

HITACHI
Inspire the Next



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

SET-FREE

FSN6Q Series



HITACHI

 **Hitachi Appliances, Inc.**

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

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HHESFN6 1407



ISO9001



ISO14001

Zero Ozone Depletion Potential
R410A

A New Energy-saving Benchmark of Multi-split Central Air Conditioning Hitachi SET-FREE FSN6Q Series

The up-to-date generation of R410A inverter-driven multi-split air conditioning inherits Hitachi's top-class technologies and excellent quality, improves the performance significantly.
The compact modular combination modes greatly enrich its product lineup and simplify the transportation and installation work, realize ultimate flexibility.



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Super Energy Conservation

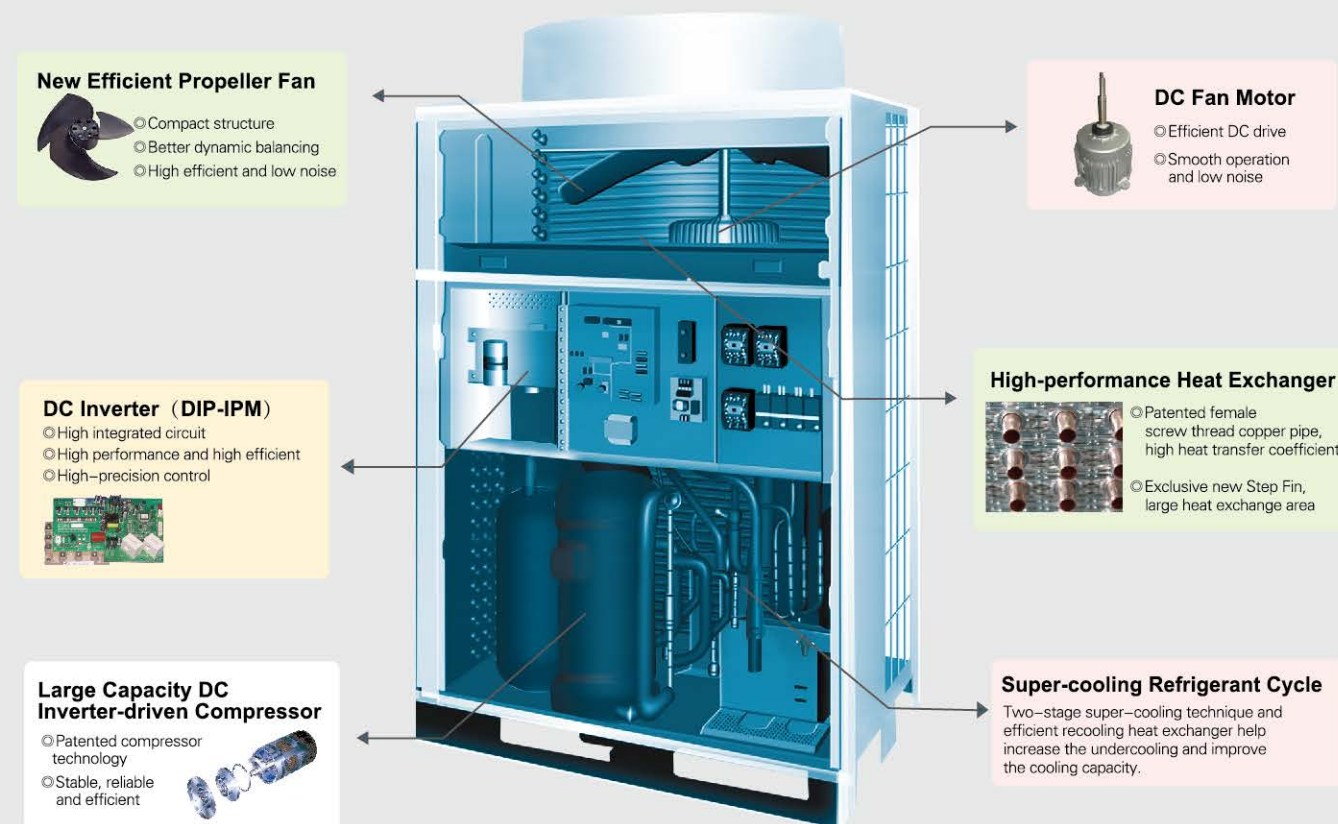
A New Energy-saving Model of Multi-split Central Air Conditioning

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 FSN6Q series as a master of energy-saving.



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.



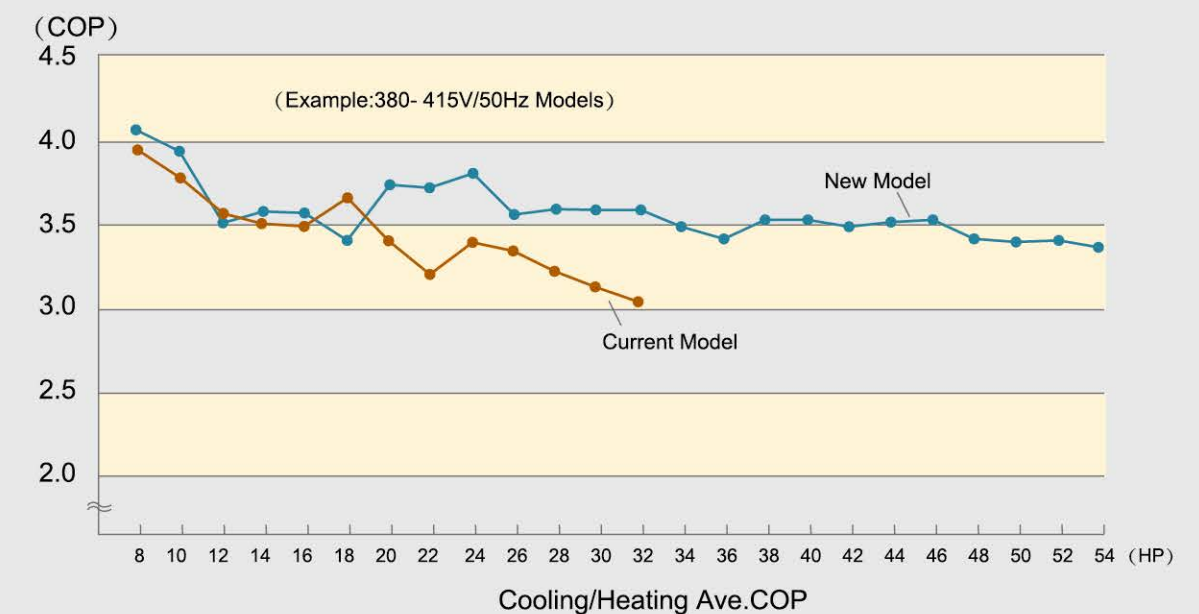
In 2003, Hitachi promoted the first high-pressure chamber scroll compressor in the industry which has the function of interior oil separating. At the same time, considering the high pressure characteristics of R410A refrigerant, asymmetric scroll disc was developed and bearing structure was strengthened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

High Efficiency and Energy Saving

Refrigerant cycle and control have improved for energy saving.





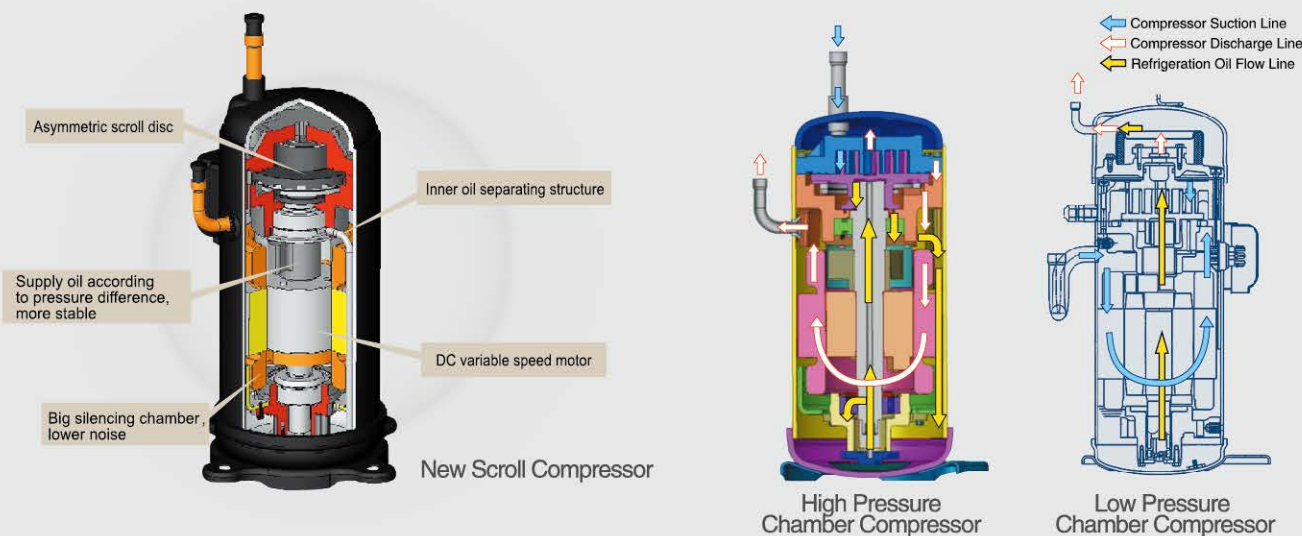
Core Technologies

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.

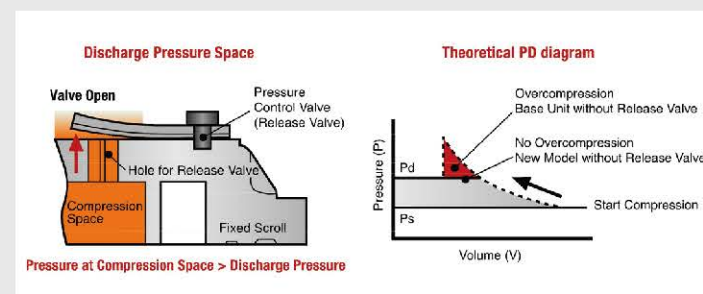
The large capacity high-pressure chamber scroll compressor adopts an interior oil separating section, maintains most of lubricating oil in compressor by the use of the interior oil mist separator and oil-returning pipe design. Only much less oil is discharged from compressor along with refrigerant, which 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 arising from overhigh condensing pressure, realizes efficient and stable operation.



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.

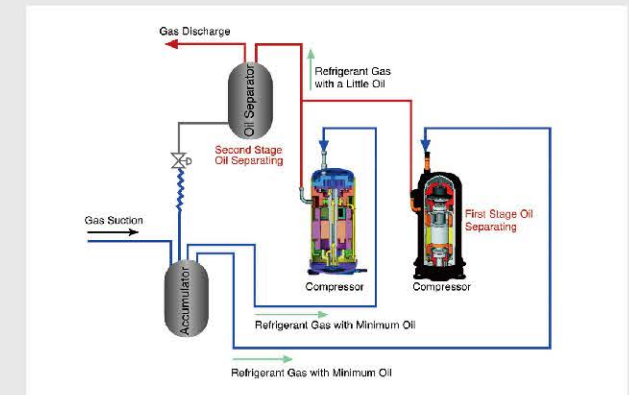
- Orbiting Scroll Lifting Force Optimization is improved
- Leakage Loss Reduction
- Improved Intermediate Pressure Performance



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.

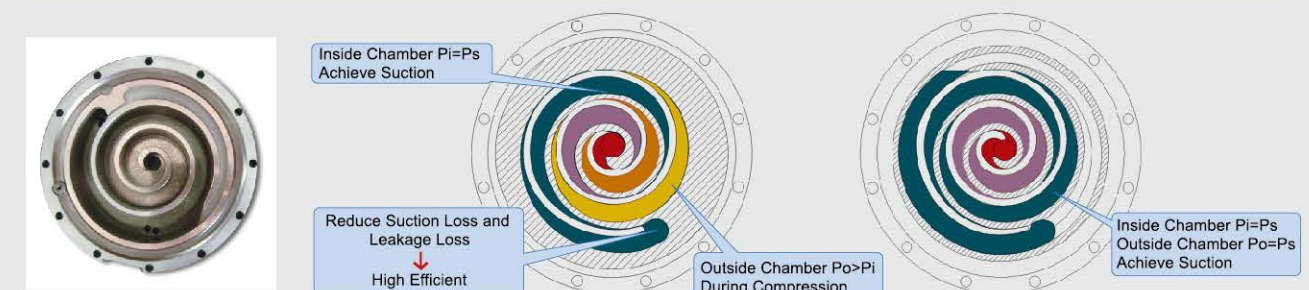


Exclusive Asymmetric Scroll Technology

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.

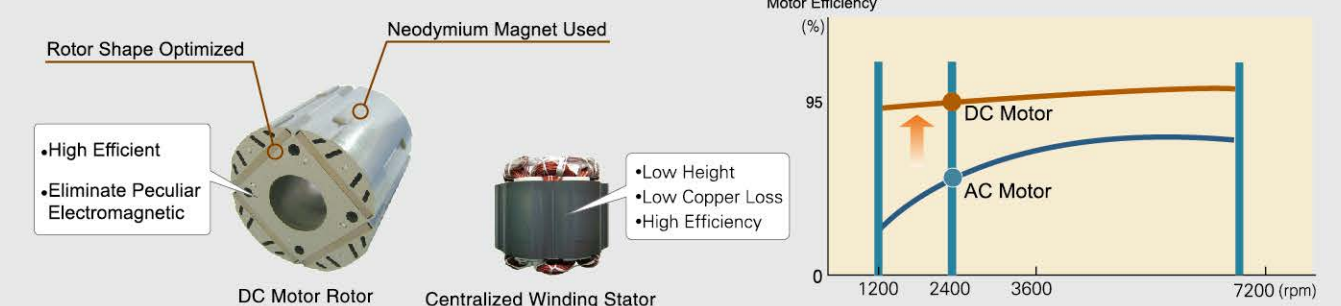
Asymmetric scroll: the time difference between the suction of outside chamber and inside chamber is 180°. The pressures of outside chamber and inside chamber are different. The pressure distribution in compressing chambers are asymmetric.

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.

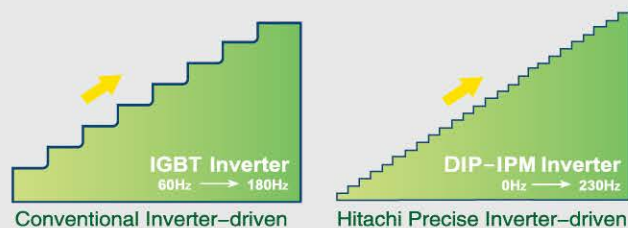


DC Inverter-driven Compressor

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.



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

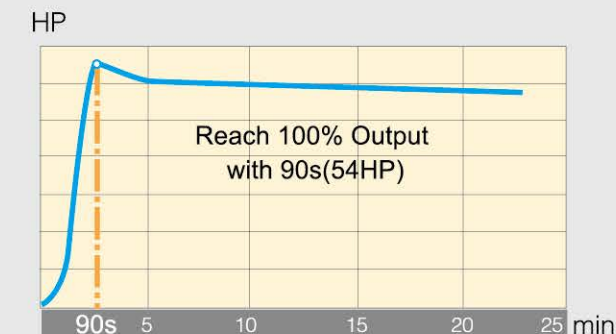
Regulating the operation time of each outdoor unit leads to load reduction on compressors. During multiple unit operation, the same rotation frequency of inverter compressor results in an equivalent load on each compressor. Therefore, outdoor unit endurance is improved.



Intelligent Defrosting Enables More Effective Heating

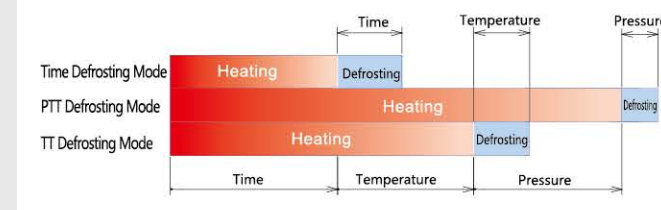
Rapid Heating Start-up

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.



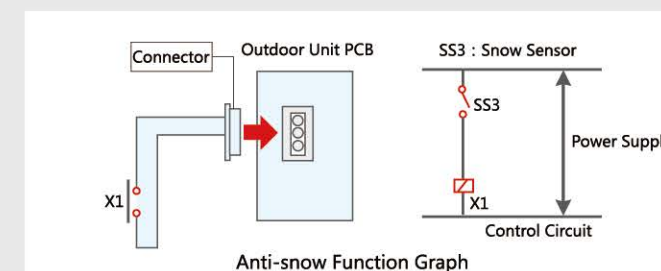
Hitachi Patented Pressure Defrosting Mode

FSN6Q 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

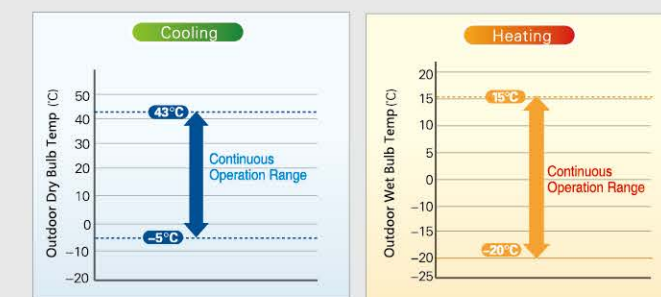
In the event of bad weather like snowstorm, even if outdoor unit is not operating, the sensor for snow on outdoor PCB can still be shorted because of natural snowflake, then the outdoor fan motor starts rotating at full speed to prevent outdoor unit from being covered by snow. When air conditioning starts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



*This Function Needs Optional Accessory

Wide Working Range

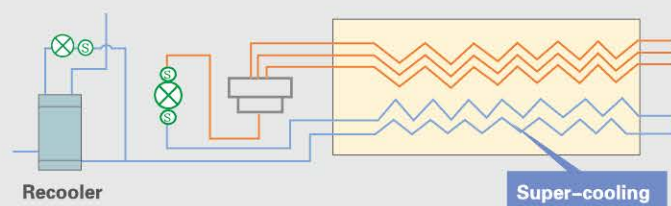
SET-FREE FSN6Q can handle a wide range of outside air condition, thus extending the flexibility of installation space and climatic environment.



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

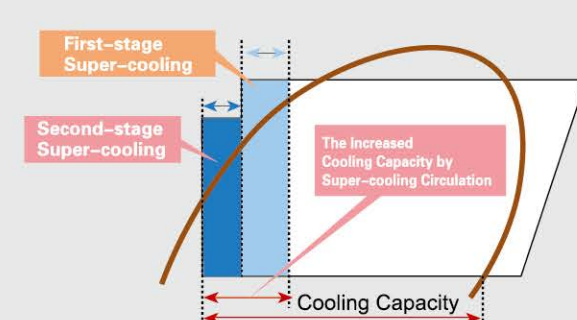
A sub-cooling section in the heat exchanger of outdoor unit is designed to realize the first-stage super-cooling. Furthermore, a high efficient recoler is applied to achieve the second-stage super-cooling. The total undercooling can reach up to 27 degree (taking 14 HP as an example).

Two-stage Super-cooling Cyclic Graph



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

Two-stage Super-cooling Pressure-enthalpy Graph

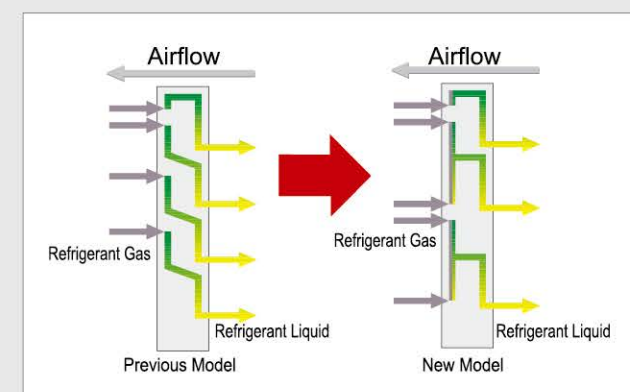


New Efficient Heat Exchanger

New efficient heat exchanger adopts $\Phi 7.0$ 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.

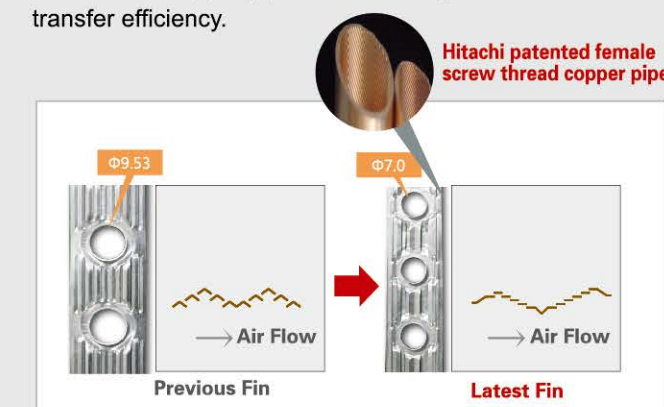
"2 in 1" Refrigerant Circuit

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

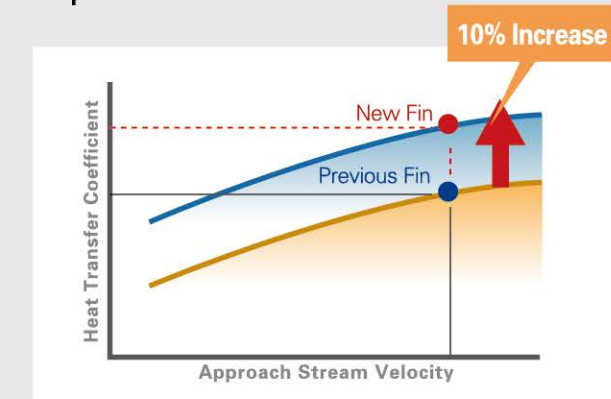


Newly Developed Fin with Efficient Heat Transfer

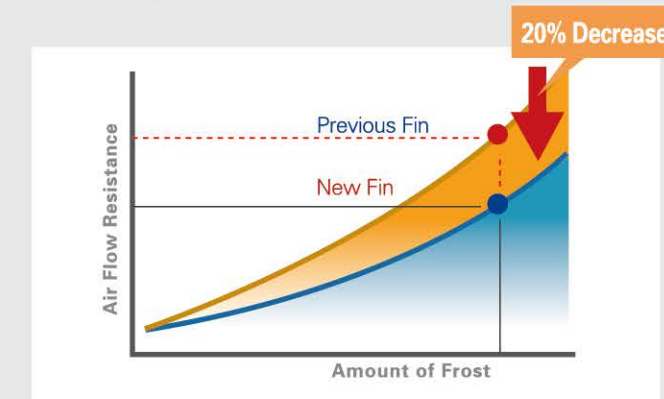
New fin and copper pipe contribute to promote heat transfer efficiency.



Improvement of Heat Transfer

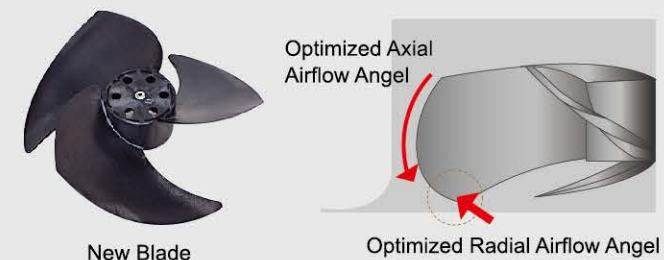


Reduction of Air Flow Resistance



New Efficient Axial Fan

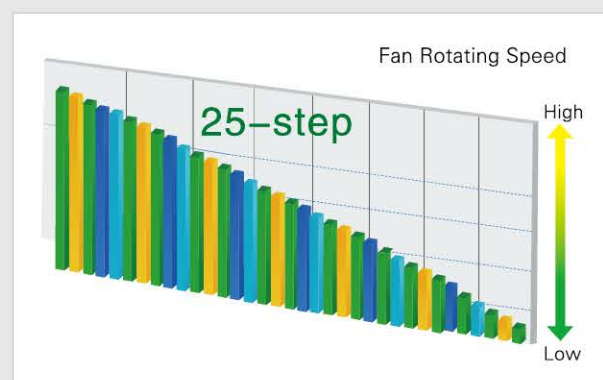
The newly developed efficient axial fan with new-shaped blade helps decrease turbulence around. It is made of special material which hold an obvious effect to absorb vibrating noise and minimizes the "Buzz" dramatically.



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.



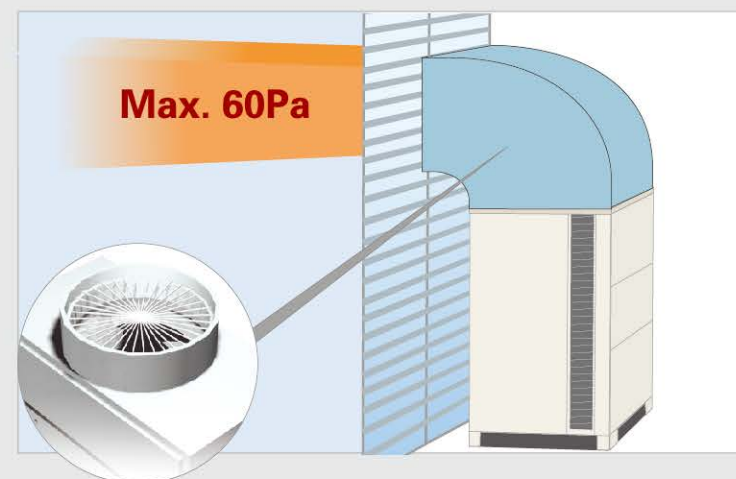
- The stability of discharge pressure and suction pressure of compressor is assured
- The stability of dynamic flow (capacity) allocation of indoor unit is assured
- Quick response of control system is improved, accordingly the system stability, durability and reliability are assured

Wide Range of External Static Pressure of Outdoor Units

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

•Application of efficient fan lowers motor power consumption

•External static pressure: 60Pa



Highest Level in Noise Reduction



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



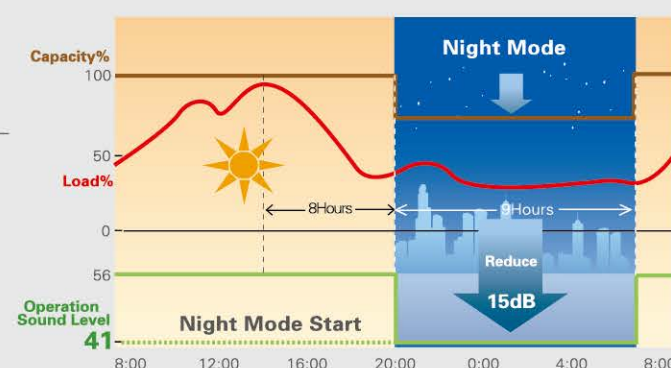
Adoption of DIP-IPM Inverter
IGBT+Auto-protection, silencer and electronic interference filter are applied to lower noise.



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.

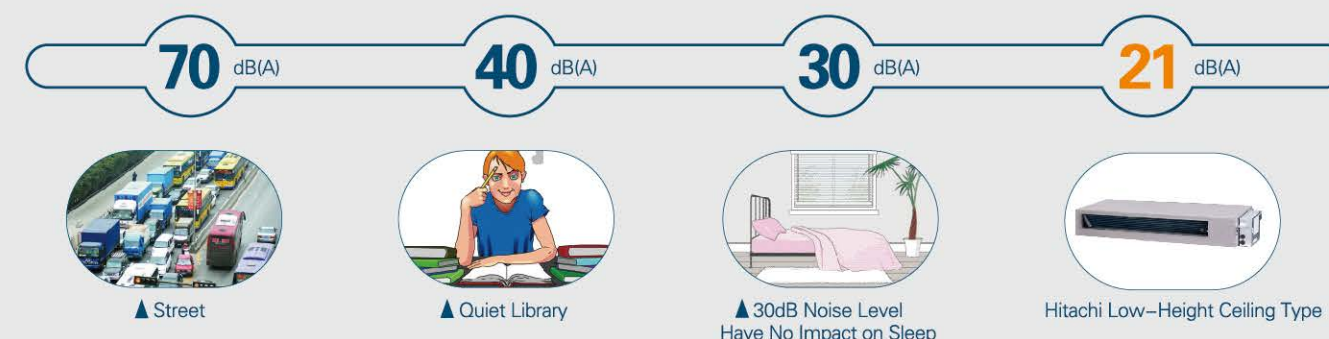
Silent Mode at Night

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

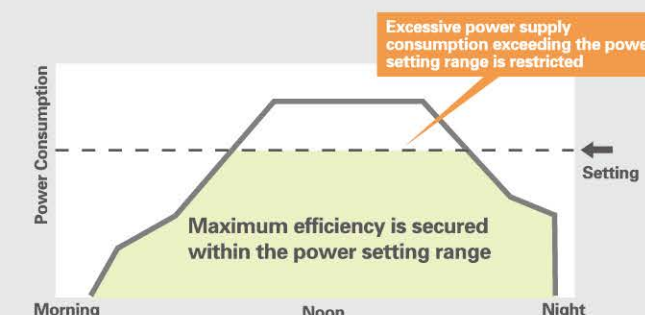
In accordance with application situation and structure, Hitachi has been studying the technical means and installation methods for noise reduction of indoor units from various aspects of fan motor, fan blade and air duct layout, which provides customers with the quietest air conditioned environment.



Intelligent Demand Control

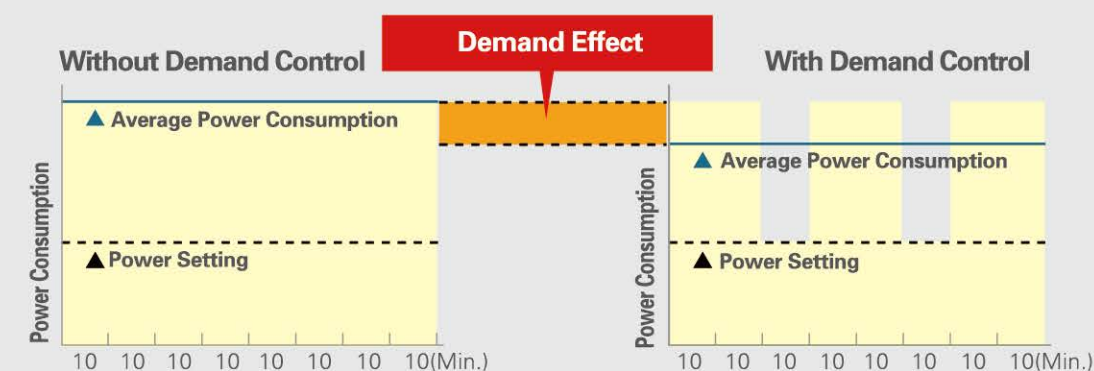
Self-demand Control

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.

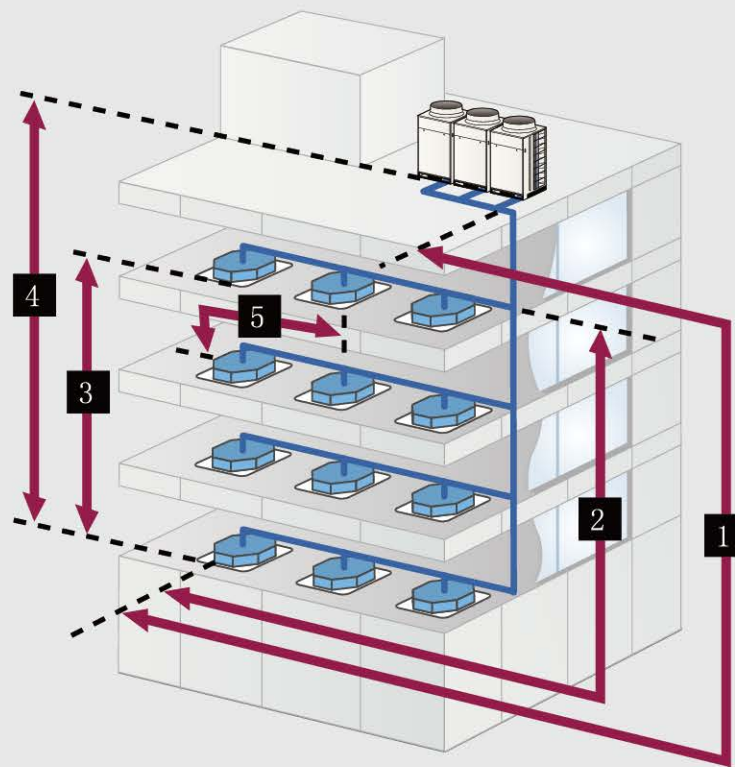




Design and Installation

System Configuration Suitable for Design and Installation

More Flexible Refrigerant Piping Work



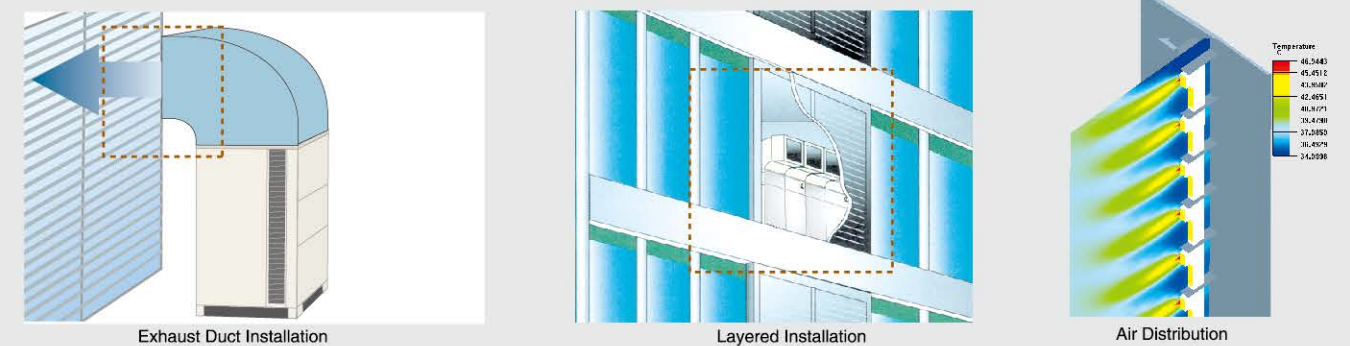
	Current Model (FSN1Q)	New Model (FSN6Q)
Total maximum piping length	300m	1,000m
Max.piping length	150m	165m
Between first branch and indoor unit	40m	90m
Max.piping length after branch	30m	40m

- ❑ Max.piping length:165m^{*1}
- ❑ Between first branch and indoor unit:90m or less
- ❑ Height difference between highest and lowest indoor units:15m or less
- ❑ Height difference between outdoor and indoor units:50m^{*2}
- ❑ Max.length after branch:40m

*1: For 100m or more, the pipe diameter will be one size larger.
*2: In case the outdoor unit is installed at a higher level than indoor units. If the outdoor unit is installed lower than indoor units, the maximum height difference is 40m.

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.



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 FSN6Q 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 FSN6Q 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.

Various Model Types Easily Match Different Spatial Layout

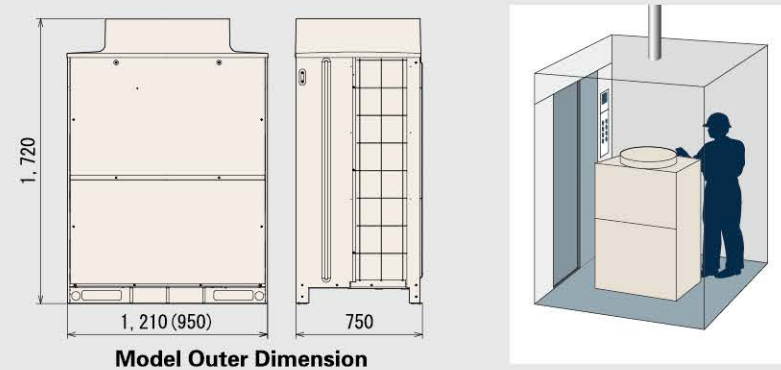
Wide capacity range of outdoor units enables free model combination relating to the actual condition of building. There are **86 models in 10 types** of indoor units for selection. Planner can choose appropriate type and capacity of indoor units according to interior decoration and functions.



Compact and Lightweight Design, Save Space

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

The elevator can be used to uplift the base unit (Max.18HP) separately.

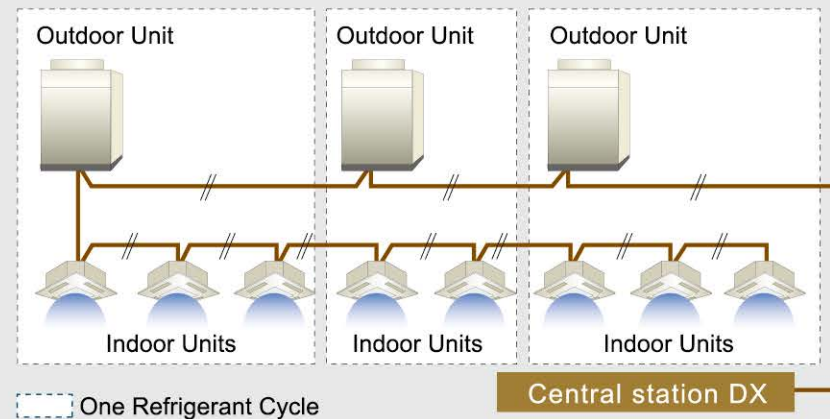


Simple and Convenient Wiring Work

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

Non-polarity Twisted-pair Wire

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



Fresh Indoor Air

All-fresh Air Indoor Unit

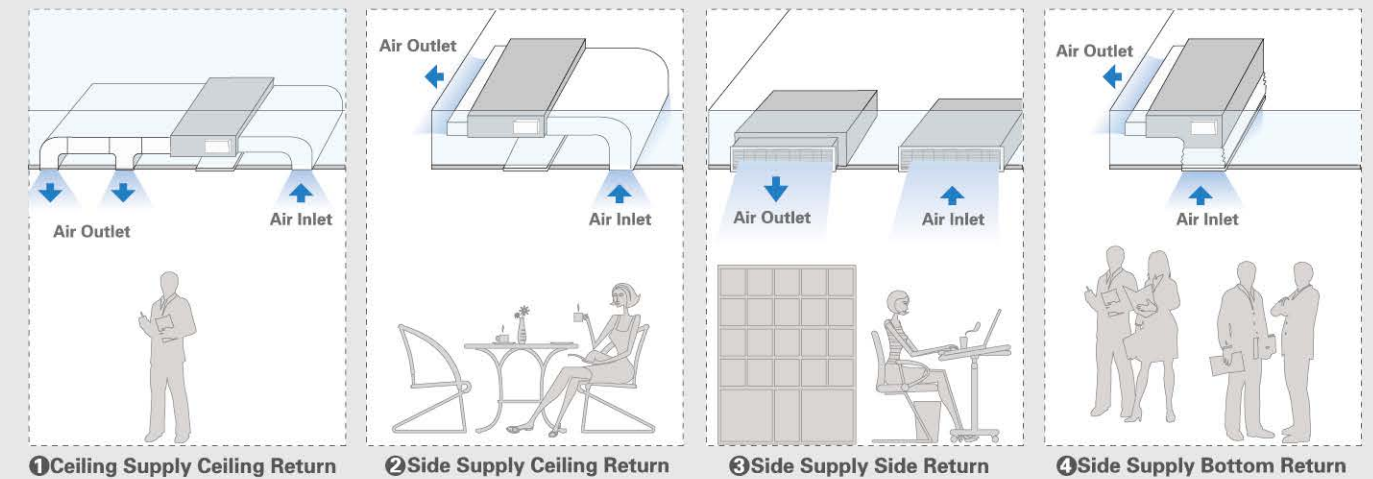
All-fresh air indoor unit is a fresh air processing equipment for heating or cooling outdoor air and with independent air supply. Other air conditioning indoor units are not required to bear ambient air load and cross infection can be avoided. It can be interfaced to H-LINKII together with other air conditioning systems.

Model	RPI-5.0KFNQ	RPI-8.0KFNQ	RPI-10.0KFNQ
Cooling Capacity (kW)	14.0	22.4	28.0

Model	RPI-12.0KFNQ	RPI-16.0KFNL/H	RPI-20.0KF NQL/H/LF/HF
Cooling Capacity (kW)	33.5	45.0	56.0

Flexible Ways of Air Supply and Air Return

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



Humanized DIP Setting

A humanized DIP adjustment switch is specially designed for indoor units less than 3HP. When indoor load increases or decreases, the DIP switch can be adjusted to realize a capacity increments of $\pm 0.25\text{HP}$ to match the load fluctuation, which benefits users much.

NO.	HP	Indoor Unit Type								DIP Switch Setting		
		RPI	RPIZ	RCI	RCD	RPK	RPF	RPFI	RPC	Decreased Capacity	Standard Capacity	Increased Capacity
1	0.8 ← 1.0	●	●							ON OFF	ON OFF	
2	1.0 → 1.3	●	●	●	●	●	●	●			ON OFF	ON OFF
3	1.3 ← 1.5	●	●	●	●	●	●	●		ON OFF	ON OFF	
4	1.5 → 1.8	●	●	●	●	●			●		ON OFF	ON OFF
5	1.8 ← 2.0		●		●	●	●	●	●	ON OFF	ON OFF	
6	2.3 ← 2.5		●		●		●	●	●	ON OFF	ON OFF	
7	2.5 → 2.8				●				●		ON OFF	ON OFF



Intelligent Control

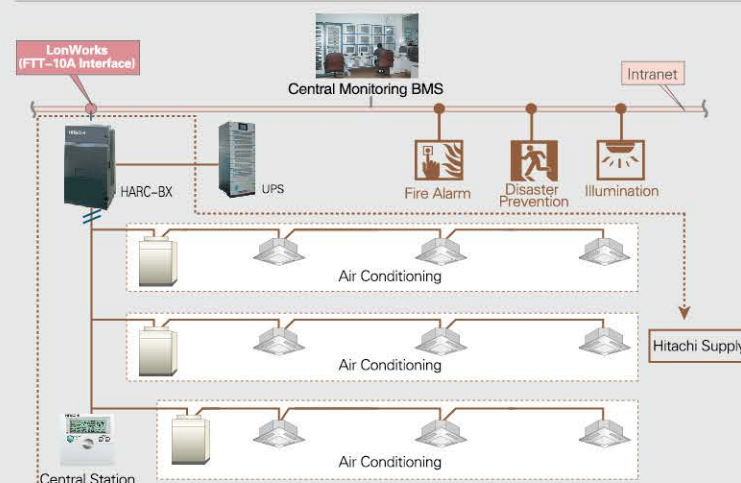
More Humanized System and More Convenient Operation

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.

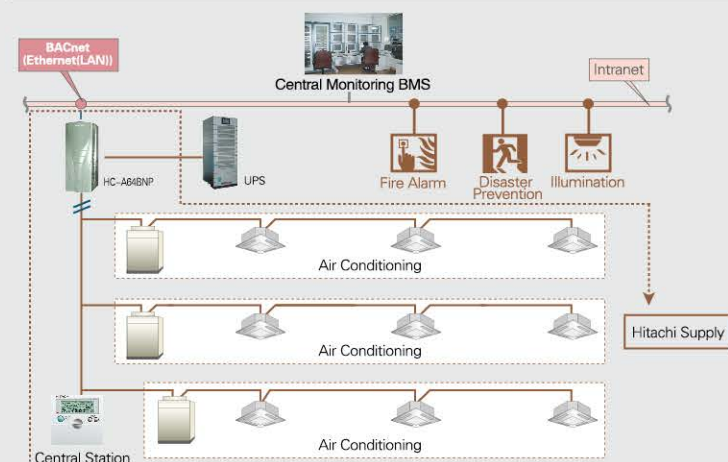
- Real-time operation status monitoring for inquiry
- Operation order from monitoring center

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

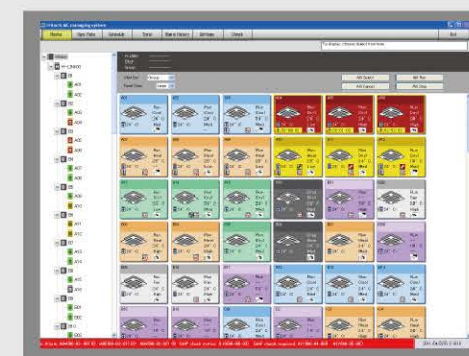


- Running-state monitoring / On-off setting
- Operating mode setting
- Temperature setting and monitoring
- Airflow setting and monitoring
- Alarm monitoring and code display
- Communication failure display
- Wireless controller permission/prohibition
- Indoor temp. monitoring
- Filter cleaning prompting

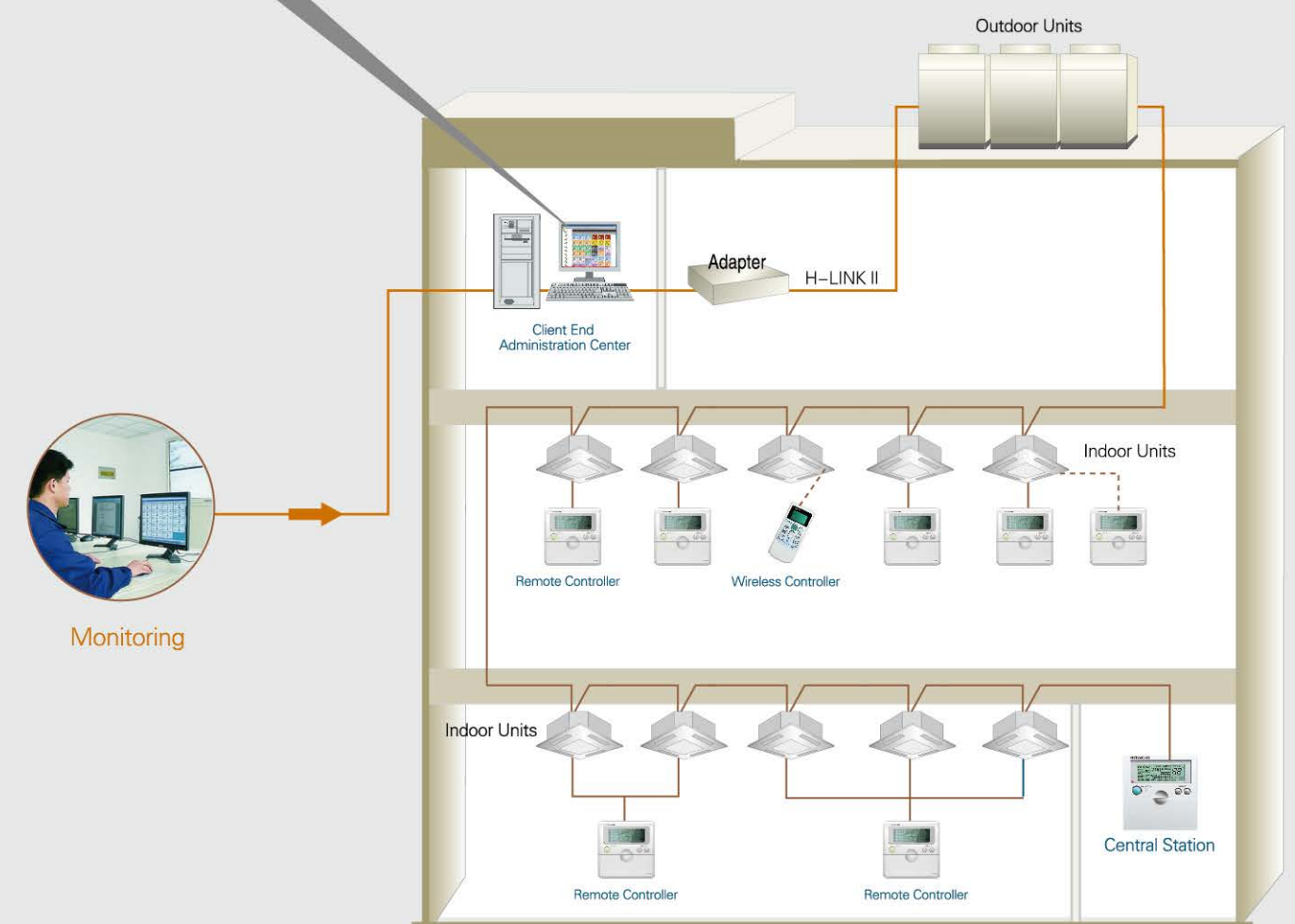
DX Computer Controlled Network System

Central Station DX 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. Each network adapter of DX system 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



Features

(1) Managing Maximum 2048 Groups (2560 Indoor Units) of Air Conditioners

Up to 2560 units of Air Conditioners can be controlled and monitored by one computer.

(2) Improved Operability by Tree View and Simple Schedule Setting

- User-friendly display is achieved by laying out whole configuration of the air conditioning system by the tree view.
- "Simple Schedule Setting" is adopted to achieve easy schedule setting.

(3) Graphic Display for Trend data

"Visualization" is achieved by showing graphics of elapsed operation time, temperature setting and intake temperature for each specified Group or air conditioner.

- * Some items may be shown upon certain condition only.

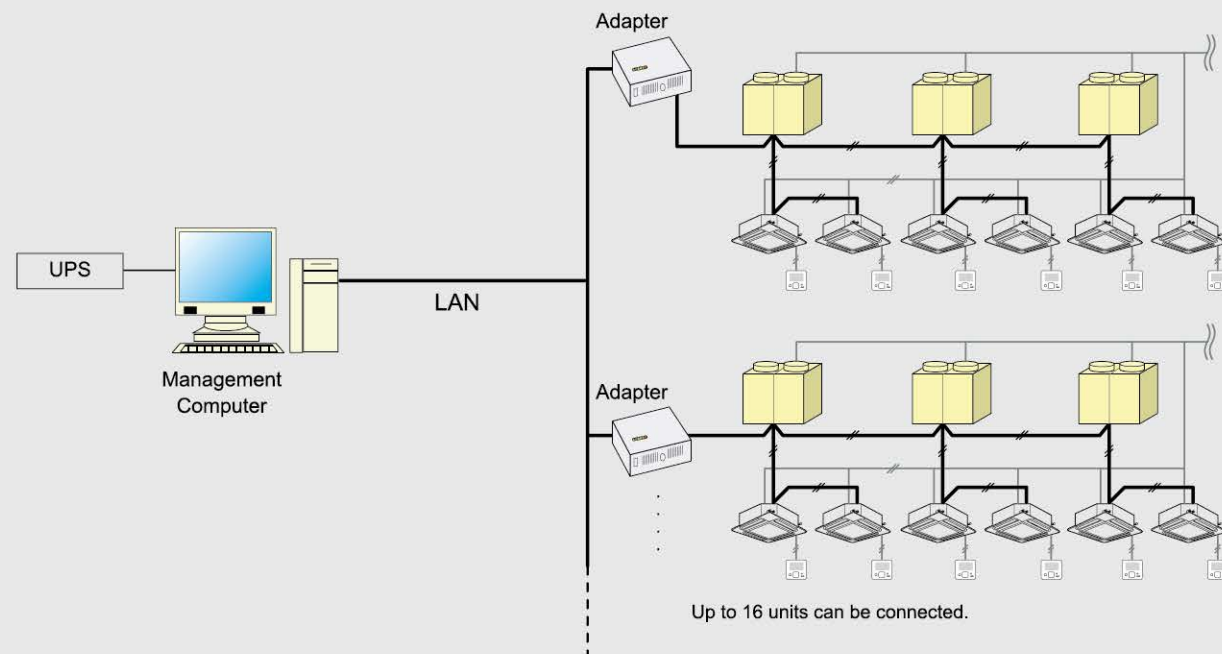
(4) Outdoor Unit Optional Function Setting, Capacity Control, Lower Noise Control

- Outdoor Unit Optional Function Setting, Capacity Control and Lower Noise Control can be set from this system.
- Capacity and Noise can be controlled via schedule setting or manual operation by a user.

- * Available only if these functions are supported by the outdoor unit.

(5) Adopting Operation Ratio

The operation ratio function can be controlled on the same display with monitored air conditioners using the changeover button.



NOTES:

1. It is recommended for the management computer to connect to UPS (Uninterruptible Power Supply).
2. Only 1 (one) management computer can exist on 1 (one) system.
3. Use the management computer exclusively to this system.
4. Up to 16 adapters (PSC-A128WX) can be connected to 1 (one) system.
5. LAN with wake on LAN function or RS-232C Interface is required for UPS.

Various Controllers

Remote Control Switch

PC-ARF

Compatible with the H-LINK II

- The newly-adopted LED-backlit LCD provides enhanced legibility. Large, clear character display is realized by Full Dot Matrix LCD.
- The newly-adopted directional key provides optimized operation. The manual operation is facilitated by reducing number of switch buttons from 13 to 9.
- "Schedule Timer" provides the timer operations for "Run/Stop" and "Temperature Setting". The weekly management is available by using this function. In addition "Holiday Setting" and "Schedule ON/OFF" setting are available.
- 4 type of menus are offered for flexible use as follows:
Menu: Contains "Schedule", "Elevating Grill", etc. for users.
Help Menu: Contains information provided by this remote control switch for users such as "About Indication", "Contact Information", etc.
Test Run Menu: This menu provides the functions installation of this remote control switch.
Check Menu: This menu provides the functions for service and maintain

Remote Control Switch

PC-AR PC-ARQ

Compatible with the H-LINK II

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

Wireless Remote Control Switch

PC-LH3A

Compatible with the H-LINK II

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

Half-size Remote Control Switch

PC-ARH

Compatible with the H-LINK II

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

7 Day Timer

PSC-A1T

Compatible with the H-LINK II

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

Central Station

PSC-A64S

Compatible with the H-LINK II

Up to 160 indoor units

Up to 64 remote control groups

PSC-5S*

Up to 128 indoor units

Up to 16 remote control groups

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

* Only for H-LINK

Centralized ON/OFF Controller

PSC-A16RS

Compatible with the H-LINK II

Up to 160 indoor units

Up to 16 remote control groups

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

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

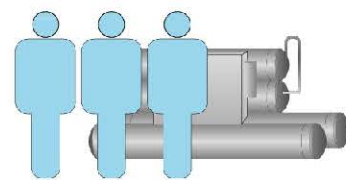


Maintenance

All-directional Maintenance and Service

Intelligent Operation

SET-FREE FSN6Q 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

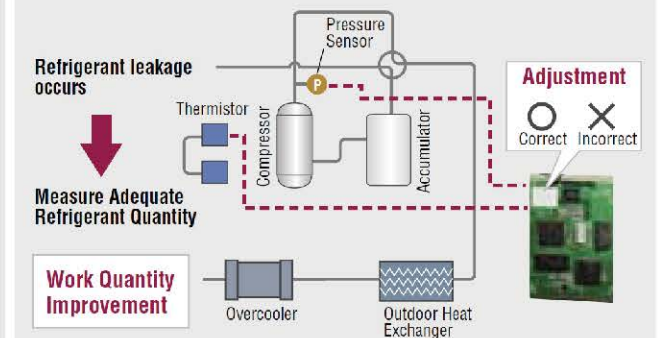
Using this automatic judgement function to check whether or not the refrigerant amount is sufficient in one refrigerant cycle.

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).



Emergency Operation

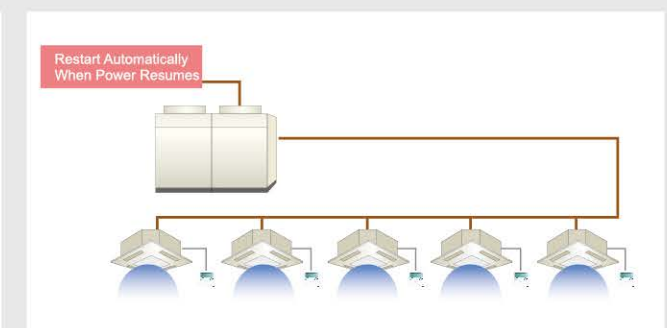
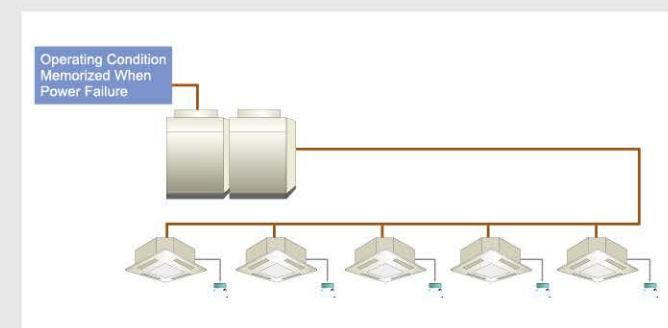
2. As one compressor is failed, the other compressor in the same outdoor unit can be set to emergency operation mode.



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.

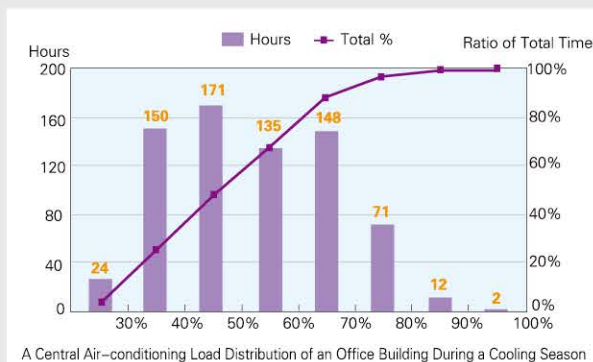




Comfortable, Healthy and Low Carbon Ultimate User Experience

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 FSN6Q works out a remarkable performance on partial load which contributes to realize a superb energy-saving.

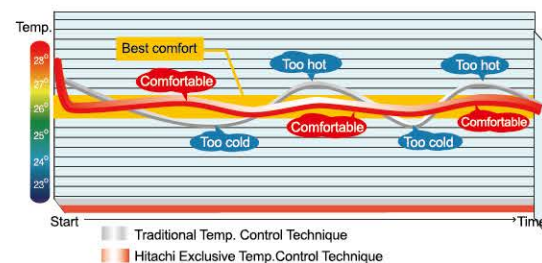


This graph shows that the operation time of central air-conditioning in this building is longest in a duration of 30%~40% cooling load in which the operation efficiency is highest. Therefore, the energy-saving effect is significant.

Focus on Comfort, Harmony Between People and Air

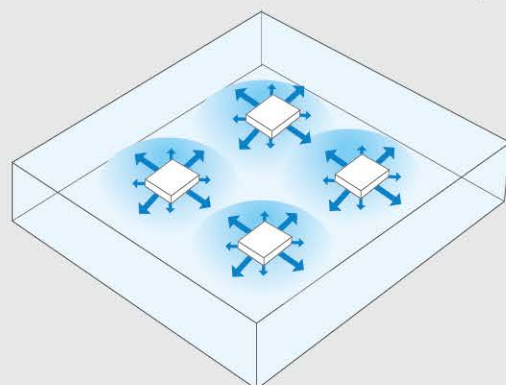
Particular Outlet Air Temperature Sensor Designed for Temperature Control

Compared with indoor temperature control in conventional air conditioning according to temperature sensors placed on air inlet and wireless controller, FSN6Q 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

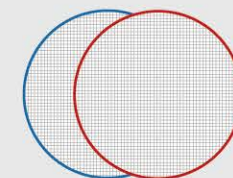
Hitachi 4-way cassette type distributes the airflow to every corner of the room by 360° air supply and adjustment of louver position. All-directional circulating airflow contributes to avoid the dead air in corner, creates the most comfortable space with uniform temperature.



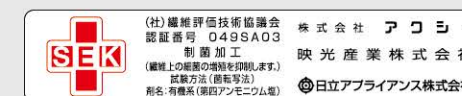
Focus on Healthy, Improve Interior Air Quality

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



Fresh Air Introduction

Hitachi FSN6Q 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 FSN6Q series adopts R410A refrigerant that doesn't destroy the environment, brings temperature, humidity, freshness and health to every inch of space as well as saving energy.



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-8FSN6Q	22.4	RAS-8FSN6Q			13
10 HP	RAS-10FSN6Q	28.0	RAS-10FSN6Q			16
12 HP	RAS-12FSN6Q	33.5	RAS-12FSN6Q			19
14 HP	RAS-14FSN6Q	40.0	RAS-14FSN6Q			23
16 HP	RAS-16FSN6Q	45.0	RAS-16FSN6Q			26
18 HP	RAS-18FSN6Q	50.0	RAS-18FSN6Q			26
20 HP	RAS-20FSN6Q	56.0	RAS-8FSN6Q	RAS-12FSN6Q		33
22 HP	RAS-22FSN6Q	61.5	RAS-8FSN6Q	RAS-14FSN6Q		36
24 HP	RAS-24FSN6Q	69.0	RAS-10FSN6Q	RAS-14FSN6Q		40
26 HP	RAS-26FSN6Q	73.0	RAS-12FSN6Q	RAS-14FSN6Q		43
28 HP	RAS-28FSN6Q	80.0	RAS-14FSN6Q	RAS-14FSN6Q		47
30 HP	RAS-30FSN6Q	85.0	RAS-14FSN6Q	RAS-16FSN6Q		50
32 HP	RAS-32FSN6Q	90.0	RAS-16FSN6Q	RAS-16FSN6Q		53
34 HP	RAS-34FSN6Q	95.0	RAS-16FSN6Q	RAS-18FSN6Q		56
36 HP	RAS-36FSN6Q	100.0	RAS-18FSN6Q	RAS-18FSN6Q		59
38 HP	RAS-38FSN6Q	109.0	RAS-12FSN6Q	RAS-12FSN6Q	RAS-14FSN6Q	64
40 HP	RAS-40FSN6Q	112.0	RAS-12FSN6Q	RAS-12FSN6Q	RAS-16FSN6Q	64
42 HP	RAS-42FSN6Q	118.0	RAS-12FSN6Q	RAS-12FSN6Q	RAS-18FSN6Q	64
44 HP	RAS-44FSN6Q	125.0	RAS-12FSN6Q	RAS-14FSN6Q	RAS-18FSN6Q	64
46 HP	RAS-46FSN6Q	132.0	RAS-12FSN6Q	RAS-16FSN6Q	RAS-18FSN6Q	64
48 HP	RAS-48FSN6Q	136.0	RAS-12FSN6Q	RAS-18FSN6Q	RAS-18FSN6Q	64
50 HP	RAS-50FSN6Q	140.0	RAS-14FSN6Q	RAS-18FSN6Q	RAS-18FSN6Q	64
52 HP	RAS-52FSN6Q	145.0	RAS-16FSN6Q	RAS-18FSN6Q	RAS-18FSN6Q	64
54 HP	RAS-54FSN6Q	150.0	RAS-18FSN6Q	RAS-18FSN6Q	RAS-18FSN6Q	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/3Q	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
In-the-ceiling(High Static Pressure)	 RPI-FSNQ(H)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Low-Height In-the-ceiling	 RPIZ-FSN1Q	●	●	●	●	●	●	●								
Slim In-the-ceiling	 RPIZ-FSNQS	●	●	●	●											
4-Way Cassette	 RCI-FSN1Q		●	●	●	●	●	●	●	●	●	●	●	●		
2-Way Cassette	 RCD-FSN2		●		●		●		●	●		●	●			
Ceiling	 RPC-FSN3				●		●		●	●		●	●	●		
Wall	 RPK-FSNQS	●	●	●	●	●	●	●								
Floor	 RPF-FSN2E		●		●											
Floor Concealed	 RPII-FSNQ		●		●		●		●							

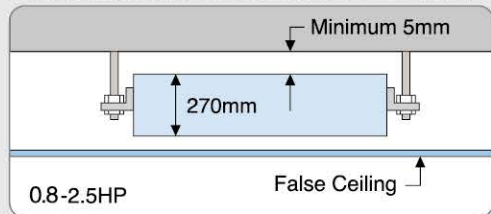
In-the-ceiling Type (Low Static Pressure)



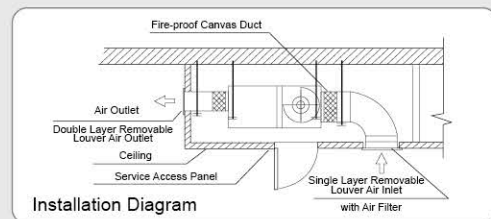
SET FREE-RPI Technique Features

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 Satisfy Varied Requests on Installation



NOTE:

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

Fresh Indoor Air

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

Excellent Air Flow

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

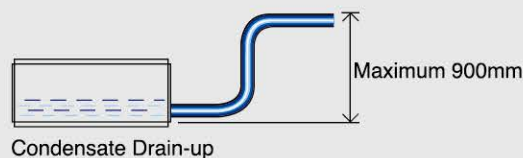
Quiet Operation

Far less noise , much quieter operation.

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

Optional Parts

Drain-up mechanism can be supplied as optional part.



Indoor Unit		In-the-ceiling Type(Low Static Pressure)																
Model		RPI-0.8 FSNQL	RPI-1.0 FSNQL	RPI-1.3 FSNQL	RPI-1.5 FSNQL	RPI-1.8 FSNQL	RPI-2.0 FSNQL	RPI-2.3 FSNQL	RPI-2.5 FSNQL	RPI-3.0 FSNQL	RPI-3.3 FSNQL	RPI-4.0 FSNQL	RPI-5.0 FSNQL	RPI-6.0 FSNQL	RPI-8 FSN3Q	RPI-10 FSN3Q		
Power Supply		AC1Φ,220V~240V/50Hz,220V/60Hz														AC3Φ,380V~415V/50Hz 380V/60Hz		
Nominal Cooling Capacity *1)	kW	2.3	2.9	3.8	4.4	5.2	5.8	6.5	7.3	8.7	9.3	11.6	14.5	16.5	23.2	28.6		
	kcal/h	2,000	2,500	3,300	3,800	4,500	5,000	5,600	6,300	7,500	8,000	10,000	12,500	14,200	20,000	24,600		
	Btu/h	7,800	9,900	13,000	15,000	17,700	19,800	22,200	24,900	29,700	31,700	39,600	49,500	56,300	79,200	97,600		
Nominal Cooling Capacity *2)	kW	2.2	2.8	3.6	4.3	5.0	5.6	6.3	7.1	8.4	9.0	11.2	14.2	16.0	22.4	28.0		
	kcal/h	1,900	2,400	3,100	3,700	4,300	4,800	5,400	6,100	7,200	7,700	9,600	12,200	13,800	19,300	24,100		
	Btu/h	7,500	9,600	12,300	14,700	17,100	19,100	21,500	24,200	28,700	30,700	38,200	48,500	54,600	76,500	95,600		
Nominal Heating Capacity	kW	2.8	3.3	4.2	4.9	5.6	6.5	7.5	8.5	9.6	10.0	13.0	16.3	18.0	25.0	31.5		
	kcal/h	2,400	2,800	3,600	4,200	4,800	5,600	6,500	7,300	8,300	8,600	11,200	14,000	15,500	21,500	27,100		
	Btu/h	9,600	11,300	14,300	16,700	19,100	22,200	25,600	29,000	32,800	34,100	44,400	55,600	61,400	85,300	107,500		
Sound Pressure Level (High/Medium/Low)		dB(A)	29.5-26-24.5	29.5-26-24.5	34-32-30	34-32-30	34-32-30	34-32-30	35-33-31	35-33-31	40-37-33	40-37-33	41.5-39-35	42-39-35	43-39-37	50	52	
Outer Dimensions	H	mm	270	270	270	270	270	270	270	350	350	350	350	350	470	470		
	W	mm	650+75	650+75	650+75	650+75	900+75	900+75	900+75	900+75	900+75	900+75	900+75	1300+75	1300+75	1060	1250	
	D	mm	720	720	720	720	720	720	720	720	800	800	800	800	800	1120	1120	
Net Weight	kg	26	26	26	26	35	35	35	35	46	46	46	58	58	96	108		
	(lbs)	(57)	(57)	(57)	(57)	(77)	(77)	(77)	(77)	(101)	(101)	(101)	(128)	(128)	(211)	(238)		
Refrigerant			R410A(Nitrogen-charged for Corrosion-resistance)															
Indoor Fan Air Flow Rate (High/Medium/Low)		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	20	20	40	40	45	45	45	45	100	100	100	160	180	500	750	
Connections Refrigerant Piping			Flare-nut Connection(with Flare Nuts)														Brazing	
Liquid Line	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	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)	(3/8)	
Gas Line	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ19.05	Φ22.2		
	(in.)	(1/2)	(1/2)	(1/2)	(1/2)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(3/4)	(7/8)		
Condensate Drain			VP25(Outer Diameter Φ32)															
External Static Pressure		Pa	30	30	30	30	30	30	30	30	60	60	60	60	60	100	100	
Approximate Packing Measurement		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	0.90	

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.

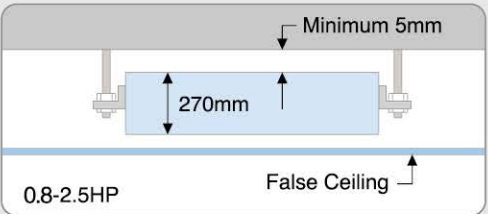
3.The data for external pressure indicates standard pressure setting values when air filter is not used.

In-the-ceiling Type (High Static Pressure)

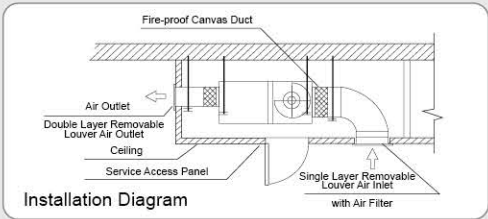
SET FREE-RPI Technique Features

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 Satisfy Varied Requests on Installation



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

Higher External Static Pressure

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

Quiet Operation

Far less noise , much quieter operation.

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

Optional Parts

Drain-up mechanism can be supplied as optional part.



Condensate Drain-up

Higher Fireproof Grade

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

Indoor Unit		In-the-ceiling Type(High Static Pressure)															
Model		RPI-0.8 FSNQH	RPI-1.0 FSNQH [RPI-1.0 FSN4QH]	RPI-1.3 FSNQH	RPI-1.5 FSNQH [RPI-1.5 FSN4QH]	RPI-1.8 FSNQH	RPI-2.0 FSNQH [RPI-2.0 FSN4QH]	RPI-2.3 FSNQH	RPI-2.5 FSNQH [RPI-2.5 FSN4QH]	RPI-3.0 FSNQH	RPI-3.3 FSNQH	RPI-4.0 FSNQH	RPI-5.0 FSNQH	RPI-6.0 FSNQH	RPI-8 FSNQ	RPI-10 FSNQ	
Power Supply		AC1Φ,220V~240V/50Hz,220V/60Hz,[220V/50Hz]														AC3Φ,380V~415V/50Hz, 380V/60Hz	
Nominal Cooling Capacity*1)	kW	2.3	2.9	3.8	4.4	5.2	5.8	6.5	7.3	8.7	9.3	11.6	14.5	16.5	23.2	28.6	
	kcal/h	2,000	2,500	3,300	3,800	4,500	5,000	5,600	6,300	7,500	8,000	10,000	12,500	14,200	20,000	24,600	
	Btu/h	7,800	9,900	13,000	15,000	17,700	19,800	22,200	24,900	29,700	31,700	39,600	49,500	56,300	79,200	97,600	
Nominal Cooling Capacity *2)	kW	2.2	2.8	3.6	4.3	5.0	5.6	6.3	7.1	8.4	9.0	11.2	14.2	16.0	22.4	28.0	
	kcal/h	1,900	2,400	3,100	3,700	4,300	4,800	5,400	6,100	7,200	7,700	9,600	12,200	13,800	19,300	24,100	
	Btu/h	7,500	9,600	12,300	14,700	17,100	19,100	21,500	24,200	28,700	30,700	38,200	48,500	54,600	76,500	95,600	
Nominal Heating Capacity	kW	2.8	3.3	4.2	4.9	5.6	6.5	7.5	8.5	9.6	10.0	13.0	16.3	18.0	25.0	31.5	
	kcal/h	2,400	2,800	3,600	4,200	4,800	5,600	6,500	7,300	8,300	8,600	11,200	14,000	15,500	21,500	27,100	
	Btu/h	9,600	11,300	14,300	16,700	19,100	22,200	25,600	29,000	32,800	34,100	44,400	55,600	61,400	85,300	107,500	
Sound Pressure Level (High/Medium/Low)	dB(A)	35-33-31	35-33-31 [36-33-29]	35-33-31	35-33-31 [38-36-32]	35-33-31	35-33-31 [38-36-32]	36-34-32	36-34-32 [38-36-32]	42-39-35	42-39-35	43-40-36	44-41-37	45-41-37	50	52	
Outer Dimensions	H	mm	270	270	270	270	270	270	270	350	350	350	350	350	470	470	
	W	mm	650+75	650+75	650+75	650+75	900+75	900+75	900+75	900+75	900+75	900+75	1300+75	1300+75	1060	1250	
	D	mm	720	720	720	720	720	720	720	800	800	800	800	800	1120	1120	
Net Weight	kg	26	26	26	26	35	35	35	35	46	46	46	58	58	85	95	
	(lbs)	(57)	(57)	(57)	(57)	(77)	(77)	(77)	(77)	(101)	(101)	(101)	(128)	(128)	(211)	(238)	
Refrigerant		R410A(Nitrogen-charged for Corrosion-resistance)															
Indoor Fan Air Flow Rate (High/Medium/Low)	m ³ /min	8/7/6	8/7/6 [8.3/7.1/6.1]	13/11/9	13/11/9 [11/9.7/8.3]	15/13/11	15/13/11 [14.5/13/11]	16/14/12	16/14/12 [14.5/13/11]	25/21/17	25/21/17	27/23/19	37/31/25	38/35/29	58	72	
Motor Power	W	35	35	60	60	75	75	75	75	120	120	120	200	280	650	900	
Connections Refrigerant Piping		Flare-nut Connection(with Flare Nuts)														Brazing	
Liquid Line	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	
	(in.)	(1/4)	(1/4)	(1/4)	(1/4)	(1/4)	(1/4)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)	
Gas Line	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ19.05	Φ22.2	
	(in.)	(1/2)	(1/2)	(1/2)	(1/2)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(3/4)	(7/8)	
Condensate Drain		VP25(Outer Diameter Φ32)															
External Static Pressure	Pa	50(80)	50(80)	50(80)	50(80)	50(80)	50(80)	50(80)	50(80)	120(90)	120(90)	120(90)	120(90)	120(90)	180	180	
Approximate Packing Measurement	m ³	0.21	0.21	0.21	0.21	0.27	0.27	0.27	0.27	0.38	0.38	0.38	0.52	0.52	0.90	1.06	

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

Cooling Operation Conditions	Heating Operation Conditions
Indoor Air Inlet Temperature: 27°C DB(80°F DB)	Indoor Air Inlet Temperature: 20°C DB(68°F DB)
*1): 19.5°C WB (67°F WB)	Outdoor Air Inlet Temperature: 7°C DB(45°F DB)
*2): 19.0°C WB (66.2°F WB)	6°C WB(43°F WB)
Outdoor Air Inlet Temperature: 35°C DB(95°F DB)	
Piping Length: 7.5 Meters	Piping Lift: 0 Meter
 - The sound pressure level is based on following conditions. 1.5m beneath the unit.
The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.
When bottom air inlet is adopted, sound pressure will increase according to factors such as installation mode and the room structure.
 - The data for external pressure indicates standard pressure setting values when air filter is not used.
 - The figures between brackets [] are unique data for the models with metallic fan and fan casing.
All models with capacity from 3.0 to 10HP are equipped with metallic fan and fan casing.

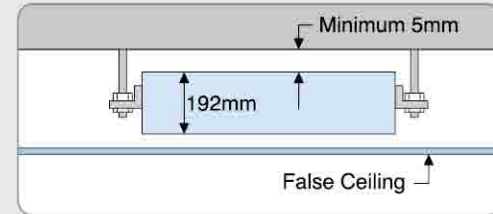
Low-height In-the-ceiling Type



SET FREE-RPIZ Technical Features

Installation Space-saving

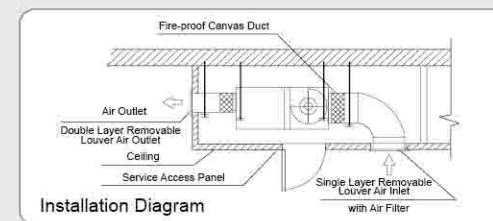
With a height of 192mm may be easily installed inside the low height residential ceiling.



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.

Flexibly Satisfy Varied Requests on Installation



NOTE:

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

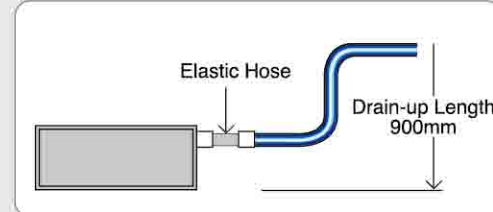
Quiet Operation

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.



Higher Fireproof Grade

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

Indoor Unit		Low-height In-the-ceiling Type							
Model		RPIZ-0.8FSN1Q	RPIZ-1.0FSN1Q [RPIZ-1.0FSN4Q/P]	RPIZ-1.3FSN1Q	RPIZ-1.5FSN1Q [RPIZ-1.5FSN4Q/P]	RPIZ-1.8FSN1Q	RPIZ-2.0FSN1Q [RPIZ-2.0FSN4Q/P]	RPIZ-2.3FSN1Q	RPIZ-2.5FSN1Q [RPIZ-2.5FSN4Q/P]
Power Supply		AC1Φ,220V~240V/50Hz,220V/60Hz,[220V/50Hz]							
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 [29-25-22]	31-29-26	31-29-26 [34-31-28]	34-30-28	34-30-28 [36-32-26]	35-33-30	35-33-30 [39-37-33]
Outer Dimensions	H	mm	192	192	192	192	192	192	192
	W	mm	900	900	900	900	1,170	1,170	1,170
	D	mm	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 [7.5/6.5/5.5]	10/8/7	10/8/7 [9.8/8.5/7.5]	14.5/12.5/10.5	14.5/12.5/10.5 [13.5/11.5/9.5]	16/14/12	16/14/12 [14.8/13.0/11.5]
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) [20(50)]	10(30)	10(30) [20(50)]	10(30)	10(30) [20(50)]	10(30)	10(30) [20(50)]
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°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.

4.The figures between brackets [] are unique data for the models with metallic fan and fan casing.

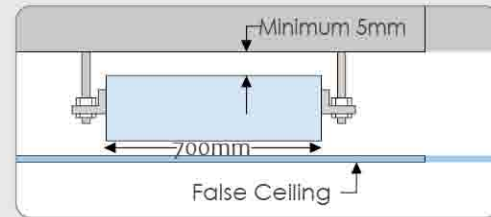
Slim In-the-ceiling Type



SET FREE-RPIZ Technical Features

Installation Space-saving

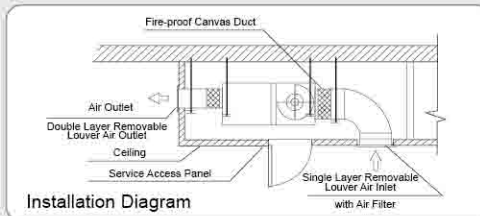
With a width of 700mm may be easily installed inside narrow residential ceiling.



Broad Range of External Static Pressure

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

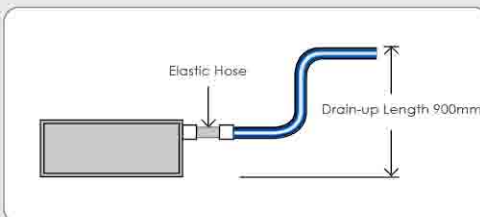
Flexibly Satisfy Varied Requests on Installation



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

Drain-up Mechanism as Standard Part

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



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

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

Cooling Operation Conditions	Heating Operation Conditions
Indoor Air Inlet Temperature: 27°C DB(80°F DB)	Indoor Air Inlet Temperature: 20°C DB(68°F DB)
*1): 19.5°C WB (67°F WB)	Outdoor Air Inlet Temperature: 7°C DB(45°F DB)
*2): 19.0°C WB (66.2°F WB)	6°C WB(43°F WB)
Outdoor Air Inlet Temperature: 35°C DB(95°F DB)	
Piping Length: 7.5 Meters	Piping Lift: 0 Meter
 - The sound pressure level is based on following conditions: 1.5m beneath the unit.
The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.
When bottom air inlet is adopted, sound pressure will increase according to factors such as installation mode and the room structure.
 - The data for external pressure indicates standard pressure setting values when air filter is not used.
 - The figures between brackets [] are unique data for the models with steel fan and fan casing.

4-Way Cassette Type

SET FREE-RCI Technique Features

Extremely Quiet Operation

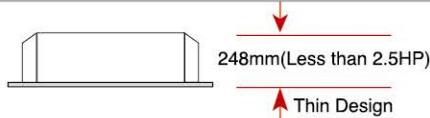
By employing a super-high-stream turbo fan (Three-dimensional twisted wing large bore and high efficiency), the wind flow efficiency has been improved. with the under damping slit mounted near the center of the revolving shaft, the abnormal noise which is unique to DC motors caused by the number of magnetic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

Unified Panel Sizes

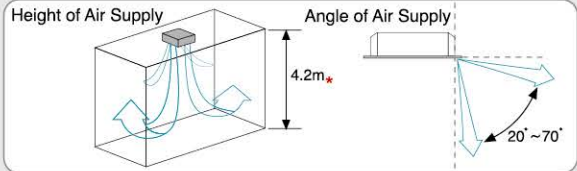
Panel sizes are unified to a 950mm square, neat and elegance, and well harmonized with decoration.

Compact and Thin

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



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



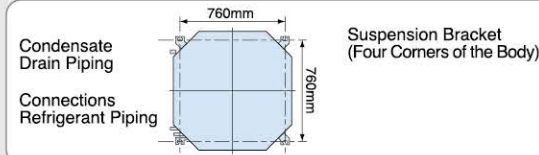
* When indoor unit model is RCI-3.0~6.0FSN1Q.
When indoor unit model is RCI-1.0~2.5FSN1Q, the value is 3.5m.

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

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

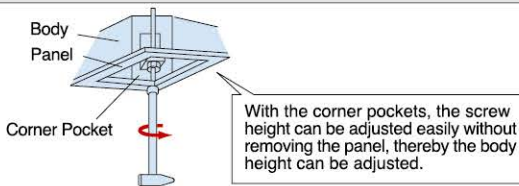
Flexible Refrigerant Piping

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

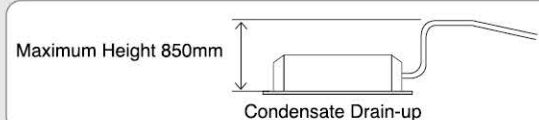


Body height easily adjustable in the corner pockets

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



Drain-up Mechanism as Standard Part



Indoor Unit		4-Way Cassette Type											
Model		RCI-1.0 FSN1Q	RCI-1.3 FSN1Q	RCI-1.5 FSN1Q	RCI-1.8 FSN1Q	RCI-2.0 FSN1Q	RCI-2.3 FSN1Q	RCI-2.5 FSN1Q	RCI-3.0 FSN1Q	RCI-3.3 FSN1Q	RCI-4.0 FSN1Q	RCI-5.0 FSN1Q	RCI-6.0 FSN1Q
Power Supply		AC1Φ,220V~240V/50Hz,220V/60Hz											
Nominal Cooling Capacity *1)	kW	2.9	3.8	4.4	5.2	5.8	6.5	7.3	8.7	9.3	11.6	14.5	16.5
	kcal/h	2,500	3,300	3,800	4,500	5,000	5,600	6,300	7,500	8,000	10,000	12,500	14,200
	Btu/h	9,900	13,000	15,000	17,700	19,800	22,200	24,900	29,700	31,700	39,600	49,500	56,300
Nominal Cooling Capacity *2)	kW	2.8	3.6	4.3	5.0	5.6	6.3	7.1	8.4	9.0	11.2	14.2	16.0
	kcal/h	2,400	3,100	3,700	4,300	4,800	5,400	6,100	7,200	7,700	9,600	12,200	13,800
	Btu/h	9,600	12,300	14,700	17,100	19,100	21,500	24,200	28,700	30,700	38,200	48,500	54,600
Nominal Heating Capacity	kW	3.3	4.2	4.9	5.6	6.5	7.5	8.5	9.6	10.0	13.0	16.3	18.0
	kcal/h	2,800	3,600	4,200	4,800	5,600	6,500	7,300	8,300	8,600	11,200	14,000	15,500
	Btu/h	11,300	14,300	16,700	19,100	22,200	25,600	29,000	32,800	34,100	44,400	55,600	61,400
Sound Pressure Level (High/Medium/Low)	dB(A)	32-30-28	32-30-28	32-30-28	32-30-28	32-30-28	32-30-28	32-30-28	34-32-30	34-32-30	41-36-33	43-38-35	44-40-36
Outer Dimensions(H)	mm	248	248	248	248	248	248	248	298	298	298	298	298
	(in.)	(9-3/4)	(9-3/4)	(9-3/4)	(9-3/4)	(9-3/4)	(9-3/4)	(9-3/4)	(11-3/4)	(11-3/4)	(11-3/4)	(11-3/4)	(11-3/4)
Outer Dimensions(W)	mm	840	840	840	840	840	840	840	840	840	840	840	840
	(in.)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)
Outer Dimensions(D)	mm	840	840	840	840	840	840	840	840	840	840	840	840
	(in.)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)	(33-1/16)
Net Weight	kg	23	23	23	24	24	24	24	26	26	29	29	29
	(lbs)	(51)	(51)	(51)	(53)	(53)	(53)	(53)	(57)	(57)	(64)	(64)	(64)
Refrigerant		R410A(Nitrogen-charged for Corrosion-resistance)											
Indoor Fan Air Flow Rate (High/Medium/Low)	m ³ /min	13/12/11	15/13.5/12	15/13.5/12	16/14/12	16/14/12	19/17/14	20/17/15	26/23/20	26/23/20	32/28/24	34/29/25	37/32/27
Motor Power	W	56	56	56	56	56	56	56	56	56	108	108	108
Connections Refrigerant Piping		Flare-nut Connection(with Flare Nuts)											
Liquid Line	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	(in.)	(1/4)	(1/4)	(1/4)	(1/4)	(1/4)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)
Gas Line	mm	Φ12.7	Φ12.7	Φ12.7	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88
	(in.)	(1/2)	(1/2)	(1/2)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)
Condensate Drain		VP25(Outer Diameter Φ32)											
Approximate Packing Measurement	m ³	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.26	0.26	0.26	0.26	0.26
Standard Accessories		Suspension Brackets											
Panel Model		P-N23NAQ											
Cabinet Color		Neutral White											
Outer Dimensions(H)	mm	37	37	37	37	37	37	37	37	37	37	37	37
	(in.)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)	(1-7/16)
Outer Dimensions(W)	mm	950	950	950	950	950	950	950	950	950	950	950	950
	(in.)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)
Outer Dimensions(D)	mm	950	950	950	950	950	950	950	950	950	950	950	950
	(in.)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)	(37-3/8)
Net Weight	kg	6	6	6	6	6	6	6	6	6	6	6	6
	(lbs)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)
Approximate Packing Measurement	m ³	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08

NOTES:

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

Cooling Operation Conditions

Indoor Air Inlet Temperature:27°C DB(80°F DB)

*1):19.5°C WB (67°F WB)

*2):19.0°C WB (66.2°F WB)

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)

Outdoor Air Inlet Temperature: 35°C DB(95°F DB)

Piping Length: 7.5 Meters Piping Lift: 0 Meter

2. The sound pressure level is based on following conditions.1.5m beneath the unit.

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

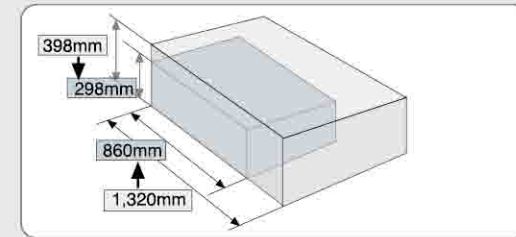
2-Way Cassette Type



SET FREE-RCD Technique Features

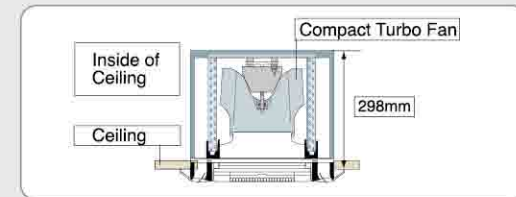
Downsizing and weight reduction simplify handling for easier renewal

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 control switch.

*Anti-mold filter as standard accessory

Indoor Unit		2-Way Cassette Type						
Model		RCD-1.0FSN2	RCD-1.5FSN2	RCD-2.0FSN2	RCD-2.5FSN2	RCD-3.0FSN2	RCD-4.0FSN2	RCD-5.0FSN2
Power Supply		AC1Φ,220V~240V/50Hz,220V/60Hz						
Nominal Cooling Capacity *1)	kW	2.9	4.1	5.8	7.3	8.3	11.6	14.5
	kcal/h	2,500	3,550	5,000	6,300	7,100	10,000	12,500
	Btu/h	9,900	14,100	19,800	25,000	28,200	39,700	49,600
Nominal Cooling Capacity *2)	kW	2.8	4.0	5.6	7.1	8.0	11.2	14.0
	kcal/h	2,400	3,400	4,800	6,100	6,900	9,600	12,000
	Btu/h	9,600	13,600	19,100	24,200	27,300	38,200	47,800
Nominal Heating Capacity	kW	3.2	4.8	6.3	8.5	9.0	12.5	16.0
	kcal/h	2,800	4,100	5,400	7,300	7,700	10,700	13,800
	Btu/h	10,900	16,400	21,500	29,000	30,700	42,600	54,600
Sound Pressure Level (High/Medium/Low)	dB(A)	34-32-30	35-32-30		38-34-31		40-36-33	43-40-36
Outer Dimensions(H)	mm	298	298	298	298	298	298	298
	(in.)	(11-3/4)	(11-3/4)	(11-3/4)	(11-3/4)	(11-3/4)	(11-3/4)	(11-3/4)
Outer Dimensions(W)	mm	860	860	860	860	860	1420	1420
	(in.)	(33-7/8)	(33-7/8)	(33-7/8)	(33-7/8)	(33-7/8)	(55-7/8)	(55-7/8)
Outer Dimensions(D)	mm	620	620	620	620	620	620	620
	(in.)	(24-7/16)	(24-7/16)	(24-7/16)	(24-7/16)	(24-7/16)	(24-7/16)	(24-7/16)
Net Weight	kg	27	27	27	30	30	48	48
	(lbs)	(60)	(60)	(60)	(66)	(66)	(106)	(106)
Refrigerant		R410A(Nitrogen-charged for Corrosion-resistance)						
Indoor Fan Air Flow Rate (High/Medium/Low)	m ³ /min	10/9/8	13/11/9	15/13/11	19/16/14	19/16/14	29/24/21	34/29/25
Motor Power	W	35	35	35	55	55	35×2	55×2
Connections Refrigerant Piping		Flare-nut Connection(with Flare Nuts)						
Liquid Line	mm	Φ6.35	Φ6.35	Φ6.35	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	(in.)	(1/4)	(1/4)	(1/4)	(3/8)	(3/8)	(3/8)	(3/8)
Gas Line	mm	Φ12.7	Φ12.7	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88
	(in.)	(1/2)	(1/2)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)
Condensate Drain		VP25						
Approximate Packing Measurement	m ³	0.23	0.23	0.23	0.23	0.23	0.37	0.37
Panel Model		P-N23DNA					P-N46DNA	
Cabinet Color		Neutral White						
Outer Dimensions(H)	mm	30	30	30	30	30	30	30
	(in.)	(1-3/16)	(1-3/16)	(1-3/16)	(1-3/16)	(1-3/16)	(1-3/16)	(1-3/16)
Outer Dimensions(W)	mm	1100	1100	1100	1100	1100	1660	1660
	(in.)	(43-5/16)	(43-5/16)	(43-5/16)	(43-5/16)	(43-5/16)	(65-3/8)	(65-3/8)
Outer Dimensions(D)	mm	710	710	710	710	710	710	710
	(in.)	(27-15/16)	(27-15/16)	(27-15/16)	(27-15/16)	(27-15/16)	(27-15/16)	(27-15/16)
Net Weight	kg	6	6	6	6	6	8	8
	(lbs)	(13)	(13)	(13)	(13)	(13)	(18)	(18)
Approximate Packing Measurement	m ³	0.1	0.1	0.1	0.1	0.1	0.15	0.15

NOTES:

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

Cooling Operation Conditions

Indoor Air Inlet Temperature: 27°C DB(80°F DB)

*1): 19.5°C WB (67°F WB)

*2): 19.0°C WB (66.2°F WB)

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)

Outdoor Air Inlet Temperature: 35°C DB(95°F DB)

Piping Length: 7.5 Meters Piping Lift: 0 Meter

2. The sound pressure level is based on following conditions.
1.5m Meters Beneath the Unit.

Voltage of the power source for the indoor fan motor is 220V. In case of the power source of 240V, the sound pressure level increases by about 1dB.

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

Wall Type



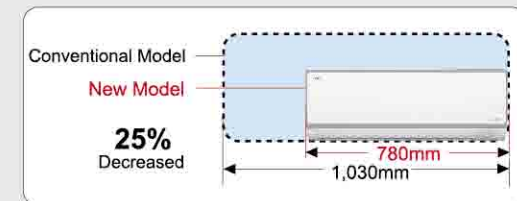
SET FREE-RPK Technique Features

Easy Installation

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

Industry-leading Compactness

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



Light Weight Design

Units weight has been vastly reduced.

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

Wireless Remote Controller as Standard Part

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



Easy Troubleshooting

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

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

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

Cooling Operation Conditions Indoor Air Inlet Temperature: 27°C DB(80°F DB) *1): 19.5°C WB (67°F WB) *2): 19.0°C WB (66.2°F WB) Outdoor Air Inlet Temperature: 35°C DB(95°F DB) Piping Length: 7.5 Meters Piping Lift: 0 Meter	Heating Operation Conditions Indoor Air Inlet Temperature: 20°C DB(68°F DB) Outdoor Air Inlet Temperature: 7°C DB(45°F DB) 6°C WB(43°F WB)
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 - The sound pressure level is based on following conditions.
 1 Meters Beneath the Unit and 1 Meters from Inlet Grille.
 Voltage of the power source for the indoor fan motor is 220V.
 In case of the power source of 240V, the sound pressure level increases by about 1~2dB.
 The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

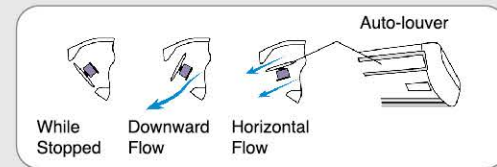
Ceiling Type



SET FREE-RPC Technique Features

Amenity improved by auto-louver at air opening

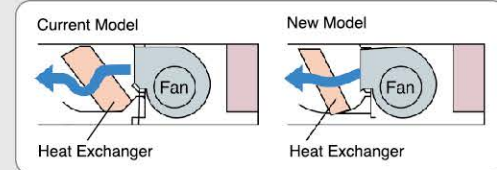
The round, lower part of the air opening complements the gentle, quiet operation. The auto-louver in the upper part of the opening automatically controls upward and downward motion of air flow, while the grille serves as a shutter when stopped.



Noise and vibration drastically reduced by our original design

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

- Improved resistance of air-flow path

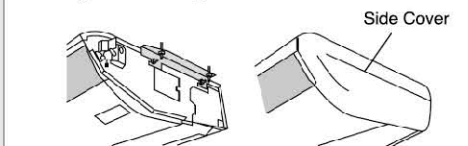


Simple Installation and Maintenance

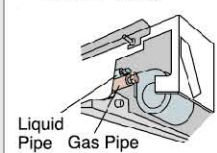
- Installation time is much shorter
- A long-filter (Mildew-proof) is fitted as standard. No maintenance is required for about 2,500 hours of operation

*For ordinary offices

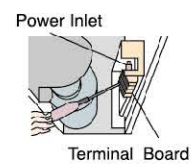
(1) Unit suspension bolts are fitted externally for easy adjustment of suspending height, and are covered with side-covers for a good exterior appearance.



(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-1.5FSN3	RPC-2.0FSN3	RPC-2.5FSN3	RPC-3.0FSN3	RPC-4.0FSN3	RPC-5.0FSN3	RPC-6.0FSN3
Power Supply		AC1Φ, 220V~240V/50Hz, 220V/60Hz						
Nominal Cooling Capacity *1)	kW	4.1	5.8	7.3	8.3	11.6	14.5	16.5
	kcal/h	3,550	5,000	6,300	7,100	10,000	12,500	14,200
	Btu/h	14,100	19,800	25,000	28,200	39,700	49,600	56,300
Nominal Cooling Capacity *2)	kW	4.0	5.6	7.1	8.0	11.2	14.0	16.0
	kcal/h	3,400	4,800	6,100	6,900	9,600	12,000	13,800
	Btu/h	13,600	19,100	24,200	27,300	38,200	47,800	54,600
Nominal Heating Capacity	kW	4.8	6.3	8.5	9.0	12.5	16.0	18.0
	kcal/h	4,100	5,400	7,300	7,700	10,700	13,800	15,500
	Btu/h	16,400	21,500	29,000	30,700	42,600	54,600	61,400
Sound Pressure Level (High2/High/Medium/Low)	dB(A)	37/35/31/28	38/35/31/28	38/35/32/29	40/37/33/29	44/42/37/32	48/45/41/35	49/47/42/36
Cabinet Color		Neutral White						
Outer Dimensions(H)	mm	235	235	235	235	235	235	235
Outer Dimensions(W)	mm	960	960	1270	1270	1580	1580	1580
Outer Dimensions(D)	mm	690	690	690	690	690	690	690
Net Weight	kg	26	27	35	35	41	41	41
	(lbs)	(57)	(59)	(77)	(77)	(90)	(90)	(90)
Refrigerant		R410A (Nitrogen-charged for Corrosion-resistance)						
Indoor Fan Air Flow Rate (High2/High/Medium/Low)	m ³ /min	15/13/11/9	15/13/11/9	19/16.5/14/11.5	21/18.5/15.5/12.5	30/26.5/22/17	35/31/25.5/20	37/32.5/27/21
	(cfm)	(530/459/388/318)	(530/459/388/318)	(671/583/494/406)	(742/653/547/441)	(1059/936/777/600)	(1236/1095/900/706)	(1306/1148/953/742)
Motor Power	W	50	50	80	80	160	160	160
Connections Refrigerant Piping		Flare-nut Connection (with Flare Nuts)						
Liquid Line	mm	Φ6.35	Φ6.35	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	(in.)	(1/4)	(1/4)	(3/8)	(3/8)	(3/8)	(3/8)	(3/8)
Gas Line	mm	Φ12.7	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88
	(in.)	(1/2)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)	(5/8)
Condensate Drain		VP20	VP20	VP20	VP20	VP20	VP20	VP20
Approximate Packing Measurement	m ³	0.23	0.23	0.31	0.31	0.38	0.38	0.38
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 Operation Conditions

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

2. The sound pressure level is based on following conditions.

1 Meters Beneath the Unit and 1 Meters from Inlet Grille.
Voltage of the power source for the indoor fan motor is 220V.

In case of the power source of 240V, the sound pressure level increases by about 1~2dB.

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

Floor Type Floor Concealed Type

SET FREE-RPF/RPFI Technique Features

Floor Type

Slim design for perimeter zone air conditioning

Space-saving slim unit, only 220mm in depth

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

Effective use of space by window

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

Floor Concealed Type

Compact design for limited space inside of perimeter wall

So compact that it fits into even a tiny space

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

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

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

<u>Cooling Operation Conditions</u>	<u>Heating Operation Conditions</u>
Indoor Air Inlet Temperature: 27°C DB(80°F DB)	Indoor Air Inlet Temperature: 20°C DB(68°F DB)
*1): 19.5°C WB (67°F WB)	Outdoor Air Inlet Temperature: 7°C DB(45°F DB)
*2): 19.0°C WB (66.2°F WB)	6°C WB(43°F WB)
Outdoor Air Inlet Temperature: 35°C DB(95°F DB)	
Piping Length: 7.5 Meters	Piping Lift: 0 Meter
 - The sound pressure level is based on following conditions.

Floor type: 1.5 meters from floor level.
Floor concealed type: 1.5 meters from the unit and 1.5 meters from the floor level.
Voltage of the power source for the indoor fan motor is 220V.
In case of the power source of 240V, the sound pressure level increases by about 1~2dB.
The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

Outdoor Units Parameter

Model		RAS-8FSN6Q	RAS-10FSN6Q	RAS-12FSN6Q	RAS-14FSN6Q
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	208	210	212	295
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	m³/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)			
Liquid Line	mm	Φ9.53	Φ9.53	Φ12.7	Φ12.7
Gas Line	mm	Φ19.05	Φ22.2	Φ25.4	Φ25.4
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	m³	1.57	1.57	1.57	1.97

Model		RAS-24FSN6Q	RAS-26FSN6Q	RAS-28FSN6Q	RAS-30FSN6Q
Combination		RAS-10FSN6Q RAS-14FSN6Q	RAS-12FSN6Q RAS-14FSN6Q	RAS-14FSN6Q RAS-14FSN6Q	RAS-14FSN6Q RAS-16FSN6Q
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	505	507	590	605
Refrigerant Category		R410A			
Refrigerant Flow Control		Micro-computer Control Expansion Valve			
Compressor Model		E656DHD+E655DHD+E655 DH	E656DHD+E655DHD+E655 DH	E656DHD+E655DH+E656D HD+E655DH	E656DHD+E655DH+E656D HD+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	m³/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)			
Liquid Line	mm	Φ15.88	Φ19.05	Φ19.05	Φ19.05
Gas Line	mm	Φ28.6	Φ31.75	Φ31.75	Φ31.75
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	m³	—	—	—	—

Model		RAS-16FSN6Q	RAS-18FSN6Q	RAS-20FSN6Q	RAS-22FSN6Q
Combination		—	—	RAS-8FSN6Q RAS-12FSN6Q	RAS-8FSN6Q RAS-14FSN6Q
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	310	315	420	503
Refrigerant Category		R410A			
Refrigerant Flow Control		Micro-computer Control Expansion Valve			
Compressor Model		E656DHD+E655DH	E656DHD+E855DH	E656DHD+E656DHD	E656DHD+E656DHD+E655 DH
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	m³/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)			
Liquid Line	mm	Φ12.7	Φ15.88	Φ15.88	Φ15.88
Gas Line	mm	Φ28.6	Φ28.6	Φ28.6	Φ28.6
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	m³	1.97	1.97	-	-

Model		RAS-32FSN6Q	RAS-34FSN6Q	RAS-36FSN6Q	RAS-38FSN6Q
Combination		RAS-16FSN6Q RAS-16FSN6Q	RAS-16FSN6Q RAS-18FSN6Q	RAS-18FSN6Q RAS-18FSN6Q	RAS-12FSN6Q RAS-12FSN6Q RAS-14FSN6Q
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	620	625	630	719
Refrigerant Category		R410A			
Refrigerant Flow Control		Micro-computer Control Expansion Valve			
Compressor Model		E656DHD+E655DH+E656D HD+E655DH	E656DHD+E655DH+E656D HD+E855DH	E656DHD+E855DH+E656D HD+E855DH	E656DHD+E656DHD+E656 DHD+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	m³/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)			
Liquid Line	mm	Φ19.05	Φ19.05	Φ19.05	Φ19.05
Gas Line	mm	Φ31.75	Φ31.75	Φ38.1	Φ38.1
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	m³	—	—	—	—

Outdoor Units Parameter

Model		RAS-40FSN6Q	RAS-42FSN6Q	RAS-44FSN6Q	RAS-46FSN6Q
Combination		RAS-12FSN6Q RAS-12FSN6Q RAS-16FSN6Q	RAS-12FSN6Q RAS-12FSN6Q RAS-18FSN6Q	RAS-12FSN6Q RAS-14FSN6Q RAS-18FSN6Q	RAS-12FSN6Q RAS-16FSN6Q RAS-18FSN6Q
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	734	739	822	837
Refrigerant Category		R410A			
Refrigerant Flow Control		Micro-computer Control Expansion Valve			
Compressor Model		E656DHD+E656DHD+E656 DHD+E655DH	E656DHD+E656DHD+E656 DHD+E855DH	E656DHD+E656DHD+E655 DH+E656DHD+E855DH	E656DHD+E656DHD+E655 DH+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	m³/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)			
Liquid Line	mm	Φ19.05	Φ19.05	Φ19.05	Φ19.05
Gas Line	mm	Φ38.1	Φ38.1	Φ38.1	Φ38.1
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	m³	—	—	—	—

Model		RAS-48FSN6Q	RAS-50FSN6Q	RAS-52FSN6Q	RAS-54FSN6Q
Combination		RAS-12FSN6Q RAS-18FSN6Q RAS-18FSN6Q	RAS-14FSN6Q RAS-18FSN6Q RAS-18FSN6Q	RAS-16FSN6Q RAS-18FSN6Q RAS-18FSN6Q	RAS-18FSN6Q RAS-18FSN6Q RAS-18FSN6Q
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	842	925	940	945
Refrigerant Category		R410A			
Refrigerant Flow Control		Micro-computer Control Expansion Valve			
Compressor Model		E656DHD+E656DHD+E855 DH+E656DHD+E855DH	E656DHD+E655DH+E656D HD+E855DH+E656DHD+E8 55DH	E656DHD+E655DH+E656D HD+E855DH+E656DHD+E8 55DH	E656DHD+E855DH+E656D HD+E855DH+E656DHD+E8 55DH
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	m³/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)			
Liquid Line	mm	Φ19.05	Φ19.05	Φ19.05	Φ19.05
Gas Line	mm	Φ38.1	Φ38.1	Φ38.1	Φ38.1
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	m³	—	—	—	—

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)

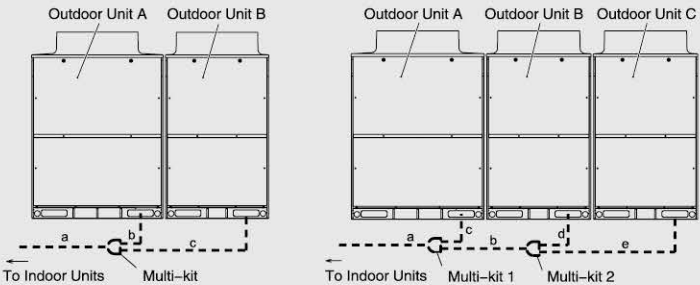
2.The sound pressure level is based on following conditions:
1.5 Meters from floor Level, and 1 Meters from the unit service cover surface.
The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

First Multi-kit

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

Piping Connection Kit(for combined system)

Outdoor Unit	RAS-20 ~ 24FSN6Q	RAS-26 ~ 36FSN6Q	RAS-38 ~ 42FSN6Q	RAS-44 ~ 54FSN6Q
Multi-kit 1			M-30SNQ	M-30SNQ
Multi-kit 2	M-20SNQ	M-30SNQ	M-20SNQ	M-30SNQ



First Multi-kit ~ Last Multi-kit

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

Last Multi-kit ~ Indoor Unit

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

NOTES:

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

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, 220~240V/50Hz,220V/60Hz								
Combined Outdoor Unit Model		SET-FREE FSN6Q Series								
Cooling Capacity		kW	14.0		22.4			28.0		
Cooling Power Input		kW	0.30	0.31	0.48	0.50	0.60	0.50	0.58	0.70
Nominal Cooling Current		A	1.4	1.3	2.2	2.1	2.7	2.3	2.4	3.2
Heating Capacity		kW	13.7		21.9			24.5		
Heating Power Input		kW	0.30	0.31	0.48	0.50	0.60	0.50	0.58	0.70
Nominal Heating Current		A	1.4	1.3	2.2	2.1	2.7	2.3	2.4	3.2
Outer Dimensions	H	mm	370		486			486		
	W	mm	1,320		1,270			1,270		
	D	mm	800		1,069			1,069		
Sound Pressure Level (Overall A Scale)		dB	42		44			45		
Net Weight		kg	60		97			97		
Refrigerant			R410A							
Indoor Fan Air Flow Rate		m³/min	18		28			35		
External Static Pressure		Pa	200		220			220		
Drain Piping Size			VP25,Outer Diameter:φ32mm							
Refrigerant Liquid Line Size		mm	φ9.53		φ9.53			φ9.53		
Refrigerant Gas Line Size		mm	φ15.88		φ19.05			φ22.2		
Temperature Range of Fresh Air Drawn			Cooling:20°C~43°C, Heating:-7°C~15°C							

NOTES:

- 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)
- 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.
- An air filter with dust collection efficiency more than 50% needs to be attached to the duct system of the suction side at site.
- 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.
- 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.
- 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).
- When SET-FREE outdoor unit connected only with all fresh air indoor unit, the configuration rate is 100% (Recommended).
- 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, 380~415V/50Hz													
Combined Outdoor Unit Model			RAS-12FSN6Q		RAS-16FSN6Q		RAS-16FSN6Q		RAS-20FSN6Q		RAS-20FSN6Q		RAS-20FSN6Q		RAS-20FSN6Q	
Cooling Capacity		kW	33.5		45.0		45.0		56.0		56.0		56.0		56.0	
Cooling Power Input		kW	0.68	0.72	0.73	0.79	1.05	1.08	1.07	1.10	1.25	1.24	1.27	1.34	1.52	1.56
Nominal Cooling Current		A	1.43	1.45	1.39	1.63	1.88	1.83	1.90	1.86	2.41	2.40	2.51	2.59	2.92	2.95
Heating Capacity		kW	26.8		36.0		36.0		44.8		44.8		44.8		44.8	
Heating Power Input		kW	0.68	0.72	0.73	0.79	1.05	1.08	1.07	1.10	1.25	1.24	1.27	1.34	1.52	1.56
Nominal Heating Current		A	1.43	1.45	1.39	1.63	1.88	1.83	1.90	1.86	2.41	2.40	2.51	2.59	2.92	2.95
Outer Dimensions	H	mm	486		635		635		735		735		735		735	
	W	mm	1,270		1,950		1,950		1,950		1,950		1,950		1,950	
	D	mm	1,069		805		805		805		805		805		805	
Sound Pressure Level		dB(A)	55		57		60		59		63		61		65	
Net Weight		kg	97		196		196		222		222		222		222	
Refrigerant			R410A													
Indoor Fan Air Flow Rate		m³/h	3000		4000		4000		5000		5000		6000		6000	
External Static Pressure		Pa	220		200		300		200		320		200		300	
Air Inlet Size		mm	1,100 x 415		1,522 x 522		1,522 x 522		1,522 x 622		1,522 x 622		1,522 x 622		1,522 x 622	
Air Outlet Size		mm	1,106 x 338		850 x 272		850 x 272		850 x 272		850 x 272		850 x 272		850 x 272	
Drain Piping Size			VP25		RC1(Internal Screw)											
Refrigerant Liquid Line Size		mm	Φ12.7		Φ12.7		Φ12.7		Φ15.88		Φ15.88		Φ15.88		Φ15.88	
Refrigerant Gas Line Size		mm	Φ25.4		Φ25.4		Φ25.4		Φ28.6		Φ28.6		Φ28.6		Φ28.6	
Temperature Range of Fresh Air Drawn			Cooling:20℃~43℃, Heating:-7℃~15℃													

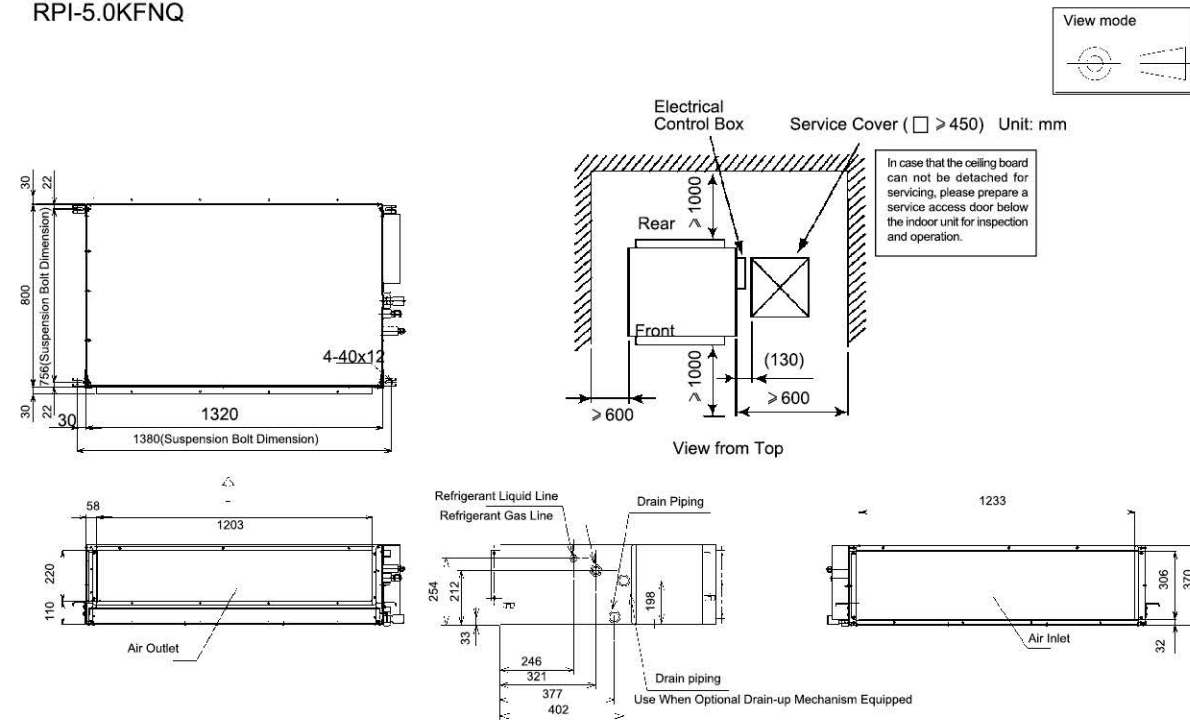
NOTES:

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



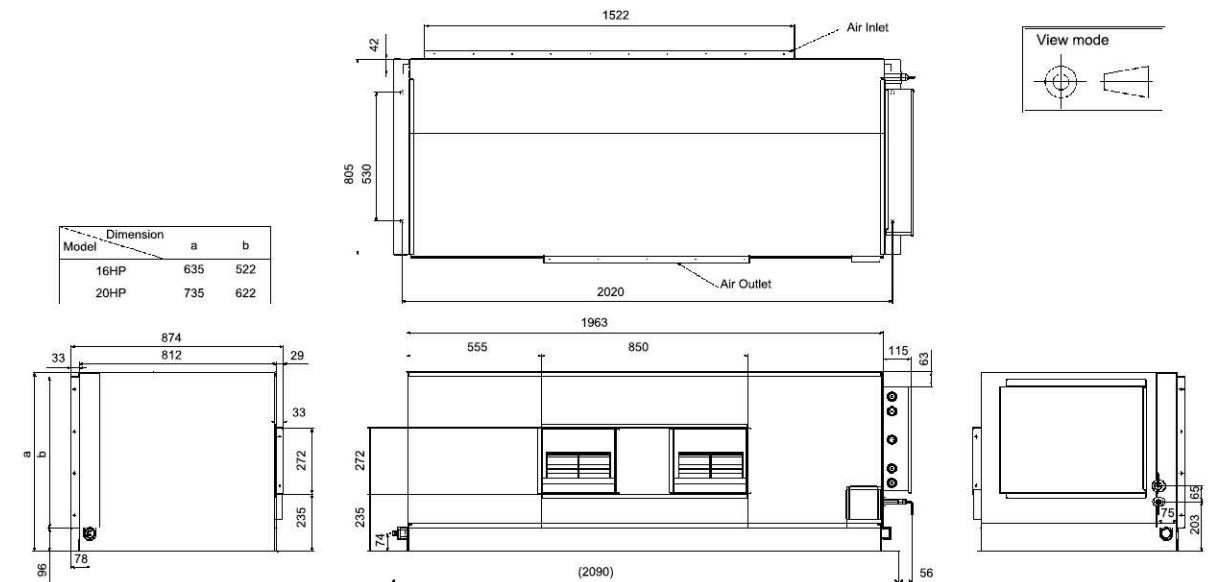
Dimensional Data

RPI-5.0KFNQ

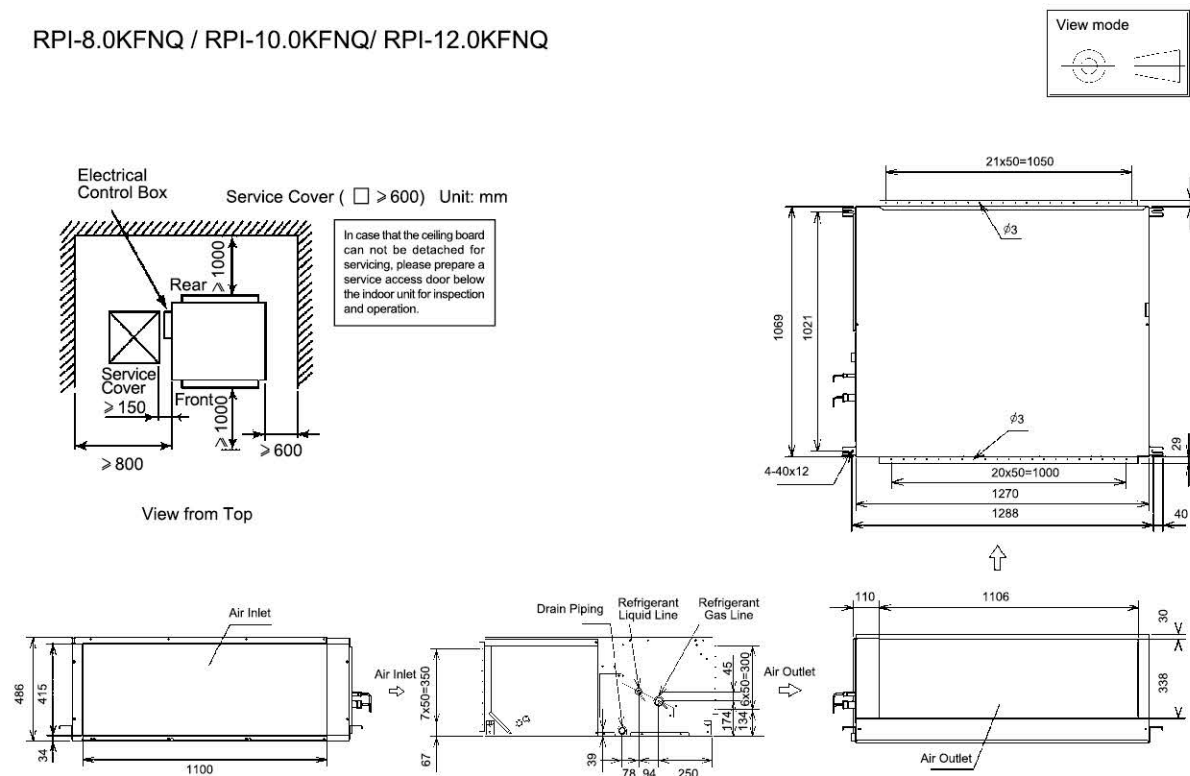


Dimensional Data

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



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



SPACE for OPERATION and MAINTENANCE

