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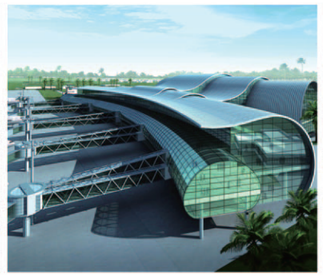


Inverter-driven Multi-split
Heat Pump Central Air Conditioning System

SET-FREE

FSXNQ Series

Zero Ozone Depletion Potential
R410A

HITACHI

Hitachi Appliances, Inc.

URL : http://www.hitachi-ap.com

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HHESFXN1102

“Heat Recovery Operation”
It’s the Air-conditioning Need of the Era

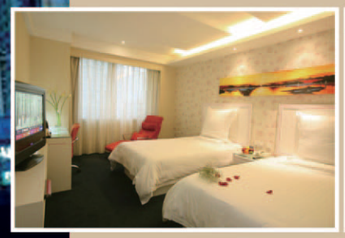
When considering the need to switch between cooling and heating for day and night times at the turn of the season, the difference in room temperatures due to the influence of sunshine and the need to cool offices all year round, which arises from the widespread use of computers and terminal devices, heat recovery operation has already become a precondition for air-conditioning systems for buildings.

Heat Recovery Operation System Optimized to Meet Different Air-conditioning Needs in the Same Building

In office buildings
Recently, the heat inside buildings is less likely to be released thanks to changes in building structures, such as the improvement of heat insulator performance and the use of double-pane windows. Cooling is required all through the year in the interior zone where there are a lot of lighting fixtures and OA equipment, while in the perimeter zone, which is easily affected by ambient temperature and sunshine, either cooling or heating is required according to changes in the flow of heat.

In commercial buildings
Heat recovery operation is essential in commercial buildings where restaurants, shops, etc., coexist.

In hotels
In hotels where all different kinds of people stay, there is a huge difference in the temperatures they can sense. Thus, room temperatures should be set flexibly according to the personal preferences of the guests.



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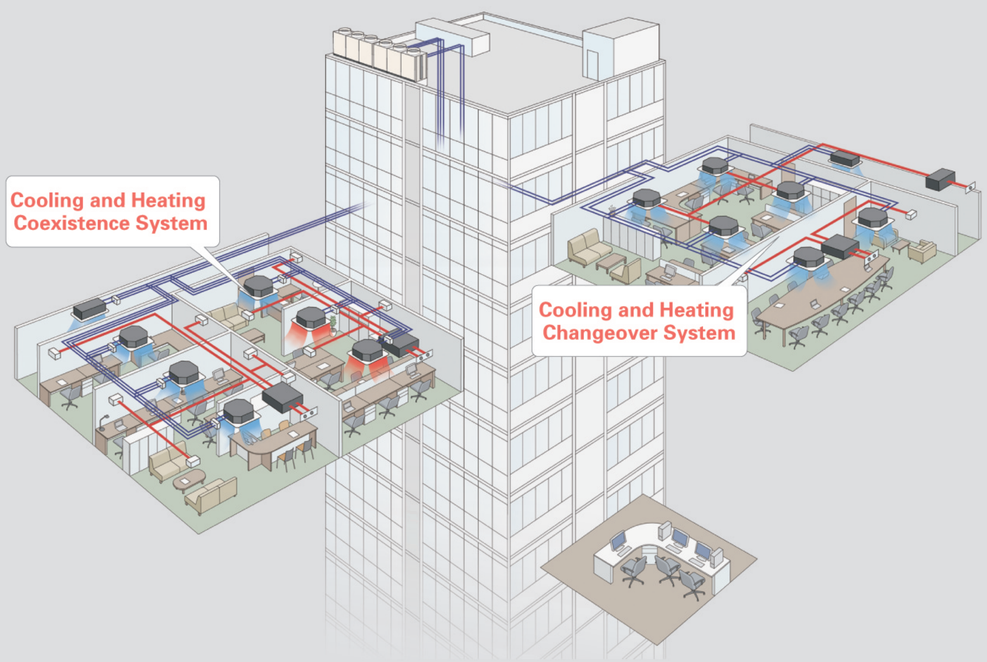
SET-FREE FSXNQ Debut

Multi Air-conditioning System That Embodies Usability

There have been increasing needs, upon the introduction of an air–condition system, for air conditioners capable of simultaneously cooling and heating , because the space where cooling is required all year round and the space where cooling and heating should be changed over seasonally coexist in office buildings and other places. Also, in order to save cost and space, lately, multiple low–capacity units are being integrated into and utilized as a high–capacity outdoor unit with increasing frequency.
Furthermore, from the viewpoint of environmental consideration, a demand is growing for an air–conditioning management system that makes it easier for users to comprehend the operating condition and the usage status of their air conditioners such as overheating, overcooling and unattended operation. To meet various kinds of needs for an air–conditioning system for buildings, Hitachi developed a new multi–split air–conditioning system for buildings called “SET–FREE FSXNQ”.



Heat Recovery Green Design, Environmentally Friendly, High Efficiency and Energy Saving

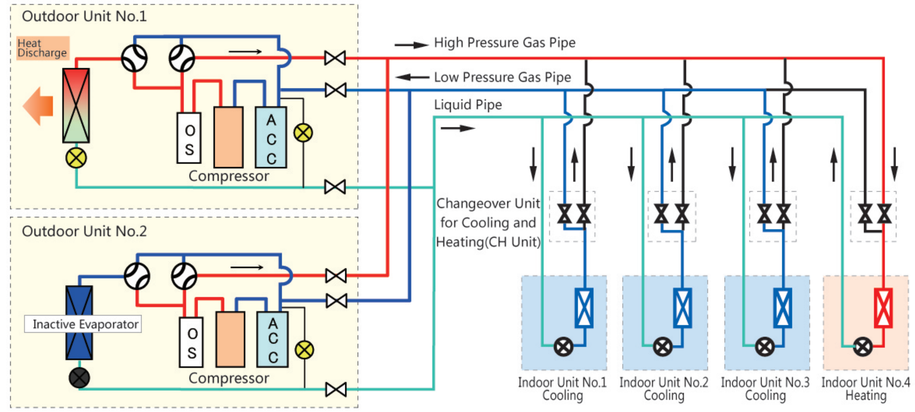
Hitachi Heat Recovery Multi-split Air Conditioning System realizes simultaneous cooling and heating through perfect combination of DC inverter technology and heat recovery technology, which results in a 20% energy saving compared with traditional air conditioning. At the same time, the extended scope of application and high quality that users experienced have been offered on the basis of effective running cost reduction.

Principle Introduction:

The refrigerant piping system of SET–FREE FSXNQ series consists of liquid pipe, high pressure gas pipe and low pressure gas pipe. By the use of CH changeover unit which is regulated by microcomputer, low pressure gas pipe and high pressure gas pipe can be used alternately, consequently, Cooling/Heating Simultaneous Operation works.

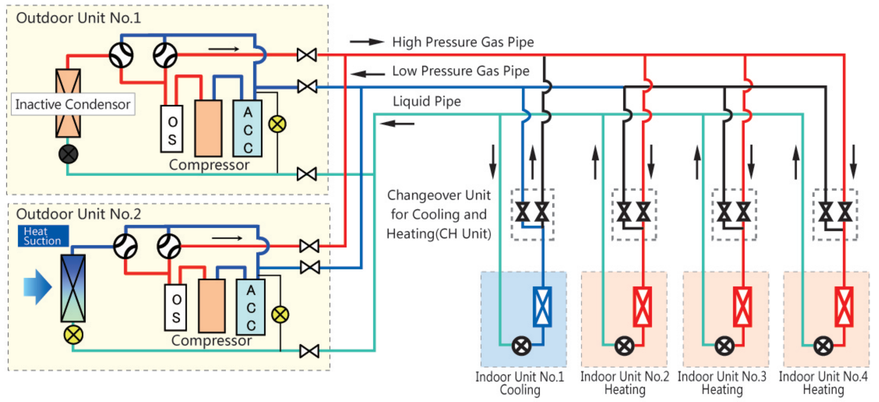
Operation Modes of Heat Recovery System:

Cooling Domination Mode



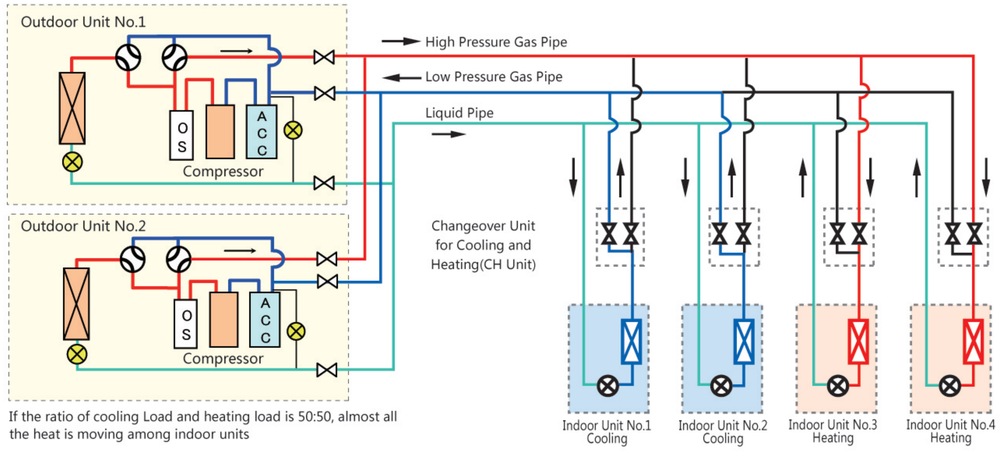
When total indoor heating load is less than cooling load, heat is being transferred from cooling room to heating room, part of heat exchanger is used as condenser to exhaust the redundant heat.

Heating Domination Mode



When total indoor heating load is more than cooling load, heat is being transferred from cooling room to heating room, part of heat exchanger is used as evaporator to compensate the required heat.

Cooling/Heating Equilibrium Mode

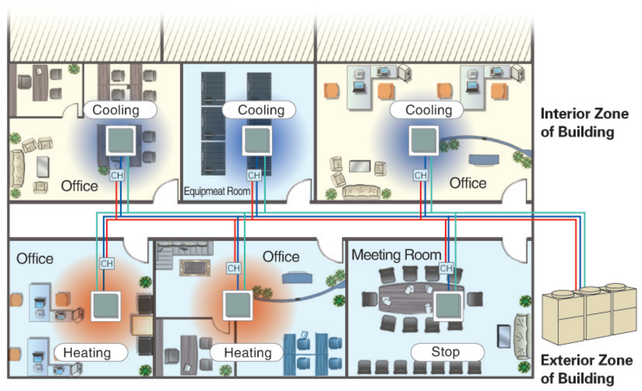


If the ratio of cooling Load and heating load is 50:50, almost all the heat is moving among indoor units

Cooling/Heating Changeover Mode:

When all indoor units are running in the same operation mode (cooling or heating), Heat Recovery System can operate as traditional air conditioning system, only two pipes needed.

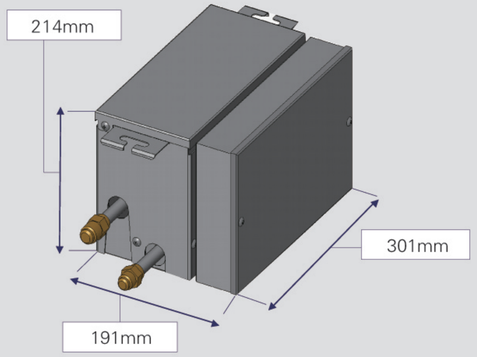
Humanized Design, Flexible Response to the Change of Demand



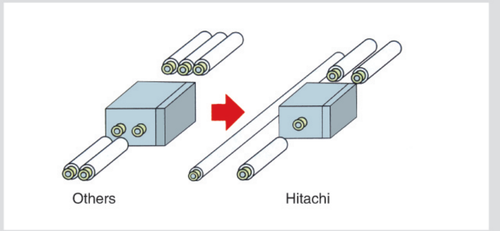
Meeting various requirements of consumers who are sensitive to temperature and diverse space with different function from the perspective of humanity especially at the turn of the season, like the complex of equipment rooms and offices, or the guest rooms and dining hall in the same hotel etc.

The latest Hitachi heat recovery multi-split system achieves indoor units cooling and heating at the same time and being switched between two modes individually,which flexibly satisfies personalized need of different users.

CH Unit (Heat recovery system only)



- Changeover box for heat recovery application
- Compact and light design
- Minimized unit and less suspension bolts facilitate installation and handling methods

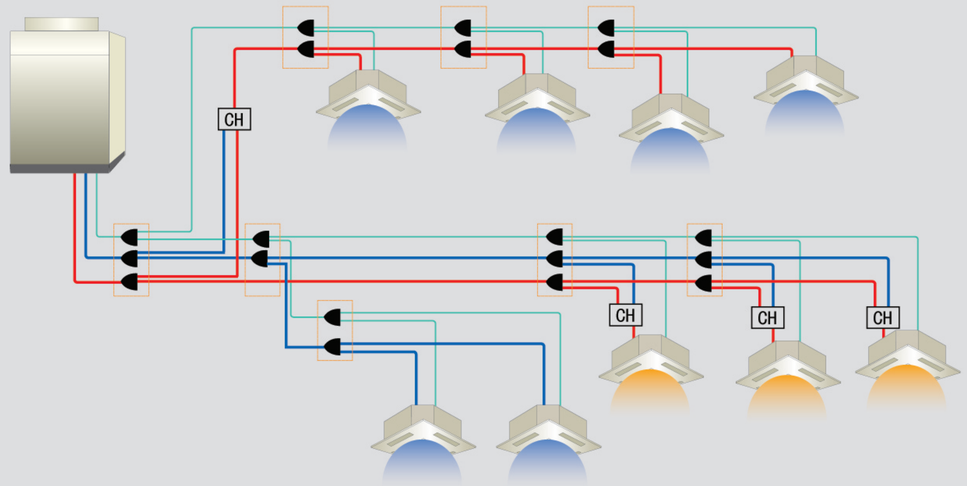


Model	Specifications		Indoor Unit Connection	
	Dimension W × D × H (mm)	Net Weight (kg)	Total HP	Number of Indoor Units *
CH-6.0N1	301 × 214 × 191	7	6HP≥	1~7
CH-10.0N1			6.1HP to 10HP	1~8

* When multiple indoor units are connected to the same CH unit, they are controlled with the same operation mode.

Configuration of Heat Recovery Operation System

SET-FREE FSXNQ heat recovery operation system is composed of heat recovery outdoor unit, indoor unit, CH changeover box, multi-kits and refrigerant pipes. One CH unit could connect to one or multiple indoor units. The indoor units equipped with a same CH unit will keep the same operation mode. The indoor units connecting directly to the refrigerant liquid pipe and the low pressure gas pipe instead of via CH unit will stick to cooling only operation.



Super Energy Conservation

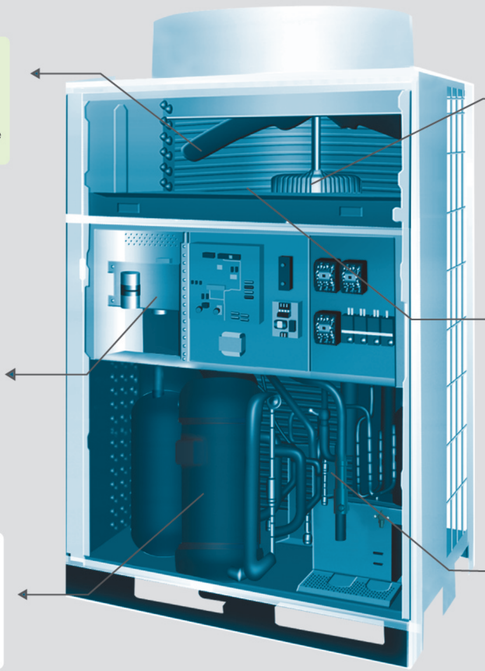
A New Energy-saving Model of Multi-split Central Air Conditioning

Cutting-edge Technological Innovation is the Cornerstone of Energy Conservation Achievement for Hitachi

Energy conservation in central air conditioning can be carried out through the following two ways, even only effective coordination of these two could achieve the maximum energy efficiency.

Management Energy Saving: On the premise of comfort in buildings, the objective of energy saving can be reached by constraints on behavior or proper operation adjustment of equipment.

Technological Energy Saving: Selecting the high efficient Central Air Conditioning with leading technology to save energy. Hitachi makes good use of innovation and optimization of every key technology to make the latest SET-FREE FSXNQ series as a master of energy-saving.



New Efficient Propeller Fan

- Compact structure
- Better dynamic balancing
- High efficient and low noise

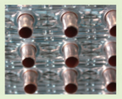
DC Fan Motor

- Efficient DC drive
- Smooth operation and low noise

DC Inverter（DIP-IPM）

- High integrated circuit
- High performance and high efficient
- High–precision control

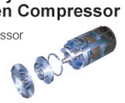
High-performance Heat Exchanger



- Patented female screw thread copper pipe, high heat transfer coefficient
- Exclusive new Step Fin, large heat exchange area

Large Capacity DC Inverter-driven Compressor

- Patented compressor technology
- Stable, reliable and efficient



Super-cooling Refrigerant Cycle

Two–stage super–cooling technique and efficient recooling heat exchanger help increase the undercooling and improve the cooling capacity.

High Efficiency Scroll Compressor Leading Industry Trends

In 1983, Hitachi invented the first air conditioning scroll compressor in the world and owned the patent. Nearly 30 years' professional experience in development and manufacturing of scroll compressor ensures more advanced technology, higher quality and stronger reliability.

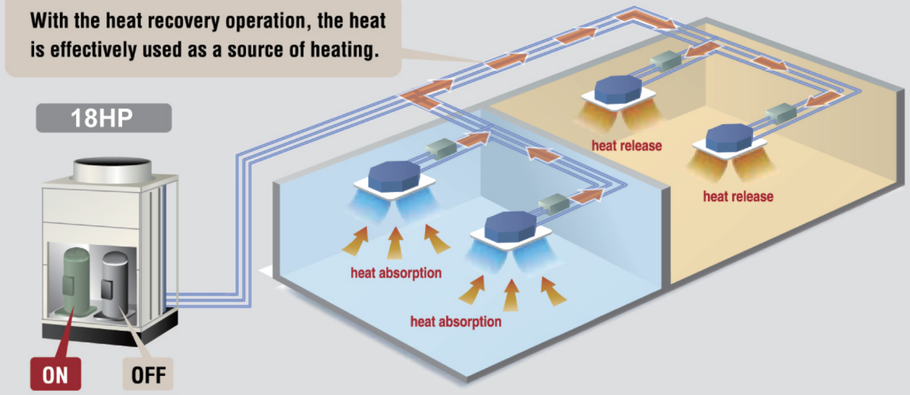
In 2003, Hitachi promoted the first high-pressure chamber scroll compressor in the industry which has the function of interior oil separating. At the same time, considering the high pressure characteristics of R410A refrigerant, asymmetric scroll disc was developed and bearing structure was strengthened which improved efficiency and reliability of the compressor.

In 2008, Hitachi applied the cutting-edge large capacity scroll compressor to SET-FREE Central Air Conditioning system.

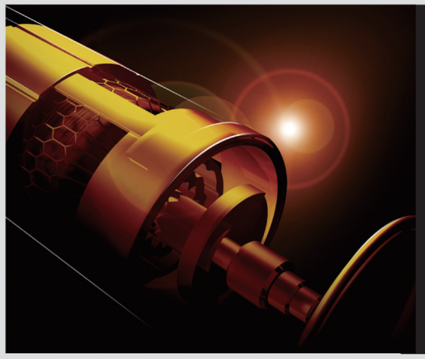
Heat Recovery Operation Significantly Enhances Energy-saving Efficiency

A heat recovery system offers high energy-saving efficiency by drawing heat from the rooms to be cooled, and effectively using it as a heat source for the rooms to be heated.

With the heat recovery operation, the heat is effectively used as a source of heating.



Heat Recovery Operation with 50% capacity



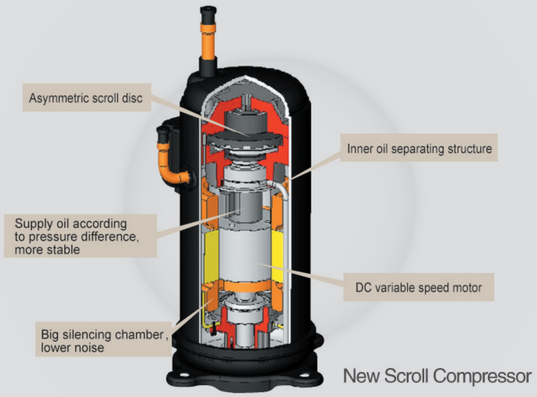
Core Technologies

The Source Power of Continuous Innovation

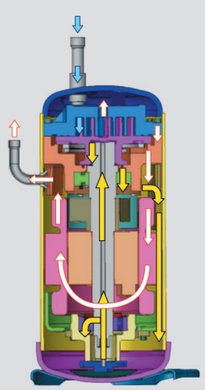
The Hitachi Patented High Efficiency Scroll Compressor

Hitachi Invented the First High-pressure Chamber Scroll Compressor with a Function of Interior Oil Separating.

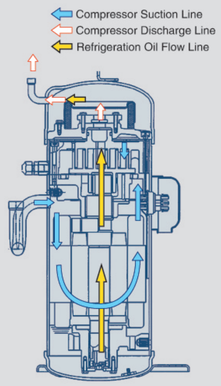
The large capacity high-pressure chamber scroll compressor adopts an interior oil separating section, maintains most of lubricating oil in compressor by the use of the interior oil mist separator and oil-returning pipe design. Only much less oil is discharged from compressor along with refrigerant, which avoids cooling capacity decrease due to redundant oil retention in refrigeration cycle, further improves efficiency. Adoption of anti-overcompression technique effectively prevents power consumption increase arised from overhigh condensing pressure, realizes efficient and stable operation.



New Scroll Compressor



High Pressure Chamber Compressor

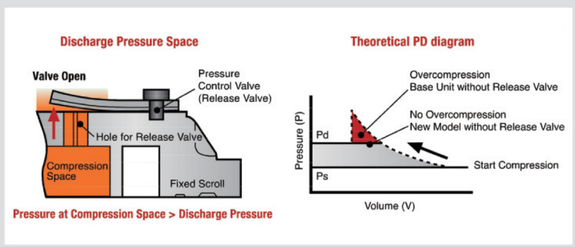


Low Pressure Chamber Compressor

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.

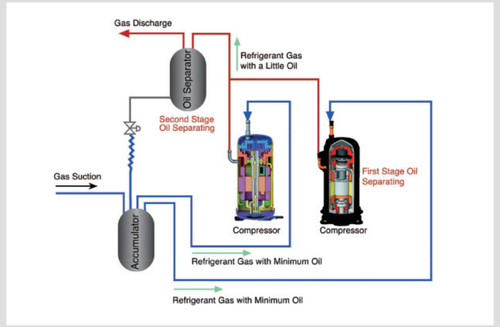
- Orbiting Scroll Lifting Force Optimization is improved
- Leakage Loss Reduction
- Improved Intermediate Pressure Performance



The Originated 2-Stage Oil Separating Technique Improves Reliability of System

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.

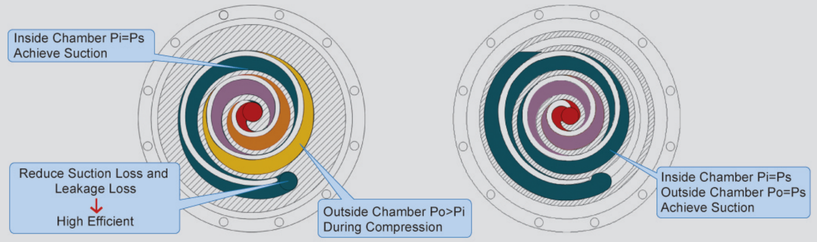


Exclusive Asymmetric Scroll Technology

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.

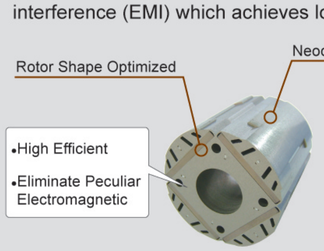
Asymmetric scroll: the time difference between the suction of outside chamber and inside chamber is 180°; The pressures of outside chamber and inside chamber are different. The pressure distribution in compressing chambers are asymmetric.

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.



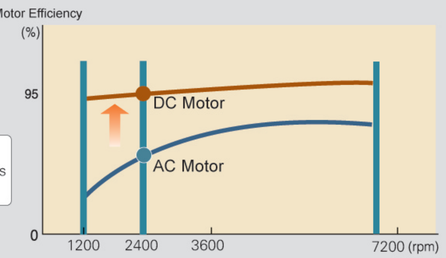
DC Inverter-driven Compressor

By the use of DC motor, the performance is improved at around 20~40Hz where the operation time of the inverter compressor is longest. Meanwhile, the rotor of compressor's motor is divided into two parts to suppress electromagnetic interference (EMI) which achieves low noise.

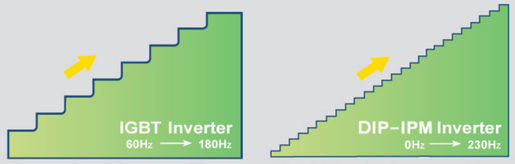


DC Motor Rotor

Centralized Winding Stator



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.

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.

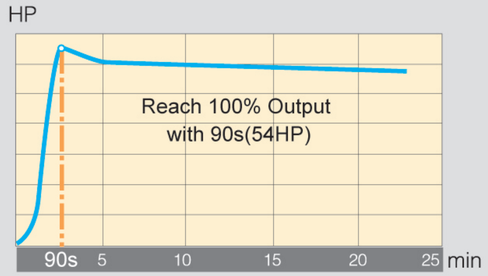
Rotational Operation to Distribute Load of Outdoor Units

Regulating the operation time of each outdoor unit leads to load reduction on compressors. 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.

Intelligent Defrosting Enables More Effective Heating

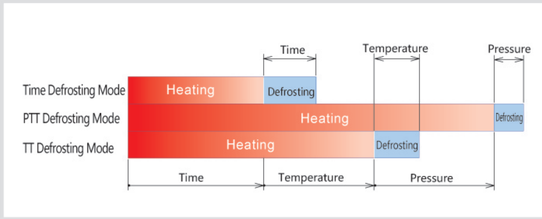
Rapid Heating Start-up

Combining the soft start of DC inverter compressor and rapid start of fixed speed compressor, the system can achieve 100% heating capacity output instantly and quickly meet the air-conditioning demand.



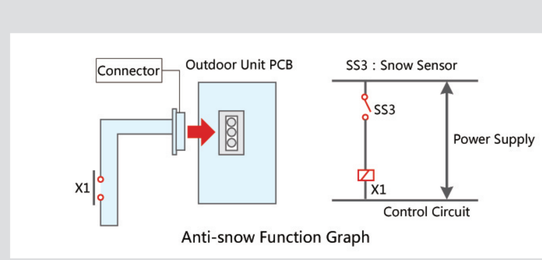
Hitachi Patented Pressure Defrosting Mode

FSXNQ 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.



Anti-snow Function

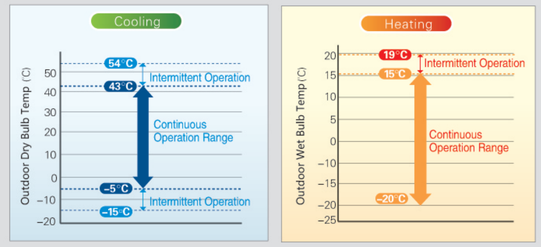
In the event of bad weather like snowstorm, even if outdoor unit is not operating, the sensor for snow on outdoor PCB can still be shorted because of natural snowflake, then the outdoor fan motor starts rotating at full speed to prevent outdoor unit from being covered by snow. When air conditioning starts up, the fan motor will turn to normal speed.



*This Function Needs Optional Accessory

Wide Working Range

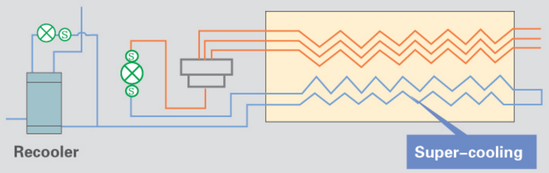
SET-FREE FSXNQ can handle a wide range of outside air condition, thus extending the flexibility of installation space and climatic environment.



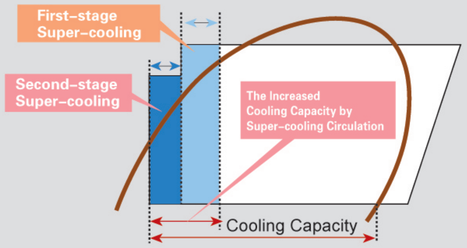
Two-stage Super-cooling Circulation Technique Improves Cooling Capacity and Total Piping Length

A sub-cooling section in the heat exchanger of outdoor unit is designed to realize the first-stage super-cooling. Furthermore, a high efficient recooler 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 Pressure-enthalpy Graph

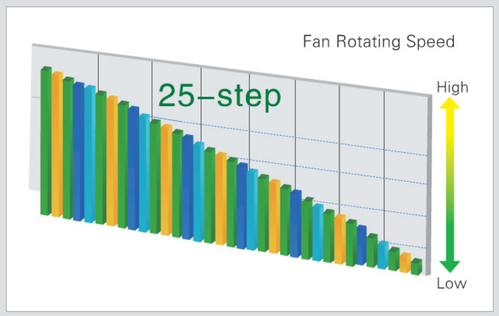


- Two–stage super–cooling circulation enhances cooling capacity
- Pressure loss of refrigerant flowing in pipe is reduced
- Improved undercooling contributes to stable operation of EEV
- Improved undercooling allows extension of total piping length

Outdoor Heat Exchange Technique Leads to Large Improvement of Heat Exchange Efficiency

25-step Fan Speed Control

The DC variable-speed motor is adopted in outdoor unit, which results in efficiency promotion and power input reduction. The outdoor fan speed can be adjusted by 25 steps.



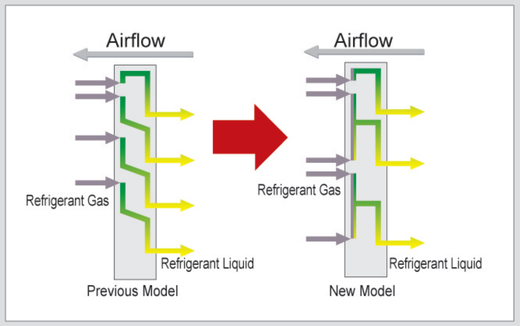
- The stability of discharge pressure and suction pressure of compressor is assured
- The stability of dynamic flow (capacity) allocation of indoor unit is assured
- Quick response of control system is improved, accordingly the system stability, durability and reliability are assured

New Efficient Heat Exchanger

New efficient heat exchanger adopts Φ7.0 female screw thread copper pipes with high thermal conductivity and new Step Fin, which leads to air flow resistance reduction, even and full heat exchange and heat transfer improvement. Furthermore, the amount of frost on heat exchanger will decrease in winter, which improves heating effect.

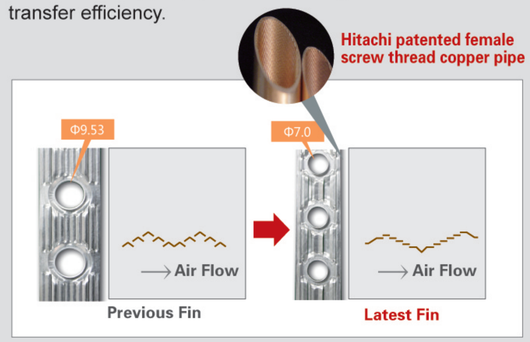
"2 in 1" Refrigerant Circuit

The specially designed "2 in 1" refrigerant flow optimizes the efficiency of heat exchanger.

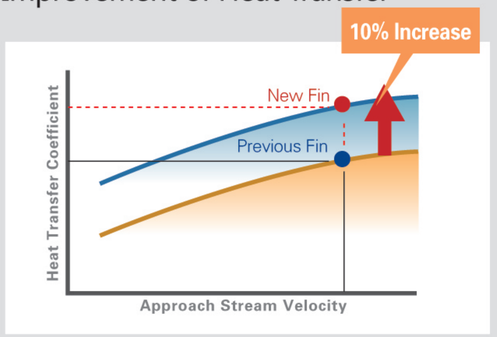


Newly Developed Fin with Efficient Heat Transfer

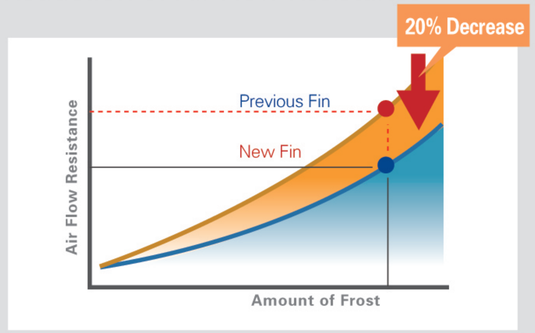
New fin and copper pipe contribute to promote heat transfer efficiency.



Improvement of Heat Transfer



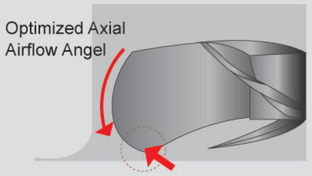
Reduction of Air Flow Resistance



New Efficient Axial Fan

The newly developed efficient axial fan with new-shaped blade helps decrease turbulence around. It is made of special material which hold an obvious effect to absorb vibrating noise and minimizes the "Buzz" dramatically.

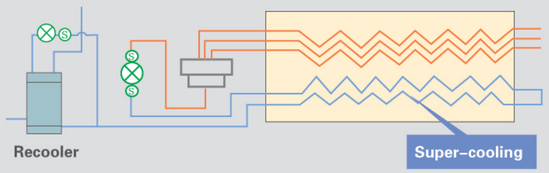

New Blade



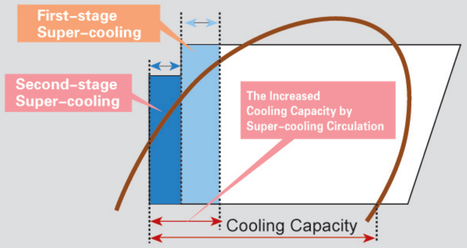
Two-stage Super-cooling Circulation Technique Improves Cooling Capacity and Total Piping Length

A sub-cooling section in the heat exchanger of outdoor unit is designed to realize the first-stage super-cooling. Furthermore, a high efficient recooler 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 Pressure-enthalpy Graph

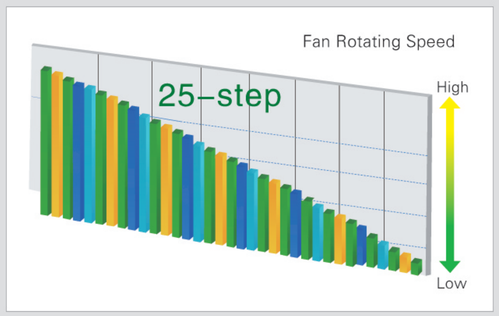


- Two–stage super–cooling circulation enhances cooling capacity
- Pressure loss of refrigerant flowing in pipe is reduced
- Improved undercooling contributes to stable operation of EEV
- Improved undercooling allows extension of total piping length

Outdoor Heat Exchange Technique Leads to Large Improvement of Heat Exchange Efficiency

25-step Fan Speed Control

The DC variable-speed motor is adopted in outdoor unit, which results in efficiency promotion and power input reduction. The outdoor fan speed can be adjusted by 25 steps.



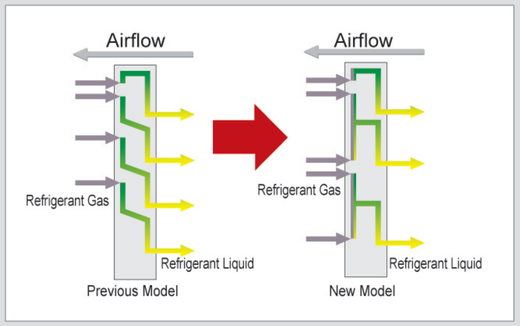
- The stability of discharge pressure and suction pressure of compressor is assured
- The stability of dynamic flow (capacity) allocation of indoor unit is assured
- Quick response of control system is improved, accordingly the system stability, durability and reliability are assured

New Efficient Heat Exchanger

New efficient heat exchanger adopts Φ7.0 female screw thread copper pipes with high thermal conductivity and new Step Fin, which leads to air flow resistance reduction, even and full heat exchange and heat transfer improvement. Furthermore, the amount of frost on heat exchanger will decrease in winter, which improves heating effect.

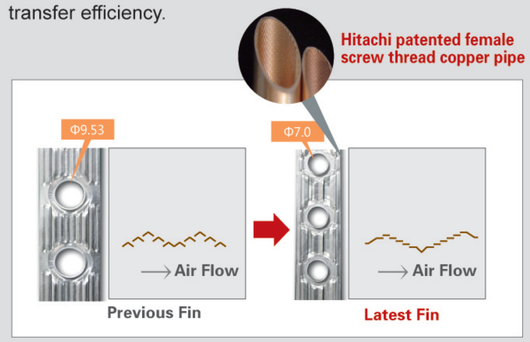
"2 in 1" Refrigerant Circuit

The specially designed "2 in 1" refrigerant flow optimizes the efficiency of heat exchanger.

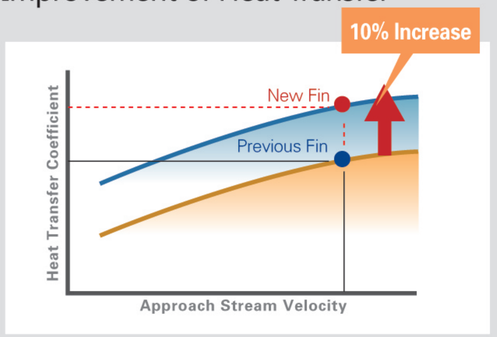


Newly Developed Fin with Efficient Heat Transfer

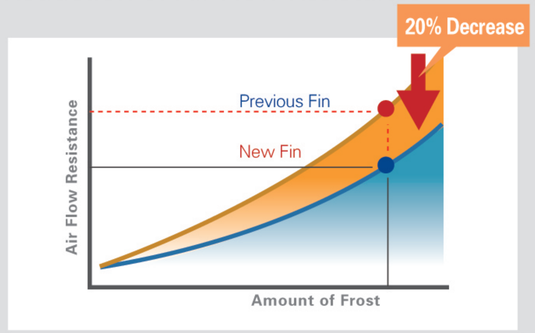
New fin and copper pipe contribute to promote heat transfer efficiency.



Improvement of Heat Transfer



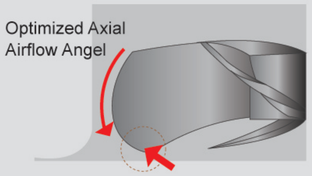
Reduction of Air Flow Resistance



New Efficient Axial Fan

The newly developed efficient axial fan with new-shaped blade helps decrease turbulence around. It is made of special material which hold an obvious effect to absorb vibrating noise and minimizes the "Buzz" dramatically.

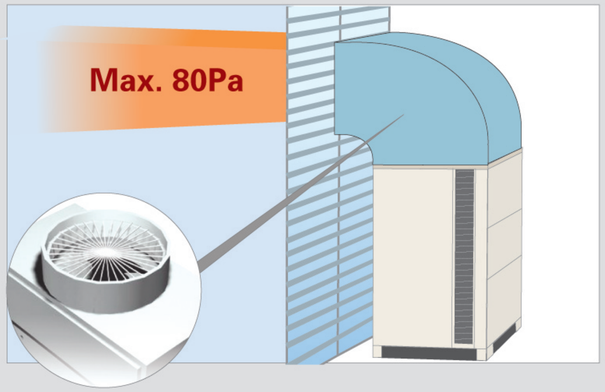

New Blade



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**
- **Top–class external static pressure in industry: 80Pa**



Highest Level in Noise Reduction

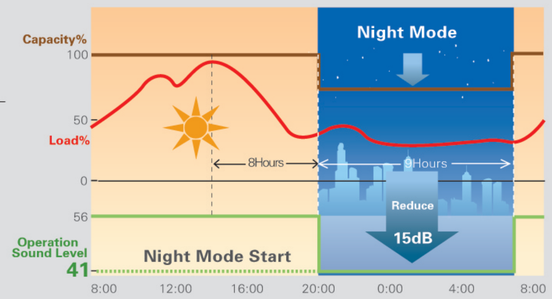
Adoption of Hitachi High Pressure Chamber Scroll Compressor
Sophisticated manufacturing technology brings about little vibration and low noise level.

Adoption of DIP-IPM Inverter
IGBT+Auto-protection, silencer and electronic interference filter are applied to lower noise.

Noise Deadening of Fan Motor
The material of fan motor is cast aluminum. The motor bracket is of non-resonant hanger structure, which ensures stable motor performance, lowers vibrating noise.

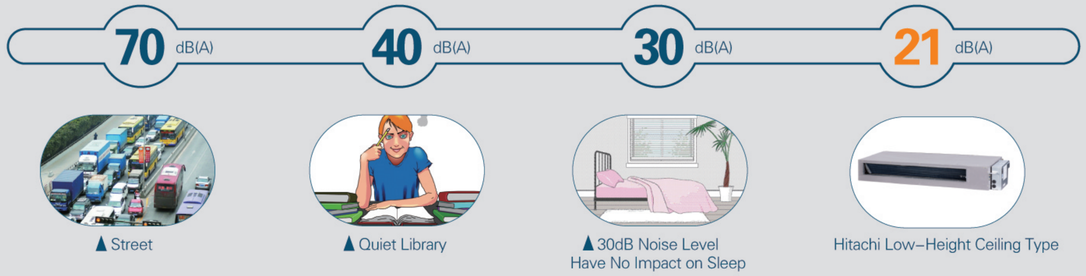
Silent Mode at Night

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.



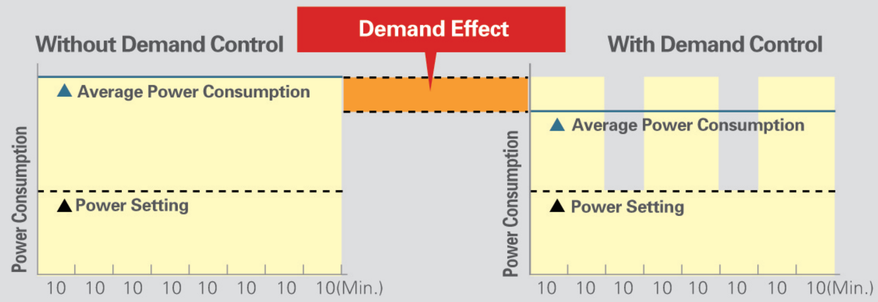
Intelligent Demand Control

Self-demand Control

A newly developed self-demand function has largely improved energy-saving effect. Since the current is self-detected and demand control performs 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

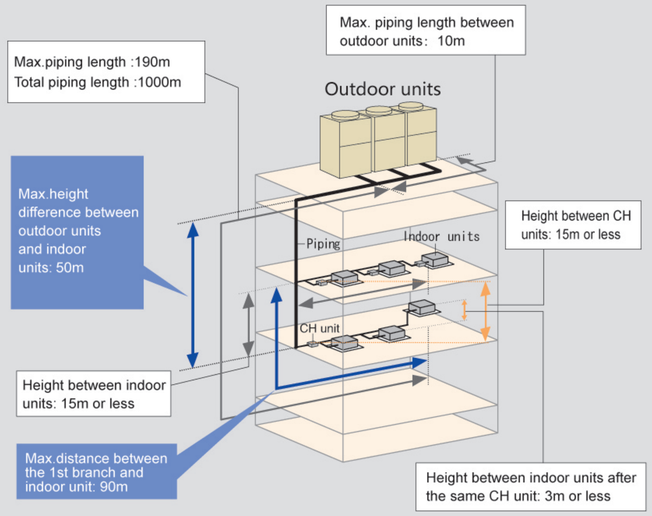
Wave mode turns demand control ON and OFF alternately at intervals of about 20 min. or 10 min. but not just switches on and off machine. Instead of stuffy interior environment, the system can offer maximum comfort with minimum power consumption.



Design and Installation

System Configuration Suitable for Design and Installation

More Flexible Refrigerant Piping Work



Actual piping length: 165m

Max. equivalent piping length: 190m

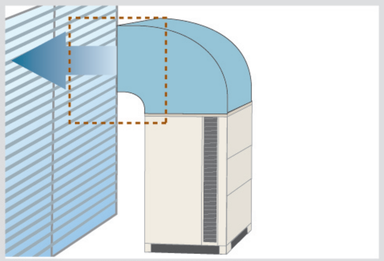
Height difference between the highest and lowest indoor units: 15m or less

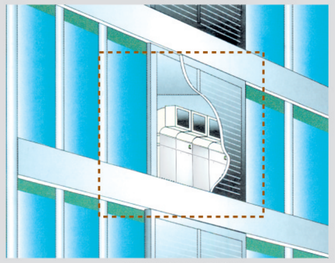
Max.height difference between outdoor and indoor units: 50m (when outdoor units are higher than indoor units)

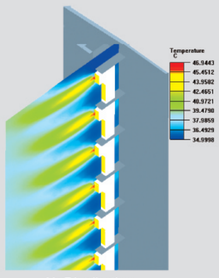
Max.height difference between outdoor and indoor units: 40m (when outdoor units are lower than indoor units)

Layered 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

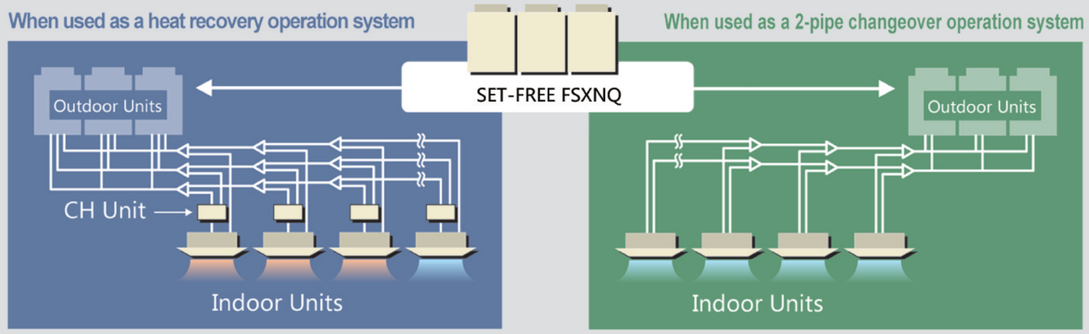

Layered Installation



Air Distribution

Heat Recovery and 2-pipe Changeover Operations Selectable for Outdoor Units

Common outdoor units are applicable to the heat recovery operation system as well as the 2-pipe changeover operation system. This eases the burden of review work when designing the equipment layout, while reducing the workload of installation on site.



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.

Connection Capacity: 50 to 130%

	HP		8	10	12	14	16	18	20	22	24	26	28	30
Max. Number of Connectable Indoor Units	Current Models	FSN(1)Q Series	13	16	16	20	20	20	20	20	27	29	31	32
	New FSXNQ Series		**13**	**16**	**19**	**23**	**26**	**26**	**33**	**36**	**40**	**43**	**47**	**50**

	HP		32	34	36	38	40	42	44	46	48	50	52	54
Max. Number of Connectable Indoor Units	Current Models	FSN(1)Q Series	32	-	-	-	-	-	-	-	-	-	-	-
	New FSXNQ 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.

Intelligent Control

More Humanized System and More Convenient Operation

Various Controllers

Remote Control Switch

PC-AR PC-ARQ

Compatible with the H-LINKII

- 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..

Wireless Remote Control Switch

PC-LH3A

Compatible with the H-LINKII

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

* Receiver kit is required.

7-Day Timer

PSC-A1T

Compatible with the H-LINKII

- By using with PSC-5S, PSC-A64S and 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, PSC-5S

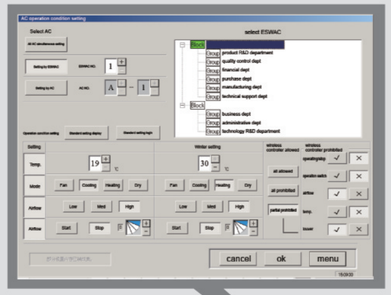
Compatible with the H-LINKII
Up to 160 indoor units
Up to 128 indoor units
Up to 64 remote control groups
Up to 16 remote control groups

- 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 control, 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.

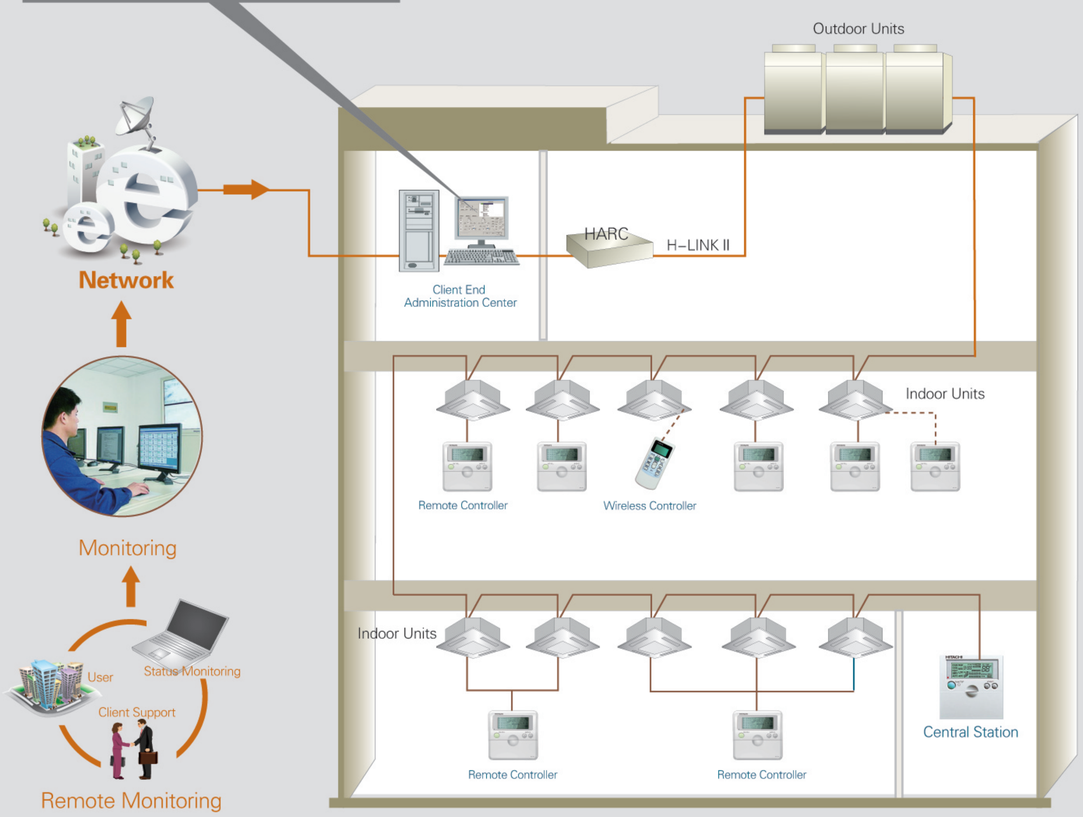
CS-NET Computer Controlled Network System

CS-NET is a powerful computer controlled network system with easy operation which can monitor and control utmost **1024** outdoor units and **2560** indoor units through **H-LINK II** connection.
HARC40 is the network adapter of CS-NET, each of which can interface up to **160** indoor units.

Main Function



- Running–state monitoring
- Access control
- Temperature limit setting
- Auto–operating function
- Operation records display
- Malfunction alarm
- Controller prohibition function
- Service monitoring

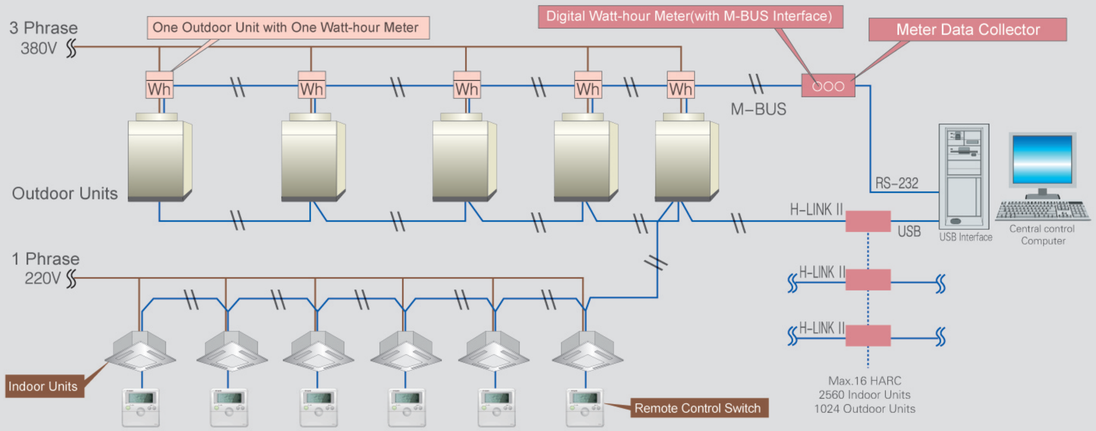


Air-conditioning Electric Charge Allocation System

Hitachi electric charge allocation system consists of meter reading system and air conditioning management system. In accordance with the operation time and capacity output of indoor and outdoor units,as well as the opening degree of EEV, the electric charge allocation software allocates the total power consumption to each indoor units.

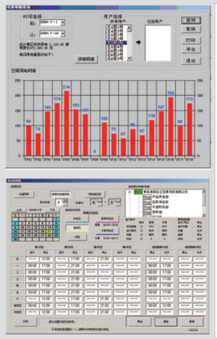
Main Features:

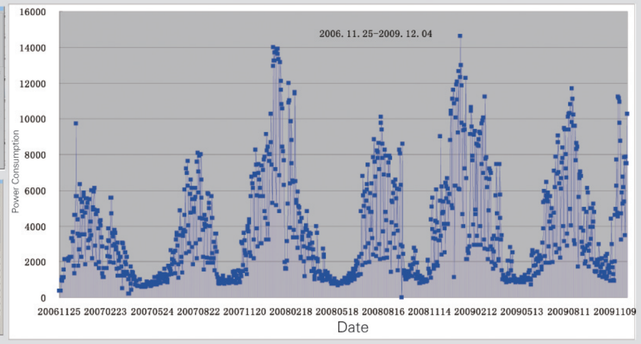
- Accurate and timely electricity calculation
- User's electricity bill reading by hour
- Electric charge allocation according to multi–rate of peak–valley period of time



All the indoor units and outdoor units connected with one HARC comprise one H–LINKII system.
Max.64 outdoor units and 160 indoor units can be connected to a H–LINKII system (the number of total units is under 200).
Max.16 HARC(16 H–LINKII) can be controlled by one computer.
Max.2560 indoor units and 1024 outdoor units are under control.

Check Electric Charge at Any Time





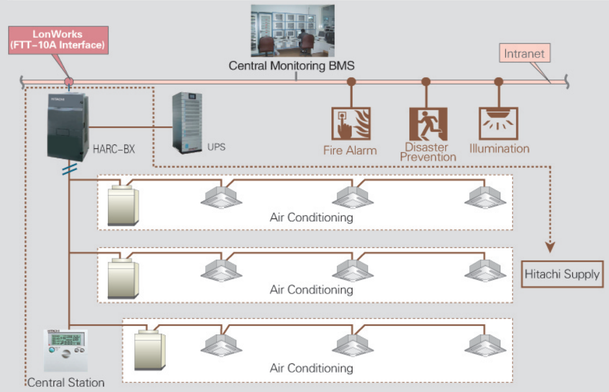
This is a real–time recorded data graph for one project during 3–year use of Hitachi Electric Charge Allocation System. Through a long time track and analysis for power consumption, the conclusion that multi–split air conditioning is 20% more economical than conventional air conditioning is drawn. Hitachi Multi–split Air Conditioning Electric Allocation System can easily realize a reasonable charge allocation, which leads people to save energy.

Building Management System

Compatible to multiple communication protocol of Lonworks, BACnet, RS-485 etc. Connectible to BMS or Smart Home System via HARC-BX, HC-A64BNP or HLRSCON all of which can connect to Max. 64 indoor units.

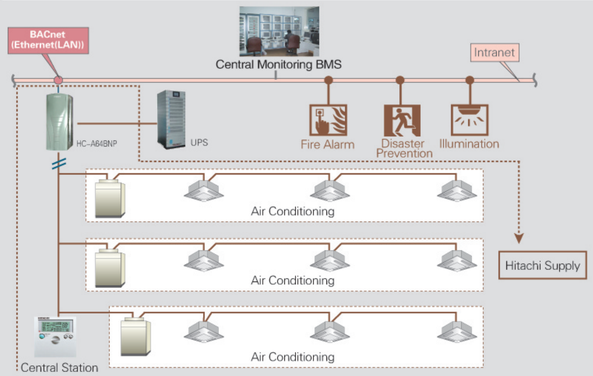
- **Real–time operation status monitoring for inquiry**
- **Operation order from monitoring center**

LonWorks HARC–BX



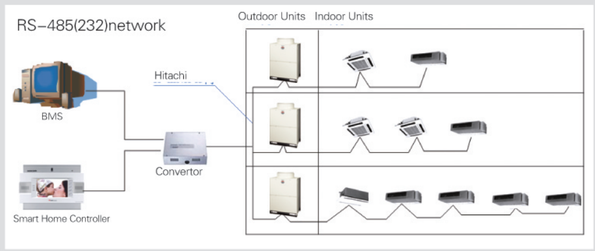
- **Running–state monitoring / On–off setting**
- **Operating mode setting**
- **Temperature setting and monitoring**
- **Airflow setting and monitoring**
- **Wind setting and monitoring**
- **Alarm monitoring and code display**
- **Wireless controller permission/prohibition**
- **Outdoor and indoor temp. monitoring**
- **All units On/off control**
- **Outlet air temp. monitoring**

BACnet HC–A64BNP



- **Running–state monitoring / On–off setting**
- **Operating mode setting**
- **Temperature setting and monitoring**
- **Airflow setting and monitoring**
- **Alarm monitoring and code display**
- **Communication failure display**
- **Wireless controller permission/prohibition**
- **Indoor temp. monitoring**
- **Filter cleaning prompting**

HLRSCON



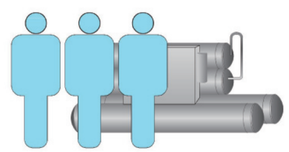
- **On–off setting**
- **Operating mode setting**
- **Airflow setting and monitoring**
- **Wind setting and monitoring**
- **Temperature setting**
- **Inlet air temp. monitoring**
- **All units On/off control**
- **Alarm monitoring and code display**

Maintenance

All-directional Maintenance and Service

Intelligent Operation

SET-FREE FSXNQ series is highly intelligentized and has no requirement for machine room, therefore it can achieve unattended operation and much more flexible and convenient control.



Conventional air conditioning system requires special staff caring for maintenance

SET-FREE R410A air conditioning system operates intelligently

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.

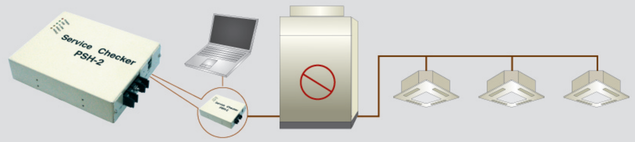
Remote Control Switch

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.



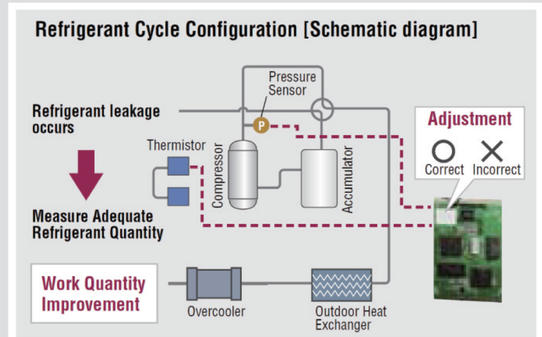
Automatic Simple Judgement System for Refrigerant Amount

Using this automatic judgement function to check whether or not the refrigerant amount is sufficient in one refrigerant cycle.

Factors for judgement
The appropriate refrigerant amount is calculated based upon the following data:

- Refrigerant Cycle Temperature
- Refrigerant Saturation Temperature
- Outdoor Unit Expansion Valve Data
- Indoor Unit Data

Refrigerant Cycle Configuration [Schematic diagram]



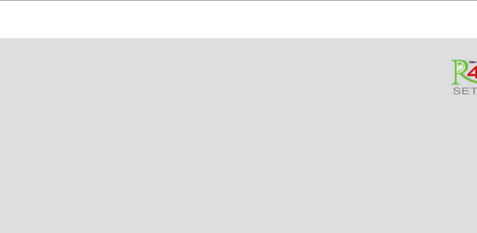
Double Back-up Operation Function

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.

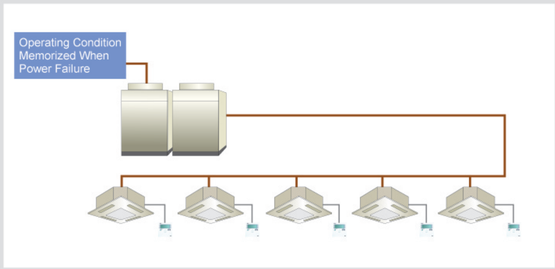
Emergency Operation

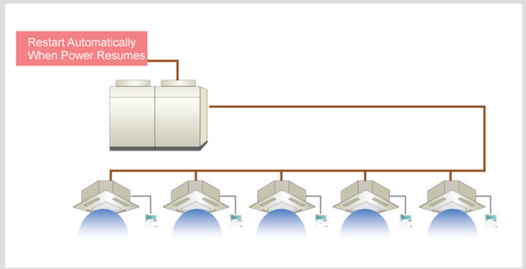


Emergency Operation

Automatic Reset Function

The operating data can be recorded automatically as power failure occurs. When the power supply is restored, the system can fulfill automatic start-up (manual operation allowed), the previous operation mode can be renewed without being reset, which brings more intelligent and considerate service to users.



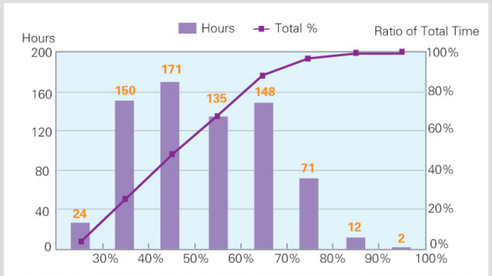


Comfortable, Healthy and Low Carbon

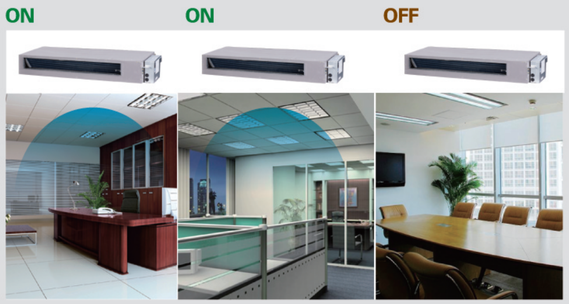
Ultimate User Experience

Focus on Energy-saving, High Efficient Partial Load Operation

As for business space, most of the time, only some of the indoor units are running simultaneously. Therefore, to measure if the air conditioning is energy-saving should depend on the energy efficiency under partial load. Hitachi FSXNQ works out a remarkable performance on partial load which contributes to realize a superb energy-saving.



A Central Air-conditioning Load Distribution of an Office Building During a Cooling Season

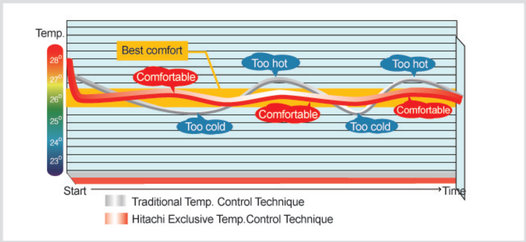


This graph shows that the operation time of central air-conditioning in this building is longest in a duration of 30%~40% cooling load in which the operation efficiency is highest. Therefore, the energy-saving effect is significant.

Focus on Comfort, Harmony Between People and Air

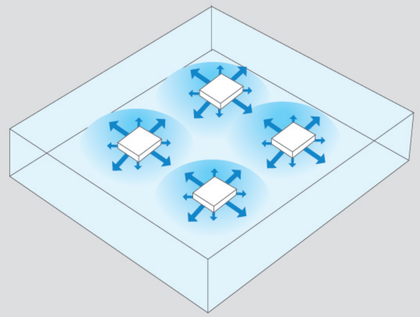
Particular Outlet Air Temperature Sensor Designed for Temperature Control

Compared with indoor temperature control in conventional air conditioning according to temperature sensors placed on air inlet and wireless controller, FSXNQ 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 Circulating Airflow Causes Temperature Uniformity

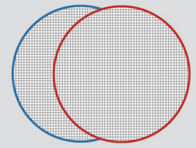
Hitachi 4-way cassette type distributes the airflow to every corner of the room by 360°air supply and adjustment of louver position. All-directional circulating airflow contributes to avoid the dead air in corner, creates the most comfortable space with uniform temperature.



Focus on Healthy, Improve Interior Air Quality

Sophisticated Antibacterial Technology (Indoor Units)

Hitachi high performance antibacterial filter adopts double-layer antibacterial structure (long-acting antibacterial filter and high performance antibacterial filter), adds active enzyme with a strong bactericidal function, which can restrain and kill bacteria and mould attached to the filter surface, as well as inhibit the reproduction of bacteria and mould on the high performance filter material and maintain fresh air in room.



Double-layer Antibacterial Filter

Japan Certificate

Fresh Air Introduction

Hitachi FSXNQ series introduces outdoor fresh air into indoor space via the all-fresh air indoor units connected, improves the indoor oxygen content, constantly remains the interior fresh degree and creates a healthy environment for people's lives.

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 FSXNQ 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.

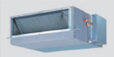
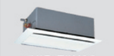
Outdoor Units & Indoor Units

8HP/10HP/12HP	14HP/16HP/18HP	20HP	22HP/24HP/26HP	28HP/30HP/32HP/34HP/36HP	38HP/40HP/42HP	44HP/46HP/48HP	50HP/52HP/54HP

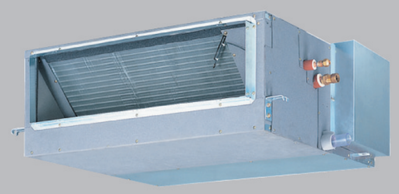
Outdoor Units Combination

HP	Model	Nominal Cooling Capacity (kW)	Combination			Connectable Indoor Units
8 HP	RAS-8FSXNQ	22.4	RAS-8FSXNQ			13
10 HP	RAS-10FSXNQ	28.0	RAS-10FSXNQ			16
12 HP	RAS-12FSXNQ	33.5	RAS-12FSXNQ			19
14 HP	RAS-14FSXNQ	40.0	RAS-14FSXNQ			23
16 HP	RAS-16FSXNQ	45.0	RAS-16FSXNQ			26
18 HP	RAS-18FSXNQ	50.0	RAS-18FSXNQ			26
20 HP	RAS-20FSXNQ	56.0	RAS-8FSXNQ	RAS-12FSXNQ		33
22 HP	RAS-22FSXNQ	62.4	RAS-8FSXNQ	RAS-14FSXNQ		36
24 HP	RAS-24FSXNQ	68.0	RAS-10FSXNQ	RAS-14FSXNQ		40
26 HP	RAS-26FSXNQ	73.5	RAS-12FSXNQ	RAS-14FSXNQ		43
28 HP	RAS-28FSXNQ	80.0	RAS-14FSXNQ	RAS-14FSXNQ		47
30 HP	RAS-30FSXNQ	85.0	RAS-14FSXNQ	RAS-16FSXNQ		50
32 HP	RAS-32FSXNQ	90.0	RAS-16FSXNQ	RAS-16FSXNQ		53
34 HP	RAS-34FSXNQ	96.0	RAS-16FSXNQ	RAS-18FSXNQ		56
36 HP	RAS-36FSXNQ	101.0	RAS-18FSXNQ	RAS-18FSXNQ		59
38 HP	RAS-38FSXNQ	107.0	RAS-12FSXNQ	RAS-12FSXNQ	RAS-14FSXNQ	64
40 HP	RAS-40FSXNQ	113.0	RAS-12FSXNQ	RAS-12FSXNQ	RAS-16FSXNQ	64
42 HP	RAS-42FSXNQ	118.5	RAS-12FSXNQ	RAS-12FSXNQ	RAS-18FSXNQ	64
44 HP	RAS-44FSXNQ	123.5	RAS-12FSXNQ	RAS-14FSXNQ	RAS-18FSXNQ	64
46 HP	RAS-46FSXNQ	130.0	RAS-12FSXNQ	RAS-16FSXNQ	RAS-18FSXNQ	64
48 HP	RAS-48FSXNQ	135.0	RAS-12FSXNQ	RAS-18FSXNQ	RAS-18FSXNQ	64
50 HP	RAS-50FSXNQ	140.0	RAS-14FSXNQ	RAS-18FSXNQ	RAS-18FSXNQ	64
52 HP	RAS-52FSXNQ	145.0	RAS-16FSXNQ	RAS-18FSXNQ	RAS-18FSXNQ	64
54 HP	RAS-54FSXNQ	150.0	RAS-18FSXNQ	RAS-18FSXNQ	RAS-18FSXNQ	64

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	●	●	●	●	●	●	●	●	●	●	●	●	●		
In-the-ceiling(High Static Pressure)	 RPI-FSNQ(H)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Low-Height In-the-ceiling	 RPIZ-FSN1Q	●	●	●	●	●	●	●	●							
4-Way Cassette	 RCI-FSN1Q		●	●	●	●	●	●	●	●	●	●	●	●		
2-Way Cassette	 RCD-FSN2Q	●	●	●	●	●	●	●	●	●		●	●			
Ceiling	 RPC-FSN2						●		●	●		●	●			
Wall	 RPK-FSNQ		●		●		●	●								
Floor	 RPF-FSN2E		●		●											
Floor Concealed	 RPFI-FSNQ		●		●		●		●							

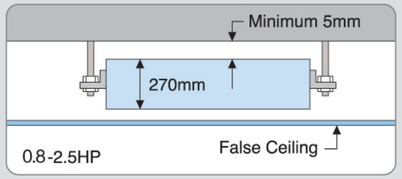
In-the-ceiling Type (Low Static Pressure)



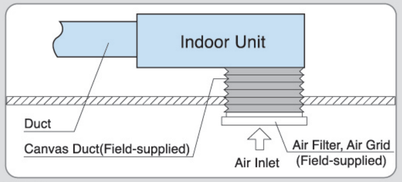
SET FREE-RPI Technique Features

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 supports a wide range of installation conditions at site



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

Optional Parts

Drain-up mechanism can be supplied as optional part.

Condensate Drain-up

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
Power Supply		AC1Φ,220V~240V/50Hz,220V/60Hz												AC1Φ,220V/50Hz
Nominal Cooling Capacity *1)	kW	2.3	2.9	3.8	4.4	5.2	5.8	6.5	7.3	8.7	9.3	11.6	14.5	16.5
	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
	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
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
	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
	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
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
	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
	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
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
Outer Dimensions	H mm	270	270	270	270	270	270	270	270	350	350	350	350	350
	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
	D mm	720	720	720	720	720	720	720	720	800	800	800	800	800
Net Weight	kg	26	26	26	26	35	35	35	35	46	46	46	58	58
	(lbs)	(57)	(57)	(57)	(57)	(77)	(77)	(77)	(77)	(101)	(101)	(101)	(128)	(128)
Refrigerant		R410A(Nitrogen-charged for Corrosion-resistance)												
Indoor Fan Air Flow Rate (High/Medium/Low)	m^3/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
Motor Power	W	20	20	40	40	45	45	45	45	100	100	100	160	180
Connections Refrigerant Piping		Flare-nut Connection(with Flare Nuts)												
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
	(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)
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
	(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)
Condensate Drain		VP25(Outer Diameter Φ32)												
External Static Pressure	Pa	30	30	30	30	30	30	30	30	60	60	60	60	60
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

NOTES:

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

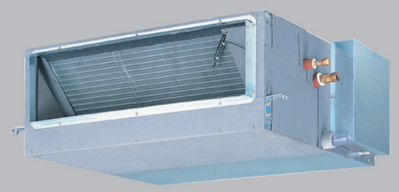
Cooling Operation Conditions
Indoor Air Inlet Temperature:27°C DB(80°F DB)
*1):19.5°C WB (67°F WB)
*2):19.0°C WB (66.2°F WB)
Outdoor Air Inlet Temperature: 35°C DB(95°F DB)
Piping Length: 7.5 Meters Piping Lift: 0 Meter

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

3.The data for external pressure indicates standard pressure setting values when air filter is not used.

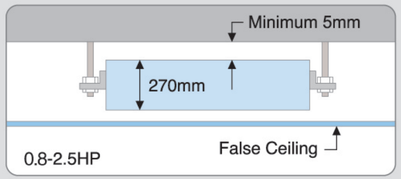
In-the-ceiling Type (High Static Pressure)



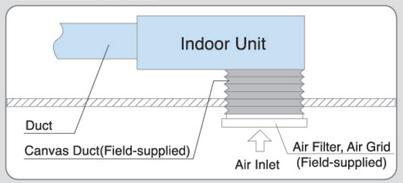
SET FREE-RPI Technique Features

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 supports a wide range of installation conditions at site



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

Indoor Unit		In-the-ceiling Type(High Static Pressure)														
Model		RPI-0.8 FSNQH	RPI-1.0 FSNQH	RPI-1.3 FSNQH	RPI-1.5 FSNQH	RPI-1.8 FSNQH	RPI-2.0 FSNQH	RPI-2.3 FSNQH	RPI-2.5 FSNQH	RPI-3.0 FSNQH	RPI-3.3 FSNQH	RPI-4.0 FSNQH	RPI-5.0 FSNQH	RPI-6.0 FSNQH	RPI-8 FSNQ	RPI-10 FSNQ
Power Supply		AC1Φ,220V~240V/50Hz,220V/60Hz												AC1Φ, 220V/50Hz	AC3Φ,380V~415V/50Hz	
Nominal Cooling Capacity*1)	kW	2.3	2.9	3.8	4.4	5.2	5.8	6.5	7.3	8.7	9.3	11.6	14.5	16.5	23.2	28.6
	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	35-33-31	35-33-31	35-33-31	35-33-31	36-34-32	36-34-32	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	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	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	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	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:

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

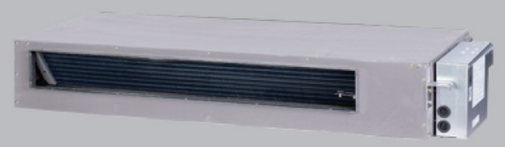
Cooling Operation Conditions
Indoor Air Inlet Temperature:27°C DB(80°F DB)
*1):19.5°C WB (67°F WB)
*2):19.0°C WB (66.2°F WB)
Outdoor Air Inlet Temperature: 35°C DB(95°F DB)
Piping Length: 7.5 Meters Piping Lift: 0 Meter

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

3.The data for external pressure indicates standard pressure setting values when air filter is not used.

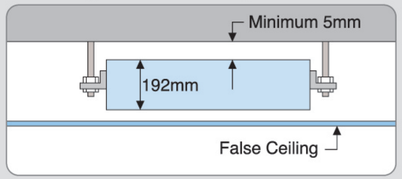
Low-height In-the-ceiling Type



SET FREE-RPIZ Technical Features

Installation Space-saving

With a height of 192mm may be easily installed inside the low height residential ceiling.

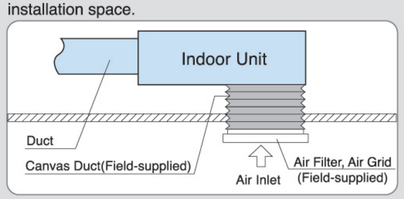


Broad Range of External Static Pressure

10Pa(or30Pa), flexibly supports a wide range of installation conditions at site, e.g. longer ducts and shorter ducts supplied.

Satisfy Varied Requests on Installation

Available air inlet as rear or bottom entry, consumers can choose relevant air inlet mode according to the practical installation space.



(Installation Diagram of Air Bottom Inlet)

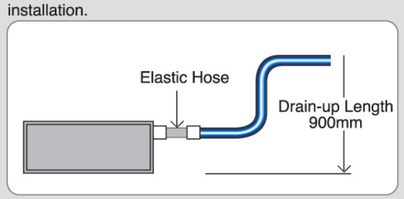
Quiet Operation

Air flow rate can be adjusted by 3 grades, lower noise in lower grade.

Model	High Sound Pressure(dB)	Low Sound Pressure(dB)
RPIZ-0.8FSN1Q	27	21
RPIZ-1.0FSN1Q	27	21
RPIZ-1.3FSN1Q	31	26
RPIZ-1.5FSN1Q	31	26
RPIZ-1.8FSN1Q	34	28
RPIZ-2.0FSN1Q	34	28
RPIZ-2.3FSN1Q	35	30
RPIZ-2.5FSN1Q	35	30

Drain-up Mechanism as Standard Part

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



Indoor Unit		Low-height In-the-ceiling Type							
Model		RPIZ-0.8FSN1Q	RPIZ-1.0FSN1Q	RPIZ-1.3FSN1Q	RPIZ-1.5FSN1Q	RPIZ-1.8FSN1Q	RPIZ-2.0FSN1Q	RPIZ-2.3FSN1Q	RPIZ-2.5FSN1Q
Power Supply		AC1Φ,220V~240V/50Hz,220V/60Hz							
Nominal Cooling Capacity *1)	kW	2.3	2.9	3.8	4.4	5.2	5.8	6.5	7.3
	kcal/h	2,000	2,500	3,300	3,800	4,500	5,000	5,600	6,300
	Btu/h	7,800	9,900	13,000	15,000	17,700	19,800	22,200	24,900
Nominal Cooling Capacity *2)	kW	2.2	2.8	3.6	4.3	5.0	5.6	6.3	7.1
	kcal/h	1,900	2,400	3,100	3,700	4,300	4,800	5,400	6,100
	Btu/h	7,500	9,600	12,300	14,700	17,100	19,100	21,500	24,200
Nominal Heating Capacity	kW	2.8	3.3	4.2	4.9	5.6	6.5	7.5	8.5
	kcal/h	2,400	2,800	3,600	4,200	4,800	5,600	6,500	7,300
	Btu/h	9,600	11,300	14,300	16,700	19,100	22,200	25,600	29,000
Sound Pressure Level (High/Medium/Low)	dB(A)	27-24-21	27-24-21	31-29-26	31-29-26	34-30-28	34-30-28	35-33-30	35-33-30
Outer Dimensions H	mm	192	192	192	192	192	192	192	192
Outer Dimensions W	mm	900	900	900	900	1,170	1,170	1,170	1,170
Outer Dimensions D	mm	447	447	447	447	447	447	447	447
Net Weight	kg	21	21	22	22	27	27	27	27
	(lbs)	(46)	(46)	(48)	(48)	(59)	(59)	(59)	(59)
Refrigerant		R410A(Nitrogen-charged for Corrosion-resistance)							
Indoor Fan Air Flow Rate (High/Medium/Low)	m^3/min	8/7/6	8/7/6	10/8/7	10/8/7	14.5/12.5/10.5	14.5/12.5/10.5	16/14/12	16/14/12
Motor Power	W	16	16	25	25	40	40	50	50
Connections Refrigerant Piping		Flare-nut Connection(with Flare Nuts)							
Liquid Line	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53
	(in.)	(1/4)	(1/4)	(1/4)	(1/4)	(1/4)	(1/4)	(3/8)	(3/8)
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		VP25(Outer Diameter Φ32)							
External Static Pressure	Pa	10(30)	10(30)	10(30)	10(30)	10(30)	10(30)	10(30)	10(30)
Approximate Packing Measurement	m^3	0.15	0.15	0.15	0.15	0.18	0.18	0.18	0.18

NOTES:

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

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

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

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

3.The data for external pressure indicates standard pressure setting values when air filter is not used.

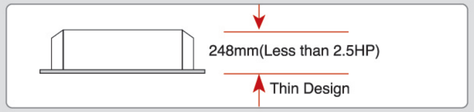
4-Way Cassette Type

SET FREE-RCI Technique Features

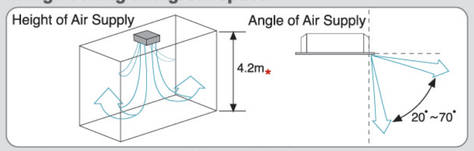
Extremely Quiet Operation
By employing a super-high-stream turbo fan (Three-dimensional twisted wing large bore and high efficiency), the wind flow efficiency has been improved. with the under damping slit mounted near the center of the revolving shaft, the abnormal noise which is unique to DC motors 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.



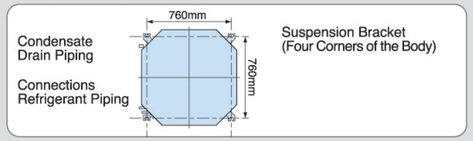
With broad range of air supply, is suitable to be used in high ceiling and great space



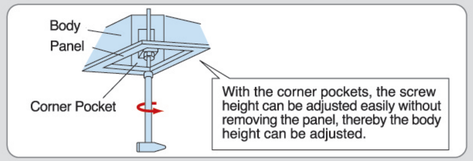
* When indoor unit model is RCI-3.0~6.0FSN1Q.
When indoor unit model is RCI-1.0~2.5FSN1Q, the value is 3.5m.

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.

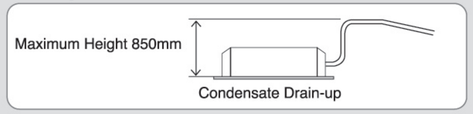
Flexible Refrigerant Piping
Suspending brackets are at the square corners of the body with pitch size of 760mm. The direction of the body can be changed easily according to the pipe-out opening without change the bolt position which makes installation much easier.



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:

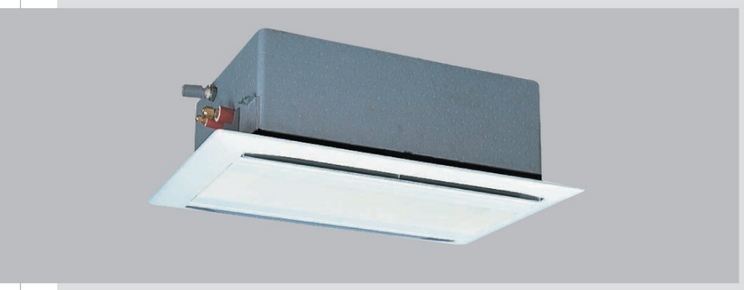
1.The nominal cooling capacity and heating capacity are based on following conditions:

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.

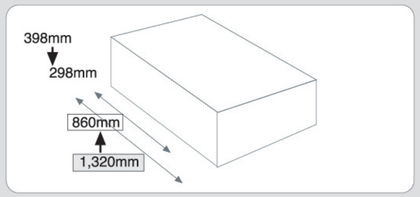
2-Way Cassette Type



SET FREE-RCD Technique Features

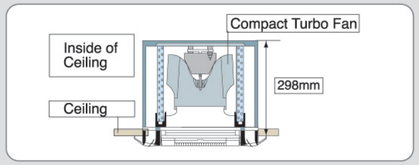
Downsizing and weight reduction simplify handling for easier renewal

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-0.8FSN2Q	RCD-1.0FSN2Q	RCD-1.3FSN2Q	RCD-1.5FSN2Q	RCD-1.8FSN2Q	RCD-2.0FSN2Q	RCD-2.3FSN2Q	RCD-2.5FSN2Q	RCD-3.0FSN2Q	RCD-4.0FSN2Q	RCD-5.0FSN2Q
Power Supply		AC1Φ,220V/50Hz										
Nominal Cooling Capacity *1)	kW	2.3	2.9	3.8	4.4	5.2	5.8	6.5	7.3	8.7	11.6	14.5
	kcal/h	2,000	2,500	3,300	3,800	4,500	5,000	5,600	6,300	7,500	10,000	12,500
	Btu/h	7,800	9,900	13,000	15,000	17,700	19,800	22,200	24,900	29,700	39,600	49,500
Nominal Cooling Capacity *2)	kW	2.2	2.8	3.6	4.3	5.0	5.6	6.3	7.1	8.4	11.2	14.2
	kcal/h	1,900	2,400	3,100	3,700	4,300	4,800	5,400	6,100	7,200	9,600	12,200
	Btu/h	7,500	9,600	12,300	14,700	17,100	19,100	21,500	24,200	28,700	38,200	48,500
Nominal Heating Capacity	kW	2.8	3.3	4.2	4.9	5.6	6.5	7.5	8.5	9.6	13.0	16.3
	kcal/h	2,400	2,800	3,600	4,200	4,800	5,600	6,500	7,300	8,300	11,200	14,000
	Btu/h	9,600	11,300	14,300	16,700	19,100	22,200	25,600	29,000	32,800	44,400	55,600
Sound Pressure Level (High/Medium/Low)	dB(A)	34-32-30	34-32-30	35-32-30	35-32-30	35-33-31	35-33-31	38-34-32	38-34-32	41-37-34	40-36-34	43-40-36
Outer Dimensions(H)	mm	298	298	298	298	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)	(11-3/4)	(11-3/4)	(11-3/4)	(11-3/4)
Outer Dimensions(W)	mm	860	860	860	860	860	860	860	860	860	1420	1420
	(in.)	(33-7/8)	(33-7/8)	(33-7/8)	(33-7/8)	(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	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)	(24-7/16)	(24-7/16)	(24-7/16)	(24-7/16)
Net Weight	kg	27	27	27	27	27	27	30	30	30	48	48
	(lbs)	(60)	(60)	(60)	(60)	(60)	(60)	(66)	(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	10/9/8	13/11/9	13/11/9	15/13/11	15/13/11	19/16/14	19/16/14	22/19/16	29/24/21	34/29/25
Motor Power	W	35	35	35	35	35	35	55	55	55	35×2	55×2
Connections Refrigerant Piping		Flare-nut Connection(with Flare Nuts)										
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
	(in.)	(1/4)	(1/4)	(1/4)	(1/4)	(1/4)	(1/4)	(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
	(in.)	(1/2)	(1/2)	(1/2)	(1/2)	(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	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.37	0.37
Standard Accessories		Mounting Brackets										
Panel Model		P-N23DWA									P-N46DWA	
Cabinet Color		Neutral White										
Outer Dimensions(H)	mm	30	30	30	30	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)	(1-3/16)	(1-3/16)	(1-3/16)	(1-3/16)
Outer Dimensions(W)	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	1660	1660
	(in.)	(43-5/16)	(43-5/16)	(43-5/16)	(43-5/16)	(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	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)	(27-15/16)	(27-15/16)	(27-15/16)	(27-15/16)
Net Weight	kg	6	6	6	6	6	6	6	6	6	8	8
	(lbs)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(18)	(18)
Approximate Packing Measurement	m^3	0.1	0.1	0.1	0.1	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

Elegant design,harmonizing with any type of interior design

The quality of "elegance" is additionally provided to meet contemporary needs. Features a simple,smooth form that harmonizes with any interior style.

Anti-mold filter

Anti-mold filter is equipped as standard accessory.

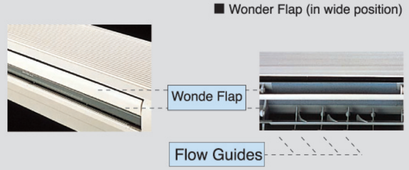
Compact and light weight,allowing easy installation

Designed with ease of installation in mind, this new model adopts a slim design and uses a high proportion of lightweight resin parts. Unit weight has been vastly reduced.

Uses the new "Wonder Flap"

Uses the "Wonder Flap" in its air outlet. The flap, provided with three flow guides each at its right and left sides, helps disperse the air flow. this wodening effect allows the air to be comfortably circulated throughout the room.

■ Wonder Flap (in wide position)



Indoor Unit		Wall Type			
Model		RPK-1.0FSNQ	RPK-1.5FSNQ	RPK-2.0FSNQ	RPK-2.3FSNQ
Power Supply		AC1Φ,220V~240V/50Hz			
Nominal Cooling Capacity *1)	kW	2.9	4.2	5.8	6.5
	kcal/h	2,500	3,600	5,000	5,600
	Btu/h	9,900	14,400	19,800	22,200
Nominal Cooling Capacity *2)	kW	2.8	4.0	5.6	6.3
	kcal/h	2,400	3,500	4,800	5,400
	Btu/h	9,600	13,700	19,100	21,500
Nominal Heating Capacity	kW	3.3	4.8	6.3	7.5
	kcal/h	2,800	4,100	5,400	6,500
	Btu/h	11,300	16,400	21,500	25,600
Sound Pressure Level (High/Medium/Low)	dB(A)	37-34-31	41-37-34	42-38-35	43-39-37
Cabinet Color		Silky White			
Outer Dimensions(H)	mm	305	305	305	305
	(in.)	(12)	(12)	(12)	(12)
Outer Dimensions(W)	mm	870	870	870	870
	(in.)	(34-1/4)	(34-1/4)	(34-1/4)	(34-1/4)
Outer Dimensions(D)	mm	225	225	225	225
	(in.)	(8-55/64)	(8-55/64)	(8-55/64)	(8-55/64)
Net Weight	kg	10.5	10.5	13	13
	(lbs)	(22)	(22)	(28)	(28)
Refrigerant		R410A(Nitrogen-charged for Corrosion-resistance)			
Indoor Fan Air Flow Rate (Cooling/Heating)	m^3/min	6.9/7.2	10.5/11.2	12.8/13.3	13.3/14
	(cfm)	(243/254)	(370/395)	(451/467)	(467/494)
Motor Power	W	9	16	22	24
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	Φ15.88	Φ15.88
	(in.)	(1/2)	(1/2)	(5/8)	(5/8)
Condensate Drain		VP16	VP16	VP16	VP16
Approximate Packing Measurement	m^3	0.11	0.11	0.11	0.11
Standard Accessories		Wall Mounting Bracket			

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 Pperation 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)

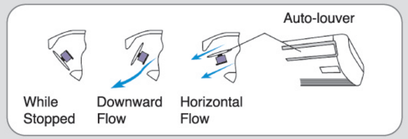
2.The sound pressure level is based on following conditions.
1 Meters Beneath the Unit and 1 Meters from Inlet Grille.
Voltage of the power source for the indoor fan motor is 220V.
In case of the power source of 240V, the sound pressure level increases by about 1~2dB.
The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

Ceiling Type

SET FREE-RPC Technique Features

Amenity improved by auto-louver at air opening

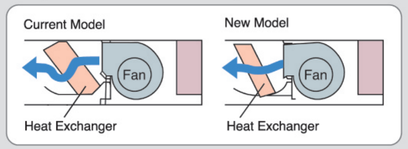
The round, lower part of the air opening complements the gentle,quite operation. The auto-louver in the upper part of the opening automatically controls upward and downward motion of air flow, while the grille serves as a shutter when stopped.



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

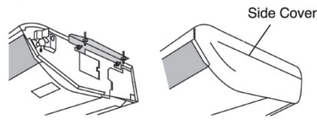


Simple Installation and Maintenance

- 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

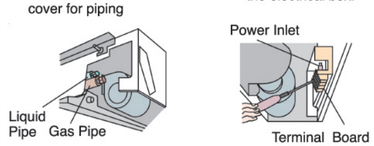
*For ordinary offices

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



(2)Work space for refrigerant piping work is widened and tightening work is easily performed by removing side cover for piping

(3)Dip switches can be set by opening the electrical box.



Indoor Unit		Ceiling Type				
Model		RPC-2.0FSN2	RPC-2.5FSN2	RPC-3.0FSN2	RPC-4.0FSN2	RPC-5.0FSN2
Power Supply		AC1Φ,220V~240V/50Hz,220V/60Hz				
Nominal Cooling Capacity *1)	kW	5.8	7.3	8.3	11.6	14.5
	kcal/h	5,000	6,300	7,100	10,000	12,500
	Btu/h	19,800	25,000	28,200	39,700	49,600
Nominal Cooling Capacity *2)	kW	5.6	7.1	8.0	11.2	14.0
	kcal/h	4,800	6,100	6,900	9,600	12,000
	Btu/h	19,100	24,200	27,300	38,200	47,800
Nominal Heating Capacity	kW	6.3	8.5	9.0	12.5	16.0
	kcal/h	5,400	7,300	7,700	10,700	13,800
	Btu/h	21,500	29,000	30,700	42,600	54,600
Sound Pressure Level (High/Medium/Low)	dB(A)	40-37-34	40-37-34	43-40-37	44-41-38	44-41-38
Cabinet Color		Silky White				
Outer Dimensions(H)	mm	210	210	210	270	270
	(in.)	(8-1/4)	(8-1/4)	(8-1/4)	(10-5/8)	(10-5/8)
Outer Dimensions(W)	mm	1100	1320	1320	1320	1580
	(in.)	(43-5/16)	(51-15/16)	(51-15/16)	(51-15/16)	(62-3/16)
Outer Dimensions(D)	mm	670	670	670	670	670
	(in.)	(26-3/8)	(26-3/8)	(26-3/8)	(26-3/8)	(26-3/8)
Net Weight	kg	26	30	30	34	42
	(lbs)	(57)	(66)	(66)	(75)	(93)
Refrigerant		R410A(Nitrogen-charged for Corrosion-resistance)				
Indoor Fan Air Flow Rate (High/Medium/Low)	m^3/min	14/12/10	18/15/12	18/15/12	25/21/18	33/28/23
	(cfm)	(494/424/353)	(636/530/424)	(636/530/424)	(883/742/636)	(1165/989/812)
Motor Power	W	35	50	50	95	135
Connections Refrigerant Piping		Flare-nut Connection(with Flare Nuts)				
Liquid Line	mm	Φ6.35	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	(in.)	(1/4)	(3/8)	(3/8)	(3/8)	(3/8)
Gas Line	mm	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88
	(in.)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)
Condensate Drain		VP20	VP20	VP20	VP20	VP20
Approximate Packing Measurement	m^3	0.3	0.36	0.36	0.43	0.5
Standard Accessories		Wall Mounting Bracket				

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 Pperation 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.
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	4.1	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		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 Pperation 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.
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.

Outdoor Units Parameter

Model			RAS-8FSXNQ	RAS-10FSXNQ	RAS-12FSXNQ	RAS-14FSXNQ
Combination			–	–	–	–
Power Supply			AC 3Φ,380V ~ 415V/50Hz,380V/60Hz			
Nominal Cooling Capacity		kW	22.4	28.0	33.5	40.0
Nominal Heating Capacity		kW	25.0	31.5	37.5	45.0
Sound Pressure Level		dB	58	58	60	62
Cabinet Color			Ivory White			
Outer Dimensions(H×W×D)		mm	1720×950×765			1720×1210×765
Net Weight		kg	210	212	215	298
Refrigerant Category			R410A			
Refrigerant Flow Control			Micro-computer Control Expansion Valve			
Compressor Model			E656DHD	E656DHD	E656DHD	E656DHD+E655DH
Compressor Quantity			1	1	1	1+1
Compressor Output(Pole)		kW	4.8(4)	6.0(4)	7.2(4)	4.8(4)+4.4(2)
Heat Exchanger			Multi-pass Cross-finned Tube			
Condenser Fan Quantity			1	1	1	1
Air Flow Rate		m^3/min	155	170	175	195
Motor Output(Pole)		kW	0.33(8)	0.44(8)	0.49(8)	0.66(8)
Refrigerant Piping			Flare-nut Connection(With Flare Nuts)			
2-pipe Heat Pump Operation System	Liquid Line	mm	Φ9.53	Φ9.53	Φ12.7	Φ12.7
	Gas Line	mm	Φ19.05	Φ22.2	Φ25.4	Φ25.4
Heat Recovery Operation System	Liquid Line	mm	Φ9.53	Φ9.53	Φ12.7	Φ12.7
	Low Pressure Gas Line	mm	Φ19.05	Φ22.2	Φ25.4	Φ25.4
	High Pressure Gas Line	mm	Φ15.88	Φ19.05	Φ22.2	Φ22.2
Refrigerant Charge		kg	6.5	6.5	8.0	9.0
Holes For Power Supply Wiring		mm	Φ52	Φ52	Φ52	Φ52
Holes For Control Line Wiring		mm	Φ26	Φ26	Φ26	Φ26
Approximate Packing Measurement		m^3	1.57	1.57	1.57	1.97

Model			RAS-16FSXNQ	RAS-18FSXNQ	RAS-20FSXNQ	RAS-22FSXNQ
Combination			–	–	RAS-8FSXNQ RAS-12FSXNQ	RAS-8FSXNQ RAS-14FSXNQ
Power Supply			AC 3Φ,380V ~ 415V/50Hz,380V/60Hz			
Nominal Cooling Capacity		kW	45.0	50.0	56.0	61.5
Nominal Heating Capacity		kW	50.0	56.0	63.0	69.0
Sound Pressure Level		dB	62	63	62	63
Cabinet Color			Ivory White			
Outer Dimensions(H×W×D)		mm	1720×1210×765		（1720×950×765）+（1720×950×765）	（1720× 950× 765 ）+（1720×1210×765 ）
Net Weight		kg	312	318	425	508
Refrigerant Category			R410A			
Refrigerant Flow Control			Micro-computer Control Expansion Valve			
Compressor Model			E656DHD+E655DH	E656DHD+E855DH	E656DHD+E656DHD	E656DHD+E656DHD+E655DH
Compressor Quantity			1+1	1+1	1+1	1+1+1
Compressor Output(Pole)		kW	6.0(4)+4.4(2)	6.0(4)+5.6(2)	4.8(4)+7.2(4)	4.8(4)+4.8(4)+4.4(2)
Heat Exchanger			Multi-pass Cross-finned Tube			
Condenser Fan Quantity			1	1	2	2
Air Flow Rate		m^3/min	195	195	330	350
Motor Output(Pole)		kW	0.66(8)	0.66(8)	0.33(8)+0.49(8)	0.33(8)+0.66(8)
Refrigerant Piping			Flare-nut Connection(With Flare Nuts)			
2-pipe Heat Pump Operation System	Liquid Line	mm	Φ12.7	Φ15.88	Φ15.88	Φ15.88
	Gas Line	mm	Φ28.6	Φ28.6	Φ28.6	Φ28.6
Heat Recovery Operation System	Liquid Line	mm	Φ12.7	Φ15.88	Φ15.88	Φ15.88
	Low Pressure Gas Line	mm	Φ28.6	Φ28.6	Φ28.6	Φ28.6
	High Pressure Gas Line	mm	Φ22.2	Φ22.2	Φ22.2	Φ25.4
Refrigerant Charge		kg	10.5	10.5	14.5	15.5
Holes For Power Supply Wiring		mm	Φ52	Φ52	Φ52	Φ52
Holes For Control Line Wiring		mm	Φ26	Φ26	Φ26	Φ26
Approximate Packing Measurement		m^3	1.97	1.97	-	-

Model			RAS-24FSXNQ	RAS-26FSXNQ	RAS-28FSXNQ	RAS-30FSXNQ
Combination			RAS-10FSXNQ RAS-14FSXNQ	RAS-12FSXNQ RAS-14FSXNQ	RAS-14FSXNQ RAS-14FSXNQ	RAS-14FSXNQ RAS-16FSXNQ
Power Supply			AC 3Φ,380V ~ 415V/50Hz,380V/60Hz			
Nominal Cooling Capacity		kW	69.0	73.0	80.0	85.0
Nominal Heating Capacity		kW	77.5	82.5	90.0	95.0
Sound Pressure Level		dB	63	64	65	65
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	510	513	596	610
Refrigerant Category			R410A			
Refrigerant Flow Control			Micro-computer Control Expansion Valve			
Compressor Model			E656DHD+E656DHD+E655DH	E656DHD+E656DHD+E655DH	E656DHD+E655DH+E656DHD+E655DH	E656DHD+E655DH+E656DHD+E655DH
Compressor Quantity			1+1+1	1+1+1	1+1+1+1	1+1+1+1
Compressor Output(Pole)		kW	6.0(4)+4.8(4)+4.4(2)	7.2(4)+4.8(4)+4.4(2)	4.8(4)+4.4(2)+4.8(4)+4.4(2)	4.8(4)+4.4(2)+6.0(4)+4.4(2)
Heat Exchanger			Multi-pass Cross-finned Tube			
Condenser Fan Quantity			2	2	2	2
Air Flow Rate		m^3/min	365	370	390	390
Motor Output(Pole)		kW	0.44(8)+0.66(8)	0.49(8)+0.66(8)	0.66(8)+0.66(8)	0.66(8)+0.66(8)
Refrigerant Piping			Flare-nut Connection(With Flare Nuts)			
2-pipe Heat Pump Operation System	Liquid Line	mm	Φ15.88	Φ19.05	Φ19.05	Φ19.05
	Gas Line	mm	Φ28.6	Φ31.75	Φ31.75	Φ31.75
Heat Recovery Operation System	Liquid Line	mm	Φ15.88	Φ19.05	Φ19.05	Φ19.05
	Low Pressure Gas Line	mm	Φ28.6	Φ31.75	Φ31.75	Φ31.75
	High Pressure Gas Line	mm	Φ25.4	Φ25.4	Φ28.6	Φ28.6
Refrigerant Charge		kg	15.5	17.0	18.0	19.5
Holes For Power Supply Wiring		mm	Φ52	Φ52	Φ52	Φ52
Holes For Control Line Wiring		mm	Φ26	Φ26	Φ26	Φ26
Approximate Packing Measurement		m^3	–	–	–	–

Model			RAS-32FSXNQ	RAS-34FSXNQ	RAS-36FSXNQ	RAS-38FSXNQ
Combination			RAS-16FSXNQ RAS-16FSXNQ	RAS-16FSXNQ RAS-18FSXNQ	RAS-18FSXNQ RAS-18FSXNQ	RAS-12FSXNQ RAS-12FSXNQ RAS-14FSXNQ
Power Supply			AC 3Φ,380V ~ 415V/50Hz,380V/60Hz			
Nominal Cooling Capacity		kW	90.0	95.0	100.0	109.0
Nominal Heating Capacity		kW	100.0	106.0	112.0	118.0
Sound Pressure Level		dB	65	66	66	66
Cabinet Color			Ivory White			
Outer Dimensions(H×W×D)		mm	（1720 × 1210 × 765）+（1720×1210×765 ）			（1720× 950 × 765）+（1720× 950 × 765）+（1720×1210×765 ）
Net Weight		kg	624	630	636	728
Refrigerant Category			R410A			
Refrigerant Flow Control			Micro-computer Control Expansion Valve			
Compressor Model			E656DHD+E655DH+E656DHD+E655DH	E656DHD+E655DH+E656DHD+E855DH	E656DHD+E855DH+E656DHD+E855DH	E656DHD+E656DHD+E656DHD+E655DH
Compressor Quantity			1+1+1+1	1+1+1+1	1+1+1+1	1+1+1+1
Compressor Output(Pole)		kW	6.0(4)+4.4(2)+6.0(4)+4.4(2)	6.0(4)+4.4(2)+6.0(4)+5.6(2)	6.0(4)+5.6(2)+6.0(4)+5.6(2)	7.2(4)+7.2(4)+4.8(4)+4.4(2)
Heat Exchanger			Multi-pass Cross-finned Tube			
Condenser Fan Quantity			2	2	2	3
Air Flow Rate		m^3/min	390	390	390	545
Motor Output(Pole)		kW	0.66(8)+0.66(8)	0.66(8)+0.66(8)	0.66(8)+0.66(8)	0.49(8)+0.49(8)+0.66(8)
Refrigerant Piping			Flare-nut Connection(With Flare Nuts)			
2-pipe Heat Pump Operation System	Liquid Line	mm	Φ19.05	Φ19.05	Φ19.05	Φ19.05
	Gas Line	mm	Φ31.75	Φ31.75	Φ31.75	Φ38.1
Heat Recovery Operation System	Liquid Line	mm	Φ19.05	Φ19.05	Φ19.05	Φ19.05
	Low Pressure Gas Line	mm	Φ31.75	Φ31.75	Φ31.5	Φ38.1
	High Pressure Gas Line	mm	Φ28.6	Φ28.6	Φ28.6	Φ31.75
Refrigerant Charge		kg	21.0	21.0	21.0	25.0
Holes For Power Supply Wiring		mm	Φ52	Φ52	Φ52	Φ52
Holes For Control Line Wiring		mm	Φ26	Φ26	Φ26	Φ26
Approximate Packing Measurement		m^3	–	–	–	–

Outdoor Units Parameter

Model		RAS-40FSXNQ	RAS-42FSXNQ	RAS-44FSXNQ	RAS-46FSXNQ
Combination		RAS-12FSXNQ RAS-12FSXNQ RAS-16FSXNQ	RAS-12FSXNQ RAS-12FSXNQ RAS-18FSXNQ	RAS-12FSXNQ RAS-14FSXNQ RAS-18FSXNQ	RAS-12FSXNQ RAS-16FSXNQ RAS-18FSXNQ
Power Supply		AC 3Φ,380V ~415V/50Hz,380V/60Hz			
Nominal Cooling Capacity	kW	112.0	118.0	125.0	132.0
Nominal Heating Capacity	kW	125.0	132.0	140.0	145.0
Sound Pressure Level	dB	66	66	67	67
Cabinet Color		Ivory White			
Outer Dimensions(H×W×D)	mm	（1720× 950 × 765）+（1720× 950 × 765）+（1720×1210×765）		（1720×950×765 ）+（1720×1210×765 ）+（1720×1210×765 ）	
Net Weight	kg	742	748	831	845
Refrigerant Category		R410A			
Refrigerant Flow Control		Micro-computer Control Expansion Valve			
Compressor Model		E656DHD+E656DHD+E656DHD+E655DH	E656DHD+E656DHD+E656DHD+E855DH	E656DHD+E656DHD+E655DH+E656DHD+E855DH	E656DHD+E656DHD+E655DH+E656DHD+E855DH
Compressor Quantity		1+1+1+1	1+1+1+1	1+1+1+1+1	1+1+1+1+1
Compressor Output(Pole)	kW	7.2(4)+7.2(4)+6.0(4)+4.4(2)	7.2(4)+7.2(4)+6.0(4)+5.6(2)	7.2(4)+4.8(4)+4.4(2)+6.0(4)+5.6(2)	7.2(4)+6.0(4)+4.4(2)+6.0(4)+5.6(2)
Heat Exchanger		Multi-pass Cross-finned Tube			
Condenser Fan Quantity		3	3	3	3
Air Flow Rate	m^3/min	545	545	565	565
Motor Output(Pole)	kW	0.49(8)+0.49(8)+0.66(8)	0.49(8)+0.49(8)+0.66(8)	0.49(8)+0.66(8)+0.66(8)	0.49(8)+0.66(8)+0.66(8)
Refrigerant Piping		Flare-nut Connection(With Flare Nuts)			
2-pipe Heat Pump Operation System — Liquid Line	mm	Φ19.05	Φ19.05	Φ19.05	Φ19.05
2-pipe Heat Pump Operation System — Gas Line	mm	Φ38.1	Φ38.1	Φ38.1	Φ38.1
Heat Recovery Operation System — Liquid Line	mm	Φ19.05	Φ19.05	Φ19.05	Φ19.05
Heat Recovery Operation System — Low Pressure Gas Line	mm	Φ38.1	Φ38.1	Φ38.1	Φ38.1
Heat Recovery Operation System — High Pressure Gas Line	mm	Φ31.75	Φ31.75	Φ31.75	Φ31.75
Refrigerant Charge	kg	26.5	26.5	27.5	29.0
Holes For Power Supply Wiring	mm	Φ52	Φ52	Φ52	Φ52
Holes For Control Line Wiring	mm	Φ26	Φ26	Φ26	Φ26
Approximate Packing Measurement	m^3	–	–	–	–

Model		RAS-48FSXNQ	RAS-50FSXNQ	RAS-52FSXNQ	RAS-54FSXNQ
Combination		RAS-12FSXNQ RAS-18FSXNQ RAS-18FSXNQ	RAS-14FSXNQ RAS-18FSXNQ RAS-18FSXNQ	RAS-16FSXNQ RAS-18FSXNQ RAS-18FSXNQ	RAS-18FSXNQ RAS-18FSXNQ RAS-18FSXNQ
Power Supply		AC 3Φ,380V ~415V/50Hz,380V/60Hz			
Nominal Cooling Capacity	kW	136.0	140.0	145.0	150.0
Nominal Heating Capacity	kW	150.0	155.0	160.0	165.0
Sound Pressure Level	dB	67	67	67	68
Cabinet Color		Ivory White			
Outer Dimensions(H×W×D)	mm	（1720×950×765 ）+（1720× 1210×765）+（1720×1210×765）	（1720 ×1210 ×765 ）+（1720×1210×765 ）+（1720×1210×765 ）		
Net Weight	kg	851	934	948	954
Refrigerant Category		R410A			
Refrigerant Flow Control		Micro-computer Control Expansion Valve			
Compressor Model		E656DHD+E656DHD+E855DH+E656DHD+E855DH	E656DHD+E655DH+E656DHD+E855DH+E656DHD+E855DH	E656DHD+E655DH+E656DHD+E855DH+E656DHD+E855DH	E656DHD+E855DH+E656DHD+E855DH+E656DHD+E855DH
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
Compressor Output(Pole)	kW	7.2(4)+6.0(4)+5.6(2)+6.0(4)+5.6(2)	4.8(4)+4.4(2)+6.0(4)+5.6(2)+6.0(4)+5.6(2)	6.0(4)+4.4(2)+6.0(4)+5.6(2)+6.0(4)+5.6(2)	6.0(4)+5.6(2)+6.0(4)+5.6(2)+6.0(4)+5.6(2)
Heat Exchanger		Multi-pass Cross-finned Tube			
Condenser Fan Quantity		3	3	3	3
Air Flow Rate	m^3/min	565	585	585	585
Motor Output(Pole)	kW	0.49(8)+0.66(8)+0.66(8)	0.66(8)+0.66(8)+0.66(8)	0.66(8)+0.66(8)+0.66(8)	0.66(8)+0.66(8)+0.66(8)
Refrigerant Piping		Flare-nut Connection(With Flare Nuts)			
2-pipe Heat Pump Operation System — Liquid Line	mm	Φ19.05	Φ19.05	Φ19.05	Φ19.05
2-pipe Heat Pump Operation System — Gas Line	mm	Φ38.1	Φ38.1	Φ38.1	Φ38.1
Heat Recovery Operation System — Liquid Line	mm	Φ19.05	Φ19.05	Φ19.05	Φ19.05
Heat Recovery Operation System — Low Pressure Gas Line	mm	Φ38.1	Φ38.1	Φ38.1	Φ38.1
Heat Recovery Operation System — High Pressure Gas Line	mm	Φ31.75	Φ31.75	Φ31.75	Φ31.75
Refrigerant Charge	kg	29.0	30.0	31.5	31.5
Holes For Power Supply Wiring	mm	Φ52	Φ52	Φ52	Φ52
Holes For Control Line Wiring	mm	Φ26	Φ26	Φ26	Φ26
Approximate Packing Measurement	m^3	–	–	–	–

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:
1.5 Meters from floor Level, and 1 Meters from the unit service cover surface.
The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

First Multi-kit

For 2-Pipe Heat Pump System

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

For Heat Recovery System

Outdoor Unit HP	8 and 10	12 to 16	18 and 24	26 and 36	38 to 54
Multi-kit	M-282XNQ	M-452XNQ	M-562XNQ	M-692XNQ	M-902XNQ

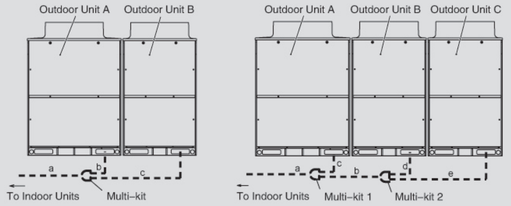
Piping Connection Kit (for combined system)

For 2-Pipe Heat Pump System

Outdoor Unit	RAS-20 ~ 24FSXNQ	RAS-26 ~ 36FSXNQ	RAS-38 ~ 42FSXNQ	RAS-44 ~ 54FSXNQ
Multi-kit 1			M-30SNQ	M-30SNQ
Multi-kit 2	M-20SNQ	M-30SNQ	M-20SNQ	M-30SNQ

For Heat Recovery System

Outdoor Unit	RAS-20 ~ 24FSXNQ	RAS-26 ~ 36FSXNQ	RAS-38 ~ 42FSXNQ	RAS-44 ~ 54FSXNQ
Multi-kit 1			M-30XNQ	M-30XNQ
Multi-kit 2	M-20XNQ	M-21XNQ	M-20XNQ	M-21XNQ



First Multi-kit ~ Last Multi-kit

For 2-Pipe Heat Pump System

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	

For Heat Recovery System

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 21.99	22 to 25.99	26 to 35.99	Over 36
Low Pressure Gas (Φmm)	Φ15.88	Φ19.05	Φ22.2	Φ25.4	Φ28.6	Φ28.6	Φ28.6	Φ31.75	Φ38.1
High Pressure Gas (Φmm)	Φ12.7	Φ15.88	Φ19.05	Φ22.2	Φ22.2	Φ22.2	Φ25.4	Φ28.6	Φ31.75
Liquid(Φmm)	Φ9.53	Φ9.53	Φ9.53	Φ12.7	Φ12.7	Φ15.88	Φ15.88	Φ19.05	Φ19.05
Multi-kit	M-142XNQ	M-282XNQ		M-452XNQ	M-562XNQ		M-692XNQ		M-902XNQ

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 Φ 6.35 into Φ9.53.

All Fresh Air Indoor Unit

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 Data for All Fresh Air Indoor Unit

Model			RPI-5.0KFNQ		RPI-8.0KFNQ			RPI-10.0KFNQ		
Power Supply			AC1Φ,220V/50Hz	AC1Φ,240V/50Hz	AC1Φ,220V/50Hz	AC1Φ,240V/50Hz	AC1Φ,220V/60Hz	AC1Φ,220V/50Hz	AC1Φ,240V/50Hz	AC1Φ,220V/60Hz
Combined Outdoor Unit Model			SET-FREE FSXNQ 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		m^3/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°C~43°C, Heating:-7°C~15°C							

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.

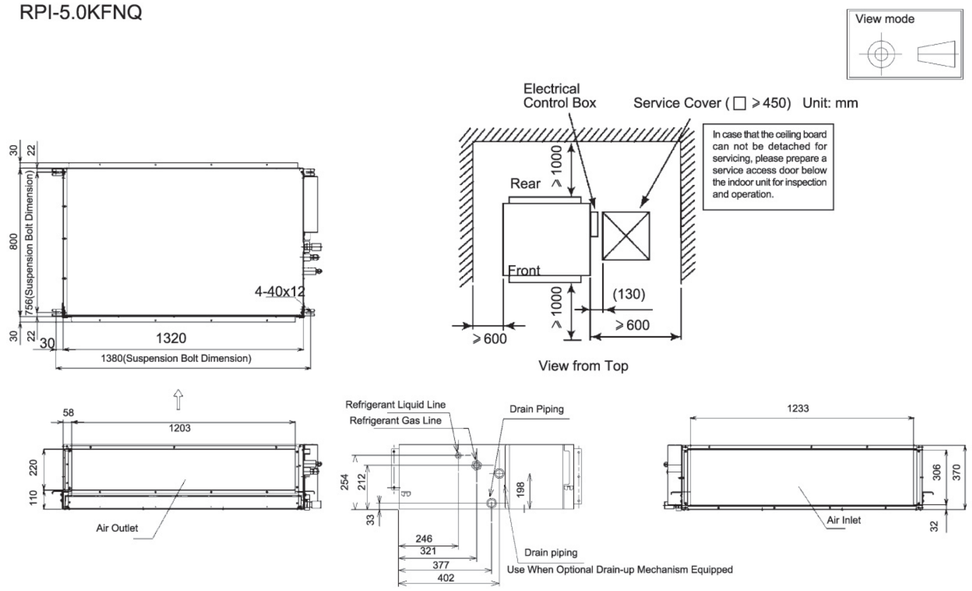
General Data for All Fresh Air Indoor Unit

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-12FSXNQ		RAS-16FSXNQ		RAS-16FSXNQ		RAS-20FSXNQ		RAS-20FSXNQ		RAS-20FSXNQ		RAS-20FSXNQ	
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		m^3/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°C~43°C, Heating:-7°C~15°C													

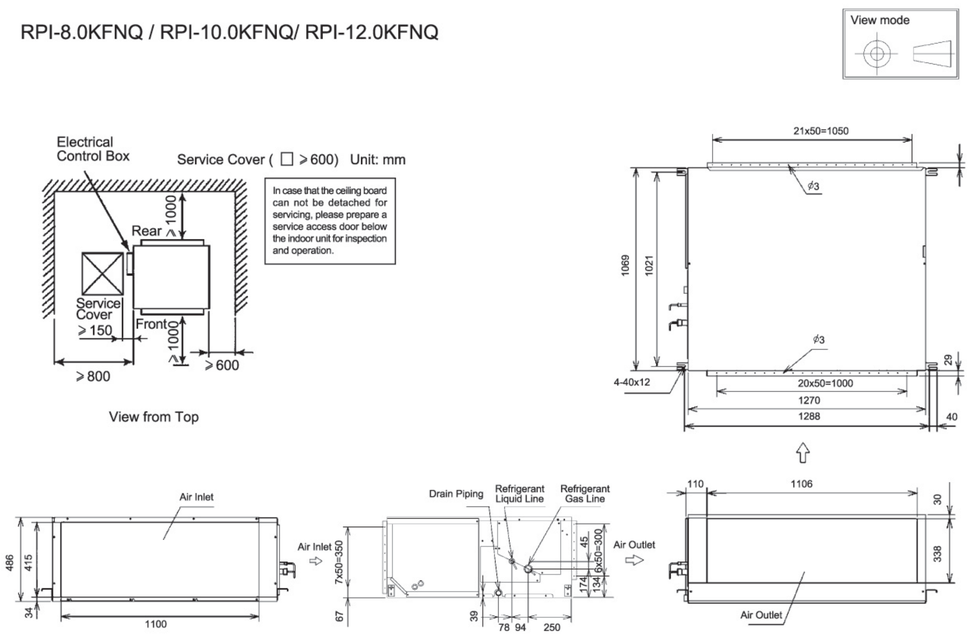
NOTES:
1. The nominal cooling capacity and heating capacity are based on following conditions: Cooling operation conditions : 33℃ DB ,28℃WB, piping length: 7.5m,piping lift :0m Heating operation conditions: 0℃ DB,-2.9℃ WB,piping length: 7.5m,piping lift :0m (Heating capacity is tested when defrosting 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.

Dimensional Data

RPI-5.0KFNQ

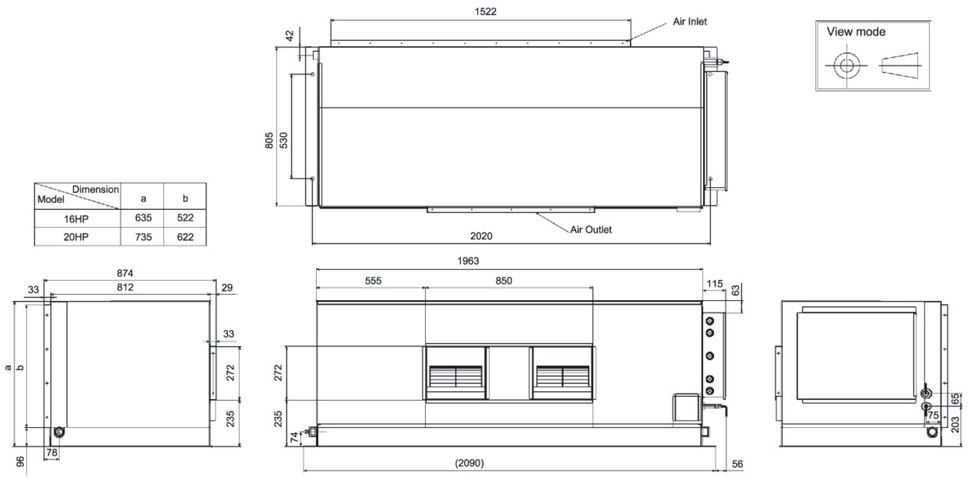


RPI-8.0KFNQ / RPI-10.0KFNQ/ RPI-12.0KFNQ

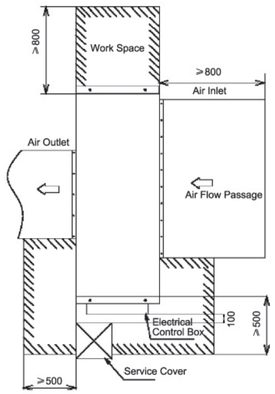


Dimensional Data

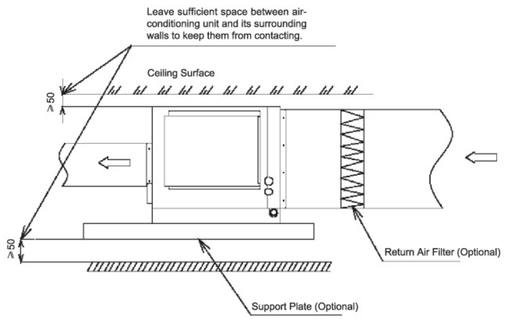
RPI-16.0KFNQL、RPI-16.0KFNQH、RPI-20.0KFNQL
RPI-20.0KFNQH、RPI-20.0KFNQLF、RPI-20.0KFNQHF



SPACE for OPERATION and MAINTENANCE



Unit: mm



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