200		220			220		
Drain Piping Size			VP25,Outer Diameter: φ32mm							
Refrigerant Liquid Line Size		mm	φ9.53		φ9.53			φ9.53		
Refrigerant Gas Line Size		mm	φ15.88		φ19.05			φ22.2		
Temperature Range of Fresh Air Drawn			Cooling:20℃~43℃, Heating:-7℃~15℃							

NOTES:

1. The nominal cooling capacity and heating capacity are based on following conditions:
Cooling operation conditions : 33℃ DB ,28℃ WB, piping length: 7.5m,piping lift :0m
Heating operation conditions: 0℃ DB,-2.9℃ WB,piping length: 7.5m,piping lift :0m
(Heating capacity is tested when defrosting is not available)

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

3. An air filter with dust collection efficiency more than 50% needs to be attached to the duct system of the suction side at site.

4. When the resistance of the field-supplied duct is small, it may cause abnormal stoppage, malfunction, spraying water, etc. due to excessive air flow. And the duct, which is to be connected to this unit, shall be insulated for dew protection.
5. All fresh air indoor unit is for processing fresh air load and not for stabilizing the room temperature. For adjusting the air conditioning load of the room, the additional air conditioner is required.

6. This unit shall be connected to SET-FREE outdoor unit. In case of connecting this unit with other indoor units in the same refrigerant cycle, calculate the capacity of this unit as 21.0kW(5HP), 33.6kW(8HP), 42.0kW(10HP).

7. When SET-FREE outdoor unit connected only with all fresh air indoor unit, the configuration rate is 100% (Recommended).

8. Under cooling mode, when outdoor temperature is lower than 20℃,the system will automatically shift to ventilation operation;Under heating mode, when outdoor temperature is higher than 15℃, the system will automatically shift to ventilation operation;In case inlet temperature is below -7℃, All Fresh Air Indoor Unit will stop.

General Date for All Fresh Air Indoor Unit

Model			RPI-12.0KFNQ		RPI-16.0KFNQL		RPI-16.0KFNQH		RPI-20.0KFNQL		RPI-20.0KFNQH		RPI-20.0KFNQLF		RPI-20.0KFNQHF	
Power Supply			AC3Φ 380V/50Hz	AC3Φ 415V/50Hz	AC3Φ 380V/50Hz	AC3Φ 415V/50Hz	AC3Φ 380V/50Hz	AC3Φ 415V/50Hz	AC3Φ 380V/50Hz	AC3Φ 415V/50Hz	AC3Φ 380V/50Hz	AC3Φ 415V/50Hz	AC3Φ 380V/50Hz	AC3Φ 415V/50Hz	AC3Φ 380V/50Hz	AC3Φ 415V/50Hz
Combined Outdoor Unit Model			RAS-12FSNY8Q		RAS-16FSNY8Q		RAS-16FSNY8Q		RAS-20FSNY8Q		RAS-20FSNY8Q		RAS-20FSNY8Q		RAS-20FSNY8Q	
Cooling Capacity		kW	33.5		45.0		45.0		56.0		56.0		56.0		56.0	
Cooling Power Input		kW	0.68	0.72	0.73	0.79	1.05	1.08	1.07	1.10	1.25	1.24	1.27	1.34	1.52	1.56
Nominal Cooling Current		A	1.43	1.45	1.39	1.63	1.88	1.83	1.90	1.86	2.41	2.40	2.51	2.59	2.92	2.95
Heating Capacity		kW	26.8		36.0		36.0		44.8		44.8		44.8		44.8	
Heating Power Input		kW	0.68	0.72	0.73	0.79	1.05	1.08	1.07	1.10	1.25	1.24	1.27	1.34	1.52	1.56
Nominal Heating Current		A	1.43	1.45	1.39	1.63	1.88	1.83	1.90	1.86	2.41	2.40	2.51	2.59	2.92	2.95
Outer Dimensions	H	mm	486		635		635		735		735		735		735	
	W	mm	1,270		1,950		1,950		1,950		1,950		1,950		1,950	
	D	mm	1,069		805		805		805		805		805		805	
Sound Pressure Level		dB(A)	55		57		60		59		63		61		65	
Net Weight		kg	97		196		196		222		222		222		222	
Refrigerant			R410A													
Indoor Fan Air Flow Rate		m³/h	3000		4000		4000		5000		5000		6000		6000	
External Static Pressure		Pa	220		200		300		200		320		200		300	
Air Inlet Size		mm	1,100 x 415		1,522 x 522		1,522 x 522		1,522 x 622		1,522 x 622		1,522 x 622		1,522 x 622	
Air Outlet Size		mm	1,106 x 338		850 x 272		850 x 272		850 x 272		850 x 272		850 x 272		850 x 272	
Drain Piping Size			VP25		RC1(Internal Screw)											
Refrigerant Liquid Line Size		mm	Φ12.7		Φ12.7		Φ12.7		Φ15.88		Φ15.88		Φ15.88		Φ15.88	
Refrigerant Gas Line Size		mm	Φ25.4		Φ25.4		Φ25.4		Φ28.6		Φ28.6		Φ28.6		Φ28.6	
Temperature Range of Fresh Air Drawn			Cooling:20℃~43℃, Heating:-7℃~15℃													

NOTES:

1. The nominal cooling capacity and heating capacity are based on following conditions:
Cooling operation conditions : 33℃ DB ,28℃ WB, piping length: 7.5m,piping lift :0m
Heating operation conditions: 0℃ DB,-2.9℃ WB,piping length: 7.5m,piping lift :0m
(Heating capacity is tested when defrosting is not available)

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

3. An air filter with dust collection efficiency more than 50% needs to be attached to the duct system of the suction side at site.

4. When the resistance of the field-supplied duct is small, it may cause abnormal stoppage, malfunction, spraying water, etc. due to excessive air flow. And the duct, which is to be connected to this unit, shall be insulated for dew protection.

5. All fresh air indoor unit is for processing fresh air load and not for stabilizing the room temperature. For adjusting the air conditioning load of the room, the additional air conditioner is required.
6. Under cooling mode, when outdoor temperature is lower than 20℃,the system will automatically shift to ventilation operation;Under heating mode, when outdoor temperature is higher than 15℃, the system will automatically shift to ventilation operation;In case inlet temperature.is below -7℃, All Fresh Air Indoor Unit will stop.

