

Heat Recovery Operation and 2 pipe Heat Pump Operation

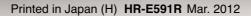


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R410A



VRF Multi-split Air Conditioning System

SET-FREE FSXN



SET-FREE FSXN debut

Multi air-conditioning system that embodies usability

There have been increasing needs, upon the introduction of an air-condition system, for air conditioners capable of simultaneously cooling and heating, because the space where cooling is required all year round and the space where cooling and heating should be changed over seasonally coexist in office buildings and other places. Also, in order to save cost and space, lately, multiple low-capacity units are being integrated into and utilized as a high-capacity outdoor unit with increasing frequency.

Furthermore, from the viewpoint of environmental consideration, a demand is growing for an air-conditioning managethe operating condition and the usage status of their air unattended operation. To meet various kinds of needs for an air-conditioning system for buildings, Hitachi developed a new multi-split air-conditioning system for buildings called "SET-FREE FSXN".



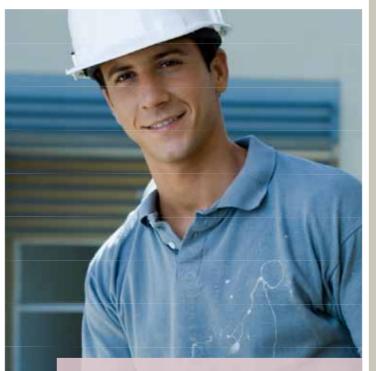
- Consideration for the environment

Benefits for End Users

what we do to the earth, we do to ourselves



Benefits for Design Companies



Construction Contractors Benefits f

Advantages

Selectable between Heat Recovery and 2-Pipe Heat Pump operations

■ Wide Product Range

All Models (8 to 54HP) for Heat Recovery

Energy Saving

- Heat Recovery Operation
- DC Inverter Driven Compressor

Flexibility of Installation

- Compact and Light Design
- Flexible Refrigrant Piping Works

Comfort and Reliability

- Noise Reduction Preference Mode (option)
- Automatic Simple judgement System for Refrigerant Amount
- Rotational Operation to Distribute Load of Outdoor Units
- Backup Operation Function for Emergency

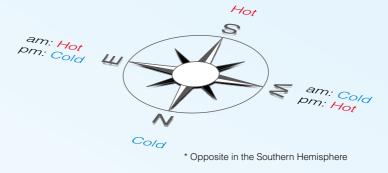
Control by Network System



Heat Recovery Operation

"Heat Recovery Operation" . . . It's the Air-conditioning Need of the Era

When considering the need to switch between cooling and heating for day and night times at the turn of the season, the difference in room temperatures due to the influence of sunshine and the need to cool offices all year round, which arises from the widespread use of computers and terminal devices, heat recovery operation has already become a precondition for air-conditioning systems for buildings. To meet such needs, Hitachi developed a new multi-split airconditioning system called "SET-FREE FSXN", which supports heat recovery operation. Based on our existing sheat recovery operation system, "SET-FREE FXN," we have expanded the lineup, enhanced efficiency, reduced the dimensions and improved workability. As a result, SET-FREE FSXN offers superb energy-saving efficiency and better comfort.



HOTE

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





In office buildings ..

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



In commercial buildings ...

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





In hotels ...

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



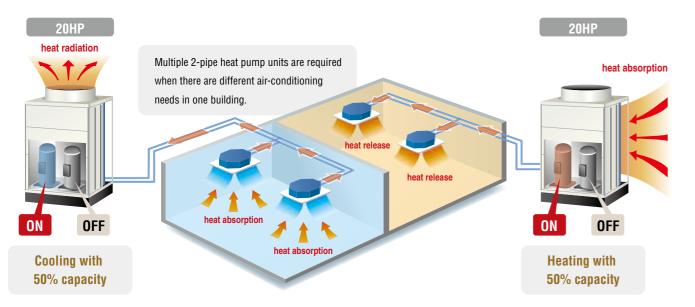


Heat Recovery Operation

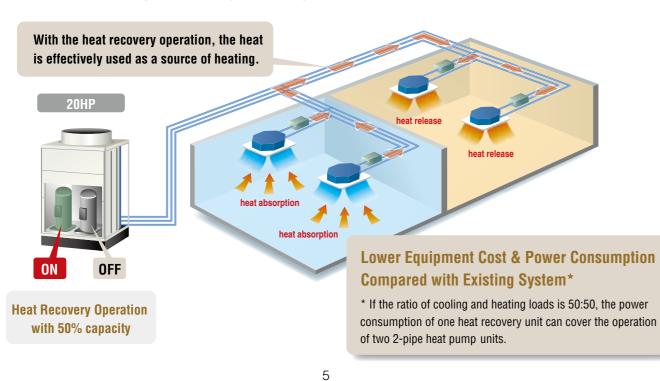
Heat Recovery Operation Significantly Enhances Energy-saving Efficiency

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

Existing system (2-pipe heat pump operation)



SET-FREE FSXN (heat recovery operation)



System Configuration

Outdoor Unit

- Heat recovery and 2-pipe heat pump operations common unit
- Module type (external connection)



| | Specificati | ons | Indoor Unit C | Connection |
|-----------|-----------------------------|--------------------|---------------|----------------------------|
| Model | Dimension W x D x H (mm) | Net Weight (kg) | Total HP | Number of Indoor Units* |
| CH-6.0N1 | 301 x 214 x 191 | 7 | 6HP <u>≥</u> | 1~7 |
| CH-10.0N1 | 501 x 214 x 151 | ' | 6.1HP to 10HP | 1~8 |

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

NOTE : When switching the refrigerant flow channel at Operation ON/OFF, Thermo ON/OFF, Defrost Operationand Operation Mode, refrigerant flow noise may be heard from CH Unit. Therefore install the unit in a place such as under the roof of corridor so that the sound may not beheard in the room.

Refrigerant Piping

Max. length: 165m Total length: 1,000m Height difference: 50m

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Transmission

• Corresponding to H-LINK II Max. 64 refrigerant groups Max. 160 indoor units

Connectable Indoor Unit Max. 64 units Capacity range: 50-130%



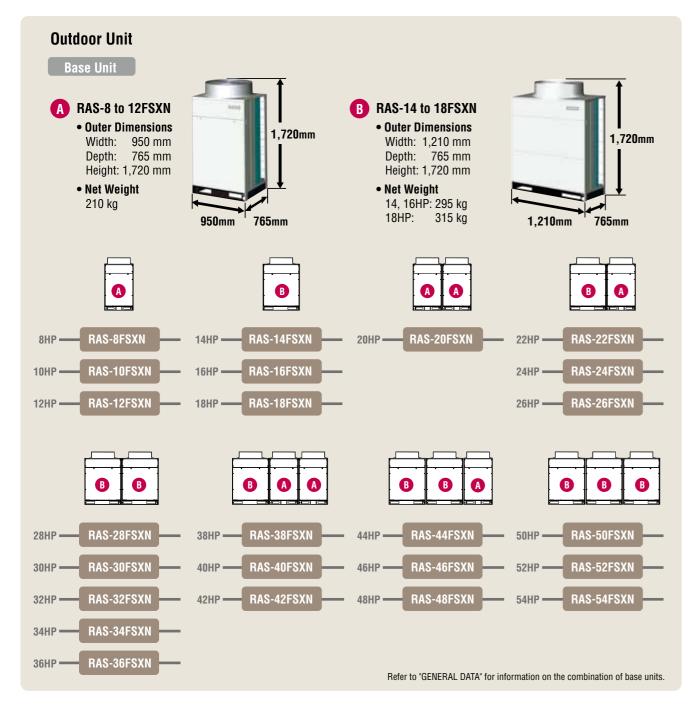
Integrated Remote Controller

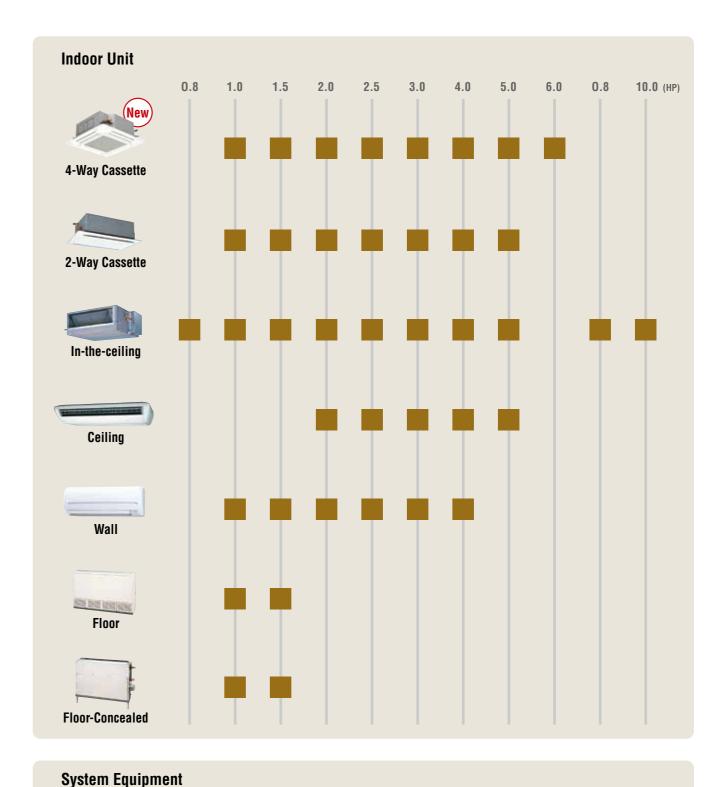


Product Line-up

All 48 models (8 to 54HP) for Heat Recovery and 2-pipe Heat Pump Operation System Most suitable Unit Can be Chosen from Large Selection

Space, structure and necessary functions, in line with evolution in building design and air conditioning requirements, have also diversified. The HITACHI SET-FREE FSXN Series offers 6 types of modular outdoor units and 7 types (40 models) of indoor units. By combining units from a wide selection of models, you can create a custom air conditioning environment to satisfy your specific building conditions. Outdoor unit capacity has been extended up to 54HP by combining the base units (max. 3). This system can provide both Heat Recovery Operation and 2-pipe Heat Pump Operation Systems as follows.





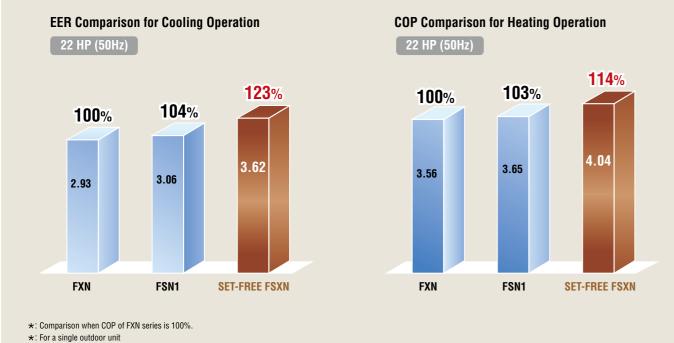




Energy-saving and Comfort

Sophisticated energy-saving technology delivers outstanding effects

Refrigerant cycle and control achieve an industry-leading level of efficiency and energy-saving performance.



*: The cooling and heating performances shown are the values when combined with our specified indoor units.

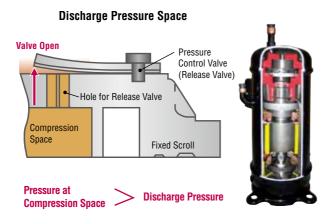
New Type DC Inverter Scroll Compressor

Improved Intermediate Pressure Performance

The intermediate pressure performance is drastically improved by using a release valve and optimizing orbiting scroll lifting force in the improved new compression mechanism, therefore intermediate pressure performance is largely improved for energy-saving.

Release Valve Adoption Prevents from Overcompression.

Orbiting Scroll Lifting Force Optimization is Improved Leakage Loss Reduction.



Capacity Control by 1 Hz

Performance is greatly improved by the high efficiency DC inverter compressor and 100% load compressor, and losslessenergy-saving operation is achieved (depending on the building).

Wide Working Range

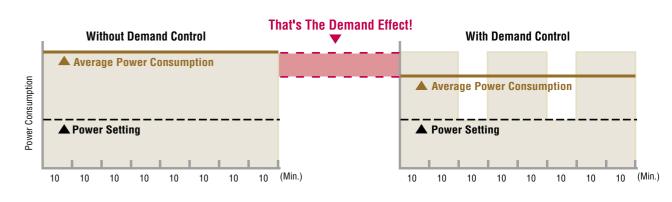
SET-FREE FSXN can handle a wide range of outside air conditions, thus extending the flexibility of installation space and climatic environment.

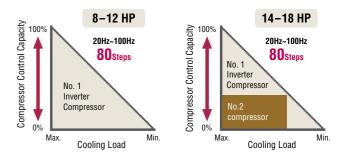
Self-demand Control

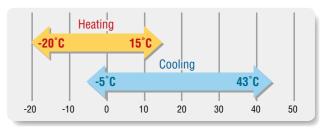
A newly developed self-demand function has largely improved energy-saving effects. Since the current is self-detected and demand control performed automatically, no signal wiring work is required. Conventional demand control using demand signals is also available, and you can select various operations as required.

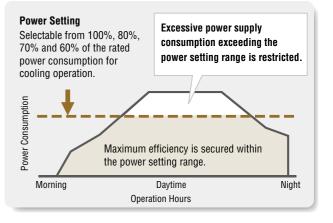
Wave Mode

Wave mode turns demand control ON and OFF alternately at intervalsof about 20 min. or 10 min. While power is always saved, temperature changes are also minimized to maintain a comfortable room temperature.









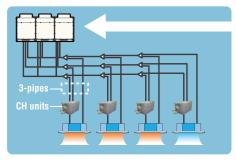
Flexibility of Installation

Heat Recovery and 2-pipe Heat Pump operations Selectable for Outdoor Units

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

When used as a

When used as a heat recovery operation system

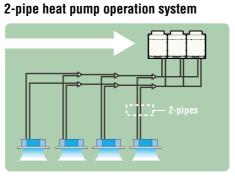


The heat recovery and 2-pipe heat pump operation systems cannot be switched over after installation is complete.



Heat recovery and 2-pipe heat pump

operations common unit



Compact and Light Design

Ease and flexibility of installation are further enhanced by adopting the outdoor unit's lightweight and compact design as compared to the current model.



Transportation and Handling using Elevator

The elevator can be used to transport the base unit separately.



Even the Largest Basic Unit (18HP Model) Can Be Carried in an Elevator

Elevator Door Opening: 800 mm Depth: 1350 mm



More Flexible Refrigerant Piping Work

Improved flexibility of design by increasing the pipe length to 165 m max. (equivalent length of 190 m) in FSXN series.

- 1 Max. piping length: 165 m *1
- 2 Between first branch and indoor unit: 90m or less
- 3 Height difference between highest and lowest indoor units: **15m or less**
- 4 Height difference between outdoor and indoor units: 50m *2
- 5 Max. length between branch from indoorunit: 40m



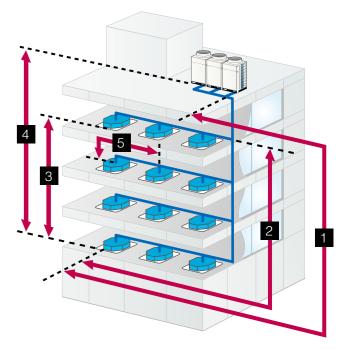
Connectable to 64 Indoor Units Max.

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.

| | | | | | | | | | | | Conn | ection (| Capacity | r: 50 to |) 130% |
|----------------|---------|---------------|----|----|----|----|----|----|----|----|------|----------|----------|----------|--------|
| | HP | | 5 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 |
| Max. Number of | Current | FSN(1) Series | 8 | 13 | 16 | 16 | 20 | 20 | 20 | 20 | 20 | 27 | 29 | 31 | 32 |
| Connectable | Models | FXN Series | - | 13 | 16 | - | - | 20 | 20 | 20 | 20 | 27 | 29 | - | 32 |
| Indoor Units | New FSX | N 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 | Current | FSN(1) Series | 32 | 32 | 32 | 32 | 32 | 32 | - | - | - | - | - | - | |
| Connectable | Models | FXN Series | 32 | - | - | - | - | - | - | - | - | - | - | - | |
| Indoor Units | New FSX | N 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.



* 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.

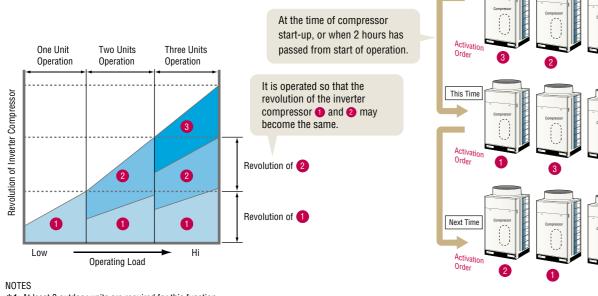
*: Compared to indoor units of over 1.5HP, indoor units of 0.8 and 1.0HP are set with higher air flow. Do not install these units in a place where a cold draft may occur during heating operation. Determine the usage environment and installation location carefully.

Other Advanced Technologies

Rotational Operation*1 to Distribute Load of Outdoor Units

Regulating the operation time of each outdoor unit leads to load reduction on compressors.*² During multiple unit operation, the same rotation frequency of inverter compressor results in an equivalent load on each compressor. Therefore, outdoor unit endurance is improved.

Inverter Compressor Rotation Frequency Control (Example)



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

*2: Comparison between rotation operation function and non-rotation operation

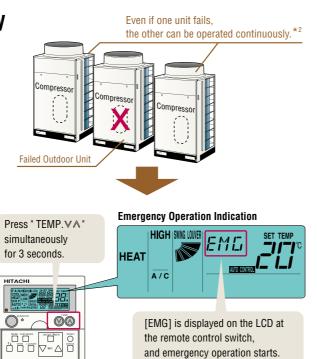
function based on the samesystem.

Backup Operation Function for Emergency

The Backup Operation Function prevents the system from coming to a complete stop when outdoor unit failure occurs.^{*1} Emergency operation starts with the remote control switch after an alarm.^{*3}

NOTES

- *1: At least 2 outdoor units are required for this function.
- *2: Emergency operation can be performed within 8 hours after unit stoppage. After 8 hours passed from unit stoppage, emergency operation can not be performed.
- *3: Emergency operation can be performed when the specified alarm code occurs. Refer to "Alarm Code for Emergency Operation".



Noise Reduction Preference Mode (Optional Function)

With the new Noise Reduction Preference Mode, the sound pressure level for a particular time zone can be set based upon the usage environment. *1

You can select from 3 sound pressure levels

| Optional Noise Reduction Function | Setting from Outdoor Unit Input and Output Function | Sound Pressure Level (dB) (Approx. Value) *2 |
|---|--|--|
| 11 | Setting 1 (Standard Value -2dB) | 56 |
| 12 | Setting 2 (Standard Value -5dB) | 53 |
| 13 | Setting 3 (Standard Value -8dB) | 50 |

NOTES

* 1: The range of performance and operation is restricted, because the rotation frequency of the compressor and outdoor fan is forcibly decreased.

*2: The table above shows an approximate value of 10HP.

In some cases, the value may temporarily become higher than the approximate value in the table above due to operation control conditions.

Automatic Simple Judgement System for Refrigerant Amount

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

Factor for Judgement

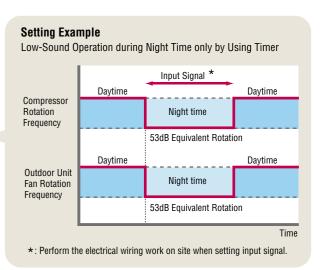
The appropriate refrigerant amount is calculated based upon the following data.

NOTES

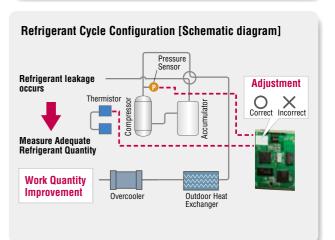
*: Refrigerant over-charging is not detected. Over-charging can be detected by gradually adding refrigerant from the under-charged state at test run or when refrigerant leakage occurs.

- *: This function does not provide automatic refrigerant charging.
- *: The adjustment (estimate) is changed according to the operation condition (the number of operating units and temperature).

Therefore, the operation/management of air conditioners is facilitated in areas where the noise level at night time is restricted by laws and regulations.



- **1** Refrigerant Cycle Temperature
- 2 Refrigerant Saturation Temperature
- **3** Outdoor Unit Expansion Valve Data
- 4 Indoor Unit Data



General Data

| Model | | RAS-8FSXN | RAS-10FSXN | RAS-12FSXN | RAS-14FSXN | RAS-16FSXN | RAS-18FSXN | RAS-20FSXN | RAS-22FSXN | RAS-24FSXN | RAS-26FSXN | RAS-28FSXN | RAS-30FSXN |
|--|----------------|---------------------------------|--------------------------------|-------------------------------|-------------------------------|-------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|--|--|
| Combination of Base Unit | | - | - | - | - | - | - | RAS-8FSXN RAS-12FSXN | RAS-8FSXN RAS-14FSXN | RAS-10FSXN RAS-14FSXN | RAS-12FSXN RAS-14FSXN | RAS-14FSXN RAS-14FSXN | RAS-14FSXN RAS-16FSXN |
| Power Supply | | | AC 3 ¢ , 400V/50H | - Iz (380-415V/50Hz), 380V | /60Hz, 220V/60Hz | | | | AC 3 φ , 400V/50H | lz (380-415V/50Hz), 380\ | //60Hz, 220V/60Hz | | |
| Nominal Cooling Capacity | kW | 22.4 | 28.0 | 33.5 | 40.0 | 45.0 | 50.0 | 56.0 | 61.5 | 69.0 | 73.0 | 80.0 | 85.0 |
| Nominal Heating Capacity | kW | 25.0 | 31.5 | 37.5 | 45.0 | 50.0 | 56.0 | 63.0 | 69.0 | 77.5 | 82.5 | 90.0 | 95.0 |
| EER [Cooling COP] (50/60Hz) | | 3.85/3.85 | 3.79/3.79 | 3.41/3.41 | 3.25/3.21 | 3.23/3.19 | 3.37/3.35 | 3.58/3.58 | 3.62/3.58 | 3.37/3.35 | 3.38/3.36 | 3.25/3.21 | 3.24/3.20 |
| COP [Heating COP] (50/60Hz) | | 4.17/4.17 | 4.11/4.11 | 3.60/3.60 | 3.89/3.90 | 3.90/3.93 | 3.81/3.85 | 3.81/3.81 | 4.04/4.05 | 3.89/3.89 | 3.75/3.76 | 3.89/3.90 | 3.90/3.92 |
| Cabinet Color (Munsell Code) | | | | Natural Gray (1.0Y 8.5/0.5 |) | | | | | Natural Gray (1.0Y 8.5/0.5 | 5) | | |
| Sound Pressure Level | | | | Maximum | | | | | | Maximum | | | |
| [Overall A Scale] (Night-Shift) | dB | 58 (53) | 58 (53) | 60 (55) | 62 (57) | 62 (57) | 63 (58) | 62 (57) | 63 (58) | 63 (58) | 64 (59) | 65 (60) | 65 (60) |
| Outer Dimensions | | | | | | | | | | | | | |
| Height x Width x Depth | mm | 1,720 x 950 x 765 | 1,720 x 950 x 765 | 1,720 x 950 x 765 | 1,720 x 1,210 x 765 | 1,720 x 1,210 x 765 | 1,720 x 1,210 x 765 | 1,720 x 1,920 x 765 | 1,720 x 2,180 x 765 | 1,720 x 2,180 x 765 | 1,720 x 2,180 x 765 | 1,720 x 2,440 x 765 | 1,720 x 2,440 x 765 |
| Net Weight | kg | 210 | 210 | 210 | 295 | 295 | 315 | 210 + 210 | 210 + 295 | 210 + 295 | 210 + 295 | 295 + 295 | 295 + 295 |
| Refrigerant (Flow Control) | | | R410A (Micr | ro-Computer Control Expa | nsion Valve) | | | | R410A (Mic | ro-Computer Control Expa | ansion Valve) | | |
| Compressor | | | | Hermetic (Scroll) | | | | | | Hermetic (Scroll) | | | |
| Model | | E656DHD | E656DHD | E656DHD | E656DHD + E655DH | E656DHD + E655DH | E656DHD+E855DH | E656DHD+ E656DHD | E656DHD + E656DHD + E655DH | E656DHD + E656DHD + E655DH | E656DHD + E656DHD + E655DH | E656DHD + E655DH + E656DHD + E655DH | E656DHD + E655DH + E656DHD + E655DH |
| Quantity | | 1 | 1 | 1 | 1+1 | 1+1 | 1+1 | 1+1 | 1+1+1 | 1+1+1 | 1+1+1 | 1+1+1+1 | 1+1+1+1 |
| Motor Output (Pole) | | 4.8 (4) | 6.0 (4) | 7.2 (4) | 4.8 (4) + 4.4 (2) | 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) | 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 | | | M | ulti-pass Cross-Finned Tu | he | | | 1 | IN | ulti-pass Cross-Finned Tu | lbe | | |
| Main Refrigerant Piping 2-pipe Heat Pump Operation System (2 pipes) Liquid Line | mm | φ 9.53* (φ 9.53 - φ 12.7) | φ 9.53* (φ 9.53 - φ 12.7) | φ 12.7* (φ 12.7 - φ 15.88) | φ 12.7* (φ 12.7 - φ 15.88) | φ 12.7* (φ 12.7 - φ 15.88) | φ 15.88* (φ 15.88 - φ 19.05) | φ 19.05* (φ 19.05 - φ 22.2) | φ 19.05* (φ 19.05 - φ 22.2) | φ 19.05* (φ 19.05 - φ 22.2) |
| Gas Line | mm | φ 19.05 (φ 19.05 - φ 22.2) | φ 22.2 (φ 22.2 - φ 25.4) | φ 25.4* (φ 25.4 - φ 28.6) | φ 25.4* (φ 25.4 - φ 28.6) | φ 28.6* (φ 28.6 - φ 31.75) | φ 28.6* (φ 28.6 - φ 31.75) | φ 28.6* (φ 28.6 - φ 31.75) | φ 28.6* (φ 28.6 - φ 31.75) | φ 28.6* (φ 28.6 - φ 31.75) | φ 31.75* (φ 31.75 - φ 34.9) | φ 31.75* (φ 31.75 - φ 34.9) | φ 31.75* (φ 31.75 - φ 34.9) |
| Main Refrigerant Piping Heat Recovery Operation System (3 pipes) Liquid Line | mm | φ 9.53* (φ 9.53 - φ 12.7) | φ 9.53* (φ 9.53 - φ 12.7) | φ 12.7* (φ 12.7 - φ 15.88) | φ 12.7* (φ 12.7 - φ 15.88) | φ 12.7* (φ 12.7 - φ 15.88) | φ 15.88* (φ 15.88 - φ 19.05) | φ 19.05* (φ 19.05 - φ 22.2) | φ 19.05* (φ 19.05 - φ 22.2) | φ 19.05* (φ 19.05 - φ 22.2) |
| Gas Line Low Pressure | mm | φ 19.05* (φ 19.05 - φ 22.2) | φ 22.2* (φ 22.2 - φ 25.4) | φ 25.4* (φ 25.4 - φ 28.6) | φ 25.4* (φ 25.4 - φ 28.6) | φ 28.6* (φ 28.6 - φ 31.75) | φ 28.6* (φ 28.6 - φ 31.75) | φ 28.6* (φ 28.6 - φ 31.75) | φ 28.6* (φ 28.6 - φ 31.75) | φ 28.6* (φ 28.6 - φ 31.75) | φ 31.75* (φ 31.75 - φ 34.9) | φ 31.75* (φ 31.75 - φ 34.9) | φ 31.75* (φ 31.75 - φ 34.9) |
| Gas Line High Pressure | mm | φ 15.88* (φ 15.88 - φ 19.05) | φ 19.05* (φ 19.05 - φ 22.2) | φ 22.2* (φ 22.2 - φ 25.4) | φ 22.2* (φ 22.2 - φ 25.4) | φ 22.2* (φ 22.2 - φ 25.4) | φ 22.2* (φ 22.2 - φ 25.4) | φ 22.2* (φ 22.2 - φ 25.4) | φ 25.4* (φ 25.4 - φ 28.6) | φ 25.4* (φ 25.4 - φ 28.6) | φ 25.4* (φ 25.4 - φ 28.6) | φ 28.6* (φ 28.6 - φ 31.75) | φ 28.6* (φ 28.6 - φ 31.75) |
| Refrigerant Charge | kg | 6.5 | 6.5 | 7.0 | 9.0 | 9.0 | 10.5 | 13.5 | 15.5 | 15.5 | 16.0 | 18.0 | 18.0 |
| Packing Dimensions | | | | | | | | | | | | | |
| Height x Width x Depth | mm | 1,895 x 990 x 810 | 1,895 x 990 x 810 | 1,895 x 990 x 810 | 1,895 x 1,250 x 810 | 1,895 x 1,250 x 810 | 1,895 x 1,250 x 810 | - | - | - | - | - | - |
| Approximate Packing Measurement | m ³ | 1.52 | 1.52 | 1.52 | 1.92 | 1.92 | 1.92 | - | - | - | - | - | - |

NOTES:

1. The cooling and heating performances are the values when combined with our specified indoor units.

Cooling Operation Conditions

Indoor Air Inlet Temperature: 27°C DB (80°F DB) 19.0°C WB (66.2°F WI Outdoor Air Inlet Temperature: 35°C DB (95°F DB) Piping Length: 7.5 Meters Piping Lift: 0 Meter

 Heating Operation Conditions

 27°C DB (80°F DB)
 Indoor Air Inlet Temperature: 20°C DB (68°F DB)

 19.0°C WB (66.2°F WB)
 Outdoor Air Inlet Temperature: 7°C DB (45°F DB)

 : 35°C DB (95°F DB)
 6°C WB (43°F WB)

 ion Lift: 0 Meter
 6°C WB (43°F WB)

2. The sound pressure is based on the following conditions. 1 Meter from the unit service cover surface, and 1.5 Meters from floor level. The above data is based on the cooling mode. In case of heating mode, the sound pressure level increases by approximately 1~2 dB. The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field. 3. * If the specified main refrigerant piping on the table is not available on site, follow the allowable piping size in parentheses. When using the main refrigerant piping indicated in parentheses, prepare an appropriate reducer on site.

 Except for the specified combination in the table (20~30HP), there is no other combination of the base unit.

5. The width of outer dimension, it is the value when each distance between the base outdoor units is specified to 20mm.

General Data

| Model | | RAS-32FSXN | RAS-34FSXN | RAS-36FSXN | RAS-38FSXN | RAS-40FSXN | RAS-42FSXN | RAS-44FSXN | RAS-46FSXN | RAS-48FSXN | RAS-50FSXN | RAS-52FSXN | RAS-54FSXN |
|--|----------------|--|--|--|--|--|--|---|---|---|--|--|--|
| Combination of Base Unit | | RAS-16FSXN RAS-16FSXN | RAS-16FSXN RAS-18FSXN | RAS-18FSXN RAS-18FSXN | RAS-12FSXN RAS-12FSXN RAS-14FSXN | RAS-12FSXN RAS-12FSXN RAS-16FSXN | RAS-12FSXN RAS-12FSXN RAS-18FSXN | RAS-12FSXN RAS-14FSXN RAS-18FSXN | RAS-12FSXN RAS-16FSXN RAS-18FSXN | RAS-12FSXN RAS-18FSXN RAS-18FSXN | RAS-14FSXN RAS-18FSXN RAS-18FSXN | RAS-16FSXN RAS-18FSXN RAS-18FSXN | RAS-18FSXN RAS-18FSXN RAS-18FSXN |
| Power Supply | | | AC 3 <i>\phi</i> , 400V/50H | łz (380-415V/50Hz), 380V | /60Hz, 220V/60Hz | | | | AC 3 ¢ , 400V/50H | lz (380-415V/50Hz), 380V | //60Hz, 220V/60Hz | | |
| Nominal Cooling Capacity | kW | 90.0 | 95.0 | 100.0 | 109.0 | 112.0 | 118.0 | 125.0 | 132.0 | 136.0 | 140.0 | 145.0 | 150.0 |
| Nominal Heating Capacity | kW | 100.0 | 106.0 | 112.0 | 118.0 | 125.0 | 132.0 | 140.0 | 145.0 | 150.0 | 155.0 | 160.0 | 165.0 |
| EER [Cooling COP] (50/60Hz) | | 3.23/3.19 | 3.30/3.27 | 3.37/3.35 | 3.29/3.28 | 3.34/3.32 | 3.32/3.31 | 3.27/3.24 | 3.16/3.15 | 3.24/3.23 | 3.33/3.31 | 3.32/3.30 | 3.37/3.35 |
| COP [Heating COP] (50/60Hz) | | 3.90/3.93 | 3.85/3.89 | 3.81/3.85 | 3.87/3.88 | 3.71/3.72 | 3.65/3.66 | 3.75/3.75 | 3.71/3.71 | 3.74/3.76 | 3.98/3.99 | 3.98/4.00 | 4.01/4.03 |
| Cabinet Color (Munsell Code) | | | | Natural Gray (1.0Y 8.5/0.5 |) | | | | | Natural Gray (1.0Y 8.5/0.5 | i) | | |
| Sound Pressure Level | | | | Maximum | | | | | | Maximum | | | |
| [Overall A Scale] (Night-Shift) | dB | 65 (60) | 66 (61) | 66 (61) | 66 (61) | 66 (61) | 66 (61) | 67 (62) | 67 (62) | 67 (62) | 67 (62) | 67 (62) | 68 (63) |
| Outer Dimensions | | | | | | | | | | | | | |
| Height x Width x Depth | mm | 1,720 x 2,440 x 765 | 1,720 x 2,440 x 765 | 1,720 x 2,440 x 765 | 1,720 x 3,150 x 765 | 1,720 x 3,150 x 765 | 1,720 x 3,150 x 765 | 1,720 x 3,410 x 765 | 1,720 x 3,410 x 765 | 1,720 x 3,410 x 765 | 1,720 x 3,670 x 765 | 1,720 x 3,670 x 765 | 1,720 x 3,670 x 765 |
| Net Weight | kg | 295 + 295 | 295 + 315 | 315 + 315 | 210 + 210 + 295 | 210 + 210 + 295 | 210 + 210 + 315 | 210 + 295 + 315 | 210 + 295 + 315 | 210 + 315 + 315 | 295 + 315 + 315 | 295 + 315 + 315 | 315 + 315 + 315 |
| Refrigerant (Flow Control) | | | R410A (Mic | ro-Computer Control Expa | nsion Valve) | | | | R410A (Mic | ro-Computer Control Expa | ansion Valve) | | |
| Compressor | | | | Hermetic (Scroll) | | | | | | Hermetic (Scroll) | | | |
| Model | | E656DHD + E655DH + E656DHD + E655DH | E656DHD+ E655DH + E656DHD + E855DH | E656DHD+E855DH+ E656DHD+E855DH | E656DHD + E656DHD + E656DHD + E655DH | E656DHD + E656DHD + E656DHD + E655DH | E656DHD + E656DHD + E656DHD + E855DH | E656DHD + E656DHD + E655DH + E656DHD + E855DH | E656DHD + E656DHD + E655DH + E656DHD + E855DH | E656DHD + E656DHD + E855DH + E656DHD + E855DH | E656DHD + E655DH + E656DHD + E855DH + E656DHD + E855DH + | E656DHD + E655DH + E656DHD + E855DH + E656DHD + E855DH | E656DHD + E855DH + E656DHD + E855DH + E656DHD + E855DH + |
| Quantity | | 1+1+1+1 | 1+1+1+1 | 1+1+1+1 | 1+1+1+1 | 1+1+1+1 | 1+1+1+1 | 1+1+1+1+1 | 1+1+1+1+1 | 1+1+1+1+1 | 1+1+1+1+1+1 | 1+1+1+1+1+1 | 1+1+1+1+1+1 |
| Motor Output (Pole) | | 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) | 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) | 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 | | | M | ulti-pass Cross-Finned Tu | be | | | | M | ulti-pass Cross-Finned Tu | be | | |
| Main Refrigerant Piping 2-pipe Heat Pump Operation System (2 pipes) Liquid Line | mm | φ 19.05* (φ 19.05 - φ 22.2) | φ 19.05* (φ 19.05 - φ 22.2) | φ 19.05* (φ 19.05 - φ 22.2) | φ 19.05* (φ 19.05 - φ 22.2) | φ 19.05* (φ 19.05 - φ 22.2) | φ 19.05* (φ 19.05 - φ 22.2) |
| Gas Line | mm | φ 31.75* (φ 31.75 - φ 34.9) | φ 31.75* (φ 31.75 - φ 34.9) | φ 38.1* (φ 38.1 - φ 41.3) | φ 38.1* (φ 38.1 - φ 41.3) | φ 38.1* (φ 38.1 - φ 41.3) | φ 38.1* (φ 38.1 - φ 41.3) | φ 38.1* (φ 38.1 - φ 41.3) | φ 38.1* (φ 38.1 - φ 41.3) | φ 38.1* (φ 38.1 - φ 41.3) | ¢ 38.1* (¢ 38.1 - ¢ 41.3) | φ 38.1* (φ 38.1 - φ 41.3) | φ 38.1* (φ 38.1 - φ 41.3) |
| Main Refrigerant Piping Heat Recovery Operation System (3 pipes) Liquid Line | mm | φ 19.05* (φ 19.05 - φ 22.2) | φ 19.05* (φ 19.05 - φ 22.2) | φ 19.05* (φ 19.05 - φ 22.2) | φ 19.05* (φ 19.05 - φ 22.2) | φ 19.05* (φ 19.05 - φ 22.2) | φ 19.05* (φ 19.05 - φ 22.2) |
| Gas Line Low Pressure | mm | φ 31.75* (φ 31.75 - φ 34.9) | φ 31.75* (φ 31.75 - φ 34.9) | φ 31.75* (φ 31.75 - φ 34.9) | φ 38.1* (φ 38.1 - φ 41.3) | φ 38.1* (φ 38.1 - φ 41.3) | φ 38.1* (φ 38.1 - φ 41.3) | φ 38.1* (φ 38.1 - φ 41.3) | φ 38.1* (φ 38.1 - φ 41.3) | φ 38.1* (φ 38.1 - φ 41.3) |
| Gas Line High Pressure | mm | φ 28.6* (φ 28.6 - φ 31.75) | φ 28.6* (φ 28.6 - φ 31.75) | φ 28.6* (φ 28.6 - φ 31.75) | φ 31.75* (φ 31.75 - φ 34.9) | φ 31.75* (φ 31.75 - φ 34.9) | φ 31.75* (φ 31.75 - φ 34.9) | φ 31.75* (φ 31.75 - φ 34.9) | φ 31.75* (φ 31.75 - φ 34.9) | φ 31.75* (φ 31.75 - φ 34.9) | φ 31.75* (φ 31.75 - φ 34.9) | φ 31.75* (φ 31.75 - φ 34.9) | φ 31.75* (φ 31.75 - φ 34.9) |
| Refrigerant Charge | kg | 18.0 | 19.5 | 21.0 | 23.0 | 23.0 | 24.5 | 26.5 | 26.5 | 28.0 | 30.0 | 30.0 | 31.5 |
| Packing Dimensions | | | | | | | | | | | | | |
| Height x Width x Depth | mm | - | - | - | - | - | - | - | - | - | - | - | - |
| Approximate Packing Measurement | m ³ | - | - | - | - | - | - | - | - | - | - | - | - |

NOTES:

1. The cooling and heating performances are the values when combined with our specified indoor units.

Cooling Operation Conditions

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

 27°C DB (80°F DB)
 Indoor Air Inlet Temperature: 20°C DB (68°F DB)

 19.0°C WB (66.2°F WB)
 Outdoor Air Inlet Temperature: 7°C DB (45°F DB)

 35°C DB (95°F DB)
 6°C WB (43°F WB)

 The sound pressure is based on the following conditions.
 Meter from the unit service cover surface, and 1.5 Meters from floor level. The above data is based on the cooling mode. In case of heating mode, the sound pressure level increases by approximately 1~2 dB. The above data was measured in an

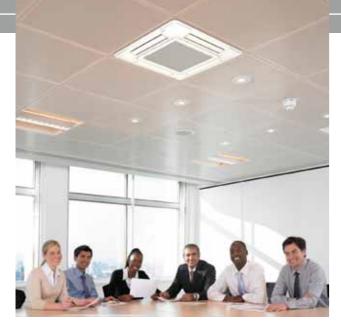
consideration in the field.

anechoic chamber so that reflected sound should be taken into

3. * If the specified main refrigerant piping on the table is not available on site, follow the allowable piping size in parentheses. When using the main refrigerant piping indicated in parentheses, prepare an appropriate reducer on site.

4. Except for the specified combination in the table (20~30HP), there is no other combination of the base unit.

The width of outer dimension, it is the value when each distance between the base outdoor units is specified to 20mm.



Motion Sensor Control

Specifications

The air conditioning capacity is saved automatically depending on a situation and detecting amount of human activity by adopting the motion sensor on the corner of the air panel. The energy-saving can be improved more with the individual operating function. In addition, the operation can be stopped automatically if the absent situation continues for more than 30 minutes^{*1}. The motion sensor allows maintaining the comfortable indoor environment and eliminating the unnecessary operation*2.

*1): The default setting is "30 minutes". However, the setting is changeable.

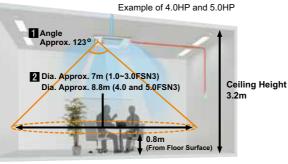
*2): The default setting is "Running Operation". However, "Automatic Stop" can be selected by setting *3): The detecting area becomes smaller if the human motion is few such as stretching on a chair, etc.



Indoor Units

4-Way Cassette Type

Detecting Area



In the case of the ceiling height is 3.2m.

Adopting New Structured Silky Flow Louver

The new structured silky flow louver is adopted to soften the discomfort by the temperature irregularity and the cold draft. The individual control setting for each louver is available.



| Model | | RCI-1.0FSN3 | RCI-1.5FSN3 | RCI-2.0FSN3 | RCI-2.5FSN3 | RCI-3.0FSN3 | RCI-4.0FSN3 | RCI-5.0FSN3 | RCI-6.0FSN3 | |
|--|-------------------------------|---------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------------|--------------------------------------|------------------------------------|--|
| Indoor Unit Power Supply | | | | | AC 1 ø , 220-240V / | / 50Hz, 220V / 60Hz | | | | |
| Nominal Cooling Capacity *1) | kW kcal/h Btu/h | 2.9 2,500 9,900 | 4.1 3,550 14,100 | 5.8 5,000 19,800 | 7.3 6,300 25,000 | 8.3 7,100 28,200 | 11.6 10,000 39,700 | 14.5 12,500 49,600 | 16.5 14,200 56,300 | |
| Nominal Cooling Capacity *2) | kW kcal/h Btu/h | 2.8 2,400 9,600 | 4.0 3,400 13,600 | 5.6 4,800 19,100 | 7.1 6,100 24,200 | 8.0 6,900 27,300 | 11.2 9,600 38,200 | 14.0 12,000 47,800 | 16.0 13,800 54,600 | |
| Nominal Heating Capacity | kW kcal/h Btu/h | 3.2 2,800 10,900 | 4.8 4,100 16,400 | 6.3 5,400 21,500 | 8.5 7,300 29,000 | 9.0 7,700 30,700 | 12.5 10,700 42,600 | 16.0 13,800 54,600 | 18.0 15,500 61,400 | |
| Sound Pressure Level (Overall A Scale) Hi2/Hi/Me/Lo | dB | 33/30/28/27 | 35/31/30/27 | 37/32/30/27 | 42/36/32/28 | 42/36/32/28 | 48/43/39/33 | 48/45/40/35 | 48/46/41/37 | |
| Dimensions H x W x D | mm | | 248 x 840 x 840 | | | | 298 x 840 x 840 | | | |
| Net Weight | kg | 20 | | | | | 2 | 26 | | |
| Refrigerant | | | | | R41 | IOA | | | | |
| Air Flow Rate Hi2/Hi/Me/Lo | m ³ /min. (cfm) | 15/13/11/9 (530/459/388/318) | 21/17/14/11 (741/600/494/388) | 21/17/14/11 (777/600/494/388) | 27/23/18/14 (953/812/635/494) | 27/23/18/14 (953/812/635/494) | 37/31/24/20 (1,306/1,094/847/706) | 37/33/26/21 (1,306/1,165/918/741) | 37/35/28/22 (1,306/1,236/988/77 | |
| Motor | W | | | 57 | | | | 127 | | |
| Connections | | | | | Flare-Nut Connection | on (With Flare Nuts) | | | | |
| Liquid / Gas | mm | φ 6.35 | i / φ 12.7 | φ 6.35 / φ 15.88 | | | φ 9.52 / φ 15.88 | | | |
| Condensate Drain | | | | | VP | 25 | | | | |
| Approximate Packing Measurement | m ³ | | 0.1 | 21 | | | 0. | 25 | | |
| Adaptable Panel Model | | | | P-AP160NA1 | (without Motion Sensor |) / P-AP160NAE (with | Motion Sensor) | | | |
| Color | | | | | Natural | White | | | | |
| Dimensions H x W x D | mm | | | | 37 x 95 | 0 x 950 | | | | |
| Net Weight | kg | | | | 6. | 5 | | | | |
| Approximate Packing Measurement | m ³ | | 0.10 | | | | | | | |

1. The nominal cooling and heating capacity is the combined capacity of the HITACHI standard split system, and is based on the JIS standard B8616. **Cooling Operation Conditions**

| 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) |
| Piping Length: 7.5 Meters | Piping Lift: 0 Meter |

Outdoor Air Inlet Temperature: 35°C DB (95°F DB) 2. The sound pressure level is based on following conditions

19.5°C WB (67°F WB)

*2) 19.0°C WB (66.2°F WB)

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

*1)

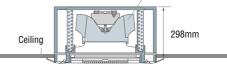
1.5 Meters Beneath the Unit. The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.



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

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

Compact Turbo Fan



Specifications

| Model | | RCD-1.0FSN2 | RCD-1.5FSN2 | RCD-2.0FSN2 | RCD-2.5FSN2 | RCD-3.0FSN2 | RCD-4.0FSN2 | RCD-5.0FSN2 | |
|--|-------------------------------|-------------------------|--------------------------|--|-------------------------------------|------------------------|-----------------------------|------------------------------|--|
| Indoor Unit Power Suppl | у | | | ΑC 1 φ , | 220-240V / 50Hz, 220 | IV / 60Hz | | | |
| Nominal Cooling Capacity *1) | kW kcal/h Btu/h | 2.9 2,500 9,900 | 4.1 3,550 14,100 | 5.8 5,000 19,800 | 7.3 6,300 25,000 | 8.3 7,100 28,200 | 11.6 10,000 39,700 | 14.5 12,500 49,600 | |
| Nominal Cooling Capacity *2) | kW kcal/h Btu/h | 2.8 2,400 9,600 | 4.0 3,400 13,600 | 5.6 4,800 19,100 | 7.1 6,100 24,200 | 8.0 6,900 27,300 | 11.2 9,600 38,200 | 14.0 12,000 47,800 | |
| Nominal Heating Capacity | kW kcal/h Btu/h | 3.2 2,800 10,900 | 4.8 4,100 16,400 | 6.3 5,400 21,500 | 8.5 7,300 29,000 | 9.0 7,700 30,700 | 12.5 10,700 42,600 | 16.0 13,800 54,600 | |
| Sound Pressure Level (Overall A Scale) Hi/Me/Lo | dB | 34/32/30 | 35/3 | 32/30 | 38/3 | 4/31 | 40/36/33 | 43/40/36 | |
| Dimensions H x W x D mm | | | | 298 x 860 x 620 | | | 298 x 1,- | 420 x 620 | |
| Net Weight | kg | | 27 | | 3 | 0 | 4 | 18 | |
| Refrigerant | | | | R410A / R407C / R22 (| Nitrogen-Charged for (| Corrosion-Resistance) | | | |
| Air Flow Rate Hi/Me/Lo | m ³ /min. (cfm) | 10/9/8 (353/318/282) | 13/11/9 (459/388/318) | 15/13/11 (530/459/388) | 19/1 (671/56 | | 29/24/21 (1,024/847/742) | 34/29/25 (1,201/1,024/883 | |
| Motor | w | | 35 | | 5 | 5 | 35 x 2 | 55 x 2 | |
| Connections Liquid / Gas | mm | φ 6.35 | / ø 12.7 | Flare-Nu \$\$\phi 6.35 / \$\phi 15.88 | it Connection (With Fla φ 9.53 / | are Nuts) Ø 15.88 | φ 9.53 / g | ¢ 15.88*3) | |
| Condensate Drain | | | | | VP25 | | | | |
| Approximate Packing Measurement | m ³ | | | 0.23 | | | 0 | .37 | |
| Adaptable Panel Model | | | | P-N23DNA | | | P-N4 | 6DNA | |
| Color | Neut | | | | | | | | |
| Dimensions H x W x D | mm | | | 30 x 1,100 x 710 | | | 30 x 1,6 | 60 x 710 | |
| Net Weight | kg | | | 6 | | | | 8 | |
| Approximate Packing Measurement | m ³ | | | 0.10 | | | 0.15 | | |

NOTES:

| 1. The nominal cooling and heating capacity | is the combined capacity of th | ne HITACHI standard split sys |
|---|--------------------------------|-------------------------------|
| Cooling Operation Conditions | | Heating Operation Co |
| Indoor Air Inlet Temperature: | 27°C DB (80°F DB) | Indoor Air Inlet Tempe |
| *1) | 19.5°C WB (67°F WB) | Outdoor Air Inlet Tem |

*2)

erature: Outdoor Air Inlet Temperature: 19 0°C WB (66 2°F WB) Piping Length: 7.5 Meters

Outdoor Air Inlet Temperature: 35°C DB (95°F DB) 2. The sound pressure level is based on following conditions.

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

3. *3) In case of using R407C or R22, use the accessory adaptor and ϕ 19.05 piping.

Indoor Units



2-Way Cassette Type

Downsizing and weight reduction simplify handling for easier renewal

The length of the 3.0HP type is shortened from 1.320 mm to 860 mm, the height is also shortened, and the volume is reduced by about 50%. The reduced weight of 30 kg also makes handling much easier.

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 PWM (Pulse Width Modulation) control.

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

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

ystem, and is based on the JIS standard B8616. 20°C DB (68°F DB)

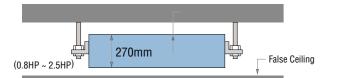
Conditions

7°C DB (45°F DB) 6°C WB (43°F WB) Piping Lift: 0 Meter



Space-saving Design

Less than 270 mm in height, this unit can be fit into practically any previously existing false ceiling or formerly ducted space without substantial modification (0.8-2.5HP).



In-the-ceiling Type

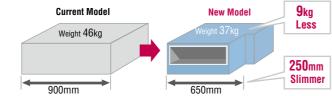
Broader range of external static pressure. Flexibly supports a wide range of installation conditions at site, e.g. longer ducts

In addition to the standard Hi-Me-Lo, the speed-up tap can be set by remote control. Available for external static pressure of up to 80 Pa for 0.8-2.5 HP and 170 Pa for 3-5 HP.

3.0HP model downsized

Indoor Units

The width is 250mm Slimmer and the weight 9kg lighter than the current model, thus delivery and installation is easier.



Specifications

| Model | | RPI-0.8FSN2 | RPI-1.0FSN2 | RPI-1.5FSN2 | RPI-2.0FSN2 | RPI-2.5FSN2 | RPI-3.0FSN2 | RPI-4.0FSN2 | RPI-5.0FSN2 | RPI-8FSN | RPI-10FSN |
|--|-------------------------------|-----------------------|-------------------------|--------------------------|---------------------------|---------------------------|---------------------------|---------------------------|-------------------------------|------------------------------|------------------------------|
| Indoor Unit Power Supp | ly | | | AC | 1φ, 220-240V/ | 50Hz, 220V / 6 | OHz | | | AC 3 ¢ 4W, 38 380V |)-415V / 50Hz, / 60Hz |
| Nominal Cooling Capacity *1) | kW kcal/h Btu/h | 2.3 2,000 7,900 | 2.9 2,500 9,900 | 4.1 3,550 14,100 | 5.8 5,000 19,800 | 7.3 6,300 25,000 | 8.3 7,100 28,200 | 11.6 10,000 39,700 | 14.5 12,500 49,600 | 23.3 20,000 79,400 | 29.1 25,000 99,200 |
| Nominal Cooling Capacity *2) | kW kcal/h Btu/h | 2.2 1,900 7,500 | 2.8 2,400 9,600 | 4.0 3,400 13,600 | 5.6 4,800 19,100 | 7.1 6,100 24,200 | 8.0 6,900 27,300 | 11.2 9,600 38,200 | 14.0 12,000 47,800 | 22.4 19,300 76,400 | 28.0 24,100 95,500 |
| Nominal Heating Capacity | kW kcal/h Btu/h | 2.5 2,100 8,500 | 3.2 2,800 10,900 | 4.8 4,100 16,400 | 6.3 5,400 21,500 | 8.5 7,300 29,000 | 9.0 7,700 30,700 | 12.5 10,700 42,600 | 16.0 13,800 54,600 | 25.0 21,500 85,300 | 31.5 27,100 107,500 |
| Sound Pressure Level (Overall A Scale) Hi/Me/Lo | dB | | 35/3 | 3/31 | - | 36/34/32 | 42/39/35 | 43/40/36 | 44/41/37 | 45(42)* | 52(50)* |
| Dimensions H x W x D | mm | | 270 x (650+75) x 720 | | 270 x (9 x 7 | , | 350 x (650+75) x 800 | 350 x (900+75) x 800 | 350 x (1,300+75) x 800 | 470 x x 1, | 1,250 120 |
| Net Weight | kg | | 26 | | 3 | 5 | 37 | 46 | 58 | 10 | 00 |
| Refrigerant | | | | R | 410A / R407C / I | R22 (Nitrogen-C | Charged for Corr | osion-Resistanc | e) | | |
| Air Flow Rate Hi/Me/Lo | m ³ /min. (cfm) | 8/2 (283/2 | 7/6 47/212) | 13/11/9 (459/388/318) | 15/13/11 (530/459/388) | 16/14/12 (565/494/424) | 19/17/14 (671/600/494) | 27/23/19 (954/812/671) | 37/31/25 (1,306/1,095/883) | 58 (58)* (2,048 (2,048)*) | 72 (72)* (2,542 (2,542)*) |
| External Pressure | | | | 50 (80-30)*3) | | | | 120 (170-60)*3) |) | 220 (110)* / 2 | 60 (130)* *4) |
| Motor | W | | 60 | | 7 | 5 | 150 | 29 | 90 | 760 (510)* | 1,080 (810)* |
| Connections | | | | | Flar | e-Nut Connectio | on (With Flare N | uts) | | Brazing C | onnection |
| Liquid | mm | | φ 6.35 | | φ 6.35 | φ 9 | 9.53 | φ9 | 0.53 | φ 9.53*6) | φ 9.53*6) |
| Gas | mm | | φ 12.7 | | φ 15.88 | 1 | 5.88 | φ 15 | i.88 ^{*5)} | φ 19.05*7) | φ 22.2 ^{*8)} |
| Condensate Drain | | | | | | VP | 25 | | | | |
| Approximate Packing Measurement | m ³ | | 0.21 | | 0.3 | 27 | 0.29 | 0.38 | 0.52 | 1.06 | 1.06 |

NOTES:

1. The nominal cooling and heating capacity is the combined capacity of the HITACHI standard split system, and is based on the JIS standard B8616. Coolina Op Heating Or

| cooling operation contaitions | | licating operation contaitions | |
|--------------------------------|-----------------------|--------------------------------|----------------------|
| 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 |
| | | | |

2. The sound pressure level is based on following conditions. 1.5 Meter Beneath the Unit. With Discharge Duct (2.0m) and Return Duct (1.0m). 0.8~5.0FSN2: 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 or 2dB. 8 and 10FSN: Voltage of the power source for the indoor fan motor is 380V. In case of the power source of 415V, the sound pressure level increases by about 2dB. The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

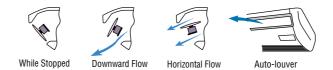
3. The values with ()* of sound pressure level, air flow rate, external pressure and motor output indicate the values incase of external pressure setting at 110Pa (130Pa for 410V). 4. The data for external pressure *3) indicates "Standard Pressure Setting (High Pressure Setting - Low Pressure Setting)" values when a filter is not used.

The data for external pressure *4) indicates the values when a filter is not used. 5. *5) In case of using R407C or R22, use the accessory adaptor and ϕ 19.05 piping. *6) In case of using R407C or R22, use the accessory reducer and ϕ 12.7 piping. *7) In case of using R407C or R22, use the accessory reducer and \$\vec{4}28.6 piping. *8) In case of using R407C or R22, use the accessory reducer and \$\vec{4}28.6 piping.



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.



Specifications

| Model | | RPC-2.0FSN2 | RPC-2.5FSN2 | RPC-3.0FSN2 | RPC-4.0FSN2 | RPC-5.0FSN2 |
|--|-------------------------------|---------------------------|------------------------|---------------------------------|---------------------------|-----------------------------|
| Indoor Unit Power Supp | ly | | AC | 1 ф , 220-240V / 50Hz, 220V / | 60Hz | |
| Nominal Cooling Capacity *1) | kW kcal/h Btu/h | 5.8 5,000 19,800 | 7.3 6,300 25,000 | 8.3 7,100 28.200 | 11.6 10,000 39,700 | 14.5 12,500 49,600 |
| Nominal Cooling Capacity *2) | kW kcal/h Btu/h | 5.6 4,800 19,100 | 7.1 6,100 24,200 | 8.0 6,900 27,300 | 11.2 9,600 38,200 | 14.0 12,000 47,800 |
| Nominal Heating Capacity | kW kcal/h Btu/h | 6.3 5,400 21,500 | 8.5 7,300 29,000 | 9.0 7,700 30,700 | 12.5 10,700 42,600 | 16.0 13,800 54,600 |
| Sound Pressure Level (Overall A Scale) Hi/Me/Lo | dB | | 40/37/34 | · | 44/4 | 1/38 |
| Cabinet Color | | | | Silky White | | |
| Dimensions $H \times W \times D$ | mm | 210 x 1,100 x 670 | 210 x 1, | 320 x 670 | 270 x 1,320 x 670 | 270 x 1,580 x 670 |
| Net Weight | kg | 26 | ŝ | 30 | 34 | 42 |
| Refrigerant | | | R410A / R407C / | R22 (Nitrogen-Charged for Cor | rosion-Resistance) | |
| Air Flow Rate Hi/Me/Lo | m ³ /min. (cfm) | 14/12/10 (494/424/353) | | 15/12 30/424) | 25/21/18 (883/742/636) | 33/28/23 (1,165/989/812) |
| Motor | W | 35 | Ę | 50 | 95 | 135 |
| Connections | | | Fla | re-Nut Connection (With Flare I | Vuts) | |
| Liquid / Gas | mm | φ 6.35 / φ 15.88 | φ 9.53 | /φ15.88 | φ 9.53 / | ø 15.88*3) |
| Condensate Drain | | · _ · · | | VP20 | · · · · · · | |
| Approximate Packing Measurement | m ³ | 0.30 | 0. | .36 | 0.43 | 0.50 |
| Standard Accessories | | | | Mounting Bracket | | ! |

NOTES

Outdoor Air Inlet

1. The nominal cooling and heating capacity is the combined capacity of the HITACHI standard split system, and is based on the JIS standard B8616. Cooling Operation Conditions Heating Operation Conditions 27°C DB (80°F DB) Indoor Air Inlet Temperature Indoor Air Inlet Temperature:

| 21 0 00 (001 00) | macor / ar milet remperate |
|-----------------------|--|
| 19.5°C WB (67°F WB) | Outdoor Air Inlet Tempera |
| 19.0°C WB (66.2°F WB) | |
| 35°C DB (95°F DB) | Piping Length: 7.5 Meters |
| | 19.5°C WB (67°F WB) 19.0°C WB (66.2°F WB) |

2. The sound pressure level is based on following conditions. 1 Meter Beneath the Unit and 1 Meter from Discharge 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 1dB.

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field. 3. *3) In case of using R407C or R22, use the accessory adaptor and ϕ 19.05 piping.

21



Ceiling Type

Indoor Units

Simple Installation and Maintenance

- Installation time is much shorter. *By 30% (Hitachi's comparison)
- A long-life filter (mildew-proof) is fitted as standard. No maintenance
- is required for about 2,500 hours of operation. *For ordinary offices

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.





Each part of the system is fully functional

The wireless light receiver kit (option) can be installed easily through the hole in the lower cover.

- 20°C DB (68°F DB) 7°C DB (45°F DB) Temperature: 6°C WB (43°F WB) Piping Lift: 0 Meter



NEW LINE-UP

RPK-1.0FSNSH2 RPK-1.5FSNSH2 (Built-to-order)

Reducing Noise by Adopting Distinctive Technology

You can select the new lineup of indoor unit wall type without expansion valve and electronic expansion valve kit according to your preference. The continuous refrigerant running noise from the indoor unit can be reduced by installing the expansion valve away from the living room such as in a false ceiling of the hallway.

Wall Type

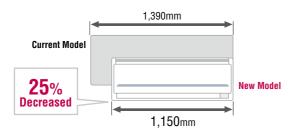
User Friendly

Indoor Units

Easy switching from wireless to wired remote controller by Dip Switch built-in the receiver part. All alarm code is displayed when using wireless remote controller by combining the flashing times of "Timer", "Filter/Defrosting". (All models)

Top-Class Compact and Light Weight Design

More Choice to select the installation place thanks to the reduction of wideness in 2.5, 3.0 and 4.0HP



Specifications

| Model | | RPK-1.0FSNSM2 | RPK-1.5FSNSM2 | RPK-2.0FSNSM2 | RPK-2.5FSNSM2 | RPK-3.0FSNSM2 | RPK-4.0FSNSM2 |
|--|-------------------------------|-------------------------|--------------------------|--|---------------------------|------------------------|---------------------------|
| Indoor Unit Power Supp | ly | | | AC 1 ø , 220-240V / 50Hz, 220V / 60Hz | | | |
| Nominal Cooling Capacity *1) | kW kcal/h Btu/h | 2.9 2,500 9,900 | 4.1 3,550 14,100 | 5.8 5,000 19,800 | 7.3 6,300 25,000 | 8.3 7,100 28,200 | 11.6 10,000 39,700 |
| Nominal Cooling Capacity *2) | kW kcal/h Btu/h | 2.8 2,400 9,600 | 4.0 3,400 13,600 | 5.6 4,800 19,100 | 7.1 6,100 24,200 | 8.0 6,900 27,300 | 11.2 9,600 38,200 |
| Nominal Heating Capacity | kW kcal/h Btu/h | 3.2 2,800 10,900 | 4.8 4,100 16,400 | 6.3 5,400 21,500 | 8.5 7,300 29,000 | 9.0 7,700 30,700 | 12.5 10,700 42,600 |
| Sound Pressure Level (Overall A Scale) Hi/Me/Lo | dB | 38/36/34 | 40/38/36 | 41/39/37 | 43/4 | 0/37 | 49/46/43 |
| Cabinet Color | | | | Wh | ite | | |
| Dimensions H × W × D | mm | 280 x 7 | 80 x 210 | 295 x 1,030 x 208 | | 333 x 1,150 x 245 | |
| Net Weight | kg | 1 | 0 | 12 | | 18 | |
| Refrigerant | | | R410 | A / R407C / R22 (Nitrogen-Cl | harged for Corrosion-Resi | stance) | |
| Air Flow Rate Hi/Me/Lo | m ³ /min. (cfm) | 10/8/7 (353/283/247) | 11/10/9 (388/353/318) | 14/12/10 (494/424/353) | 17/1 (600/56 | | 22/20/17 (777/706/600) |
| Motor | W | 2 | 0 | 30 | | | |
| Connections Liquid / Gas | mm | ø 6.35 / ø 12.7 | | Flare-Nut Connectio \$\$\phi 6.35 / \phi 15.88 or \phi 12.7^3\$ | n (With Flare Nuts) | φ 9.53 / φ 15.88 | |
| Condensate Drain | | | | VP ⁻ | 16 | | |
| Approximate Packing Measurement | m ³ | 0. | 0.07 | | | 0.13 | |
| Standard Accessories | | | | Wall Mounti | ing Bracket | | |

NOTES:

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

| 1. The normal booling and noading suparity | to the combined supusity of th | o minitorni otandard opiit oyotom, and io i | |
|---|--------------------------------|---|----------------------|
| 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 |
| 2. The sound pressure level is based on the | following conditions measured | l. | |
| 1 Meter Reneath the Unit and 1 Meter from | n Inlet Grille | | |

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

3. *3) The refrigerant piping size may be required to change depending on the outdoor unit to be connected.

If ϕ 12.7 pipe is used at the gas side, remove the flare adaptor at the indoor unit gas piping. Then attach the flare nut (accessory) for pipe connection.

Indoor Units

Floor Type Floor Concealed Type

Space-saving slim unit, only 220 mm 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.

Specifications

| Model | | Floo | ir Type | Floor Co | ncealed Type | |
|--|-----------------------|--|---|------------------------|------------------------|--|
| Wouer | | RPF-1.0FSN2E | RPF-1.5FSN2E | RPFI-1.0FSN2E | RPFI-1.5FSN2E | |
| Indoor Unit Power Suppl | у | | AC 1 ϕ , 220-240V | / 50Hz, 220V / 60Hz | | |
| Nominal Cooling Capacity *1) | kW kcal/h Btu/h | 2.9 2,500 9,900 | 4.1 3,550 14,100 | 2.9 2,500 9,900 | 4.1 3,550 14,100 | |
| Nominal Cooling Capacity *2) | kW kcal/h Btu/h | 2.8 2,400 9,600 | 4.0 3,400 13,600 | 2.8 2,400 9,600 | 4.0 3,400 13,600 | |
| Nominal Heating Capacity | kW kcal/h Btu/h | 3.2 2,800 10,900 | 4.8 4,100 16,400 | 3.2 2,800 10,900 | 4.8 4,100 16,400 | |
| Sound Pressure Level (Overall A Scale) Hi/Me/Lo | dB | 35/32/29 | 38/35/31 | 35/32/29 | 38/35/31 | |
| Cabinet Color | | Sprin | g White | - | _ | |
| Dimensions H x W x D | mm | 630 x 1,045 x 220 | 630 x 1,170 x 220 | 620 x 848 x 220 | 620 x 973 x 220 | |
| Net Weight | kg | 25 | 28 | 19 | 23 | |
| Refrigerant | | R410/ | R410A / R407C / R22 (Nitrogen-Charged for Corrosion-Resistance) | | | |
| Air Flow Rate Hi/Me/Lo | m3/min. (cfm) | 8.5/7/6 (300/247/212) | 12/10/9 (424/353/318) | 8.5/7/6 (300/247/212) | 12/10/9 (424/353/318) | |
| Motor | W | 20 | 28 | 20 | 28 | |
| Connections Liquid / Gas | mm | Flare-Nut Connection (With Flare Nuts) ϕ 6.35 / ϕ 12.7 | | | 7 | |
| Condensate Drain | | | 18. | 5 OD | | |
| Approximate Packing Measurement | m ³ | 0.26 | 0.29 | 0.20 | 0.23 | |

System Equipment

Total Heat Exchanger

Specifications

| Model | | KPI-2521 | KPI-5021 | KPI-8021 | KPI-10021 | |
|--|------|----------------|-----------------------|---------------------------|-----------------------|-----------------------|
| Indoor Unit Power Supp | ly | | | AC 1¢, 220-240V / | 50Hz, 220V / 60Hz | |
| Air Flow Rate | 50Hz | m³/h | 250/250/165 | 500/500/350 | 800/800/670 | 1,000/1,000/870 |
| Hi/Me/Lo | 60Hz | m³/h | 250/250/150 | 500/500/300 | 800/800/660 | 1,000/1,000/720 |
| External Pressure *1) | 50Hz | Pa | 65/40/20 | 150/60/30 | 140/100/70 | 160/100/80 |
| Hi/Me/Lo | 60Hz | Pa | 100/50/20 | 200/60/20 | 230/120/80 | 200/110/60 |
| Sound Pressure Level (Overall A Scale) at 50Hz dB 1.5m from the unit | | dB | 26.5-27.5/25-26/21-22 | 32.5-33.5/30-31/23.5-24.5 | 33.5-34.5/32-33/30-31 | 36-37/34-35/31.5-32.5 |
| under *2) *3) Hi/Me/Lo | 60Hz | dB | 28.5/25.5/21 | 32.5/28.5/23 | 35/31/29 | 36/34/30 |
| Dimensions $H \times W \times D$ | | mm | 275 x 735 x 780 | 317 x 1,016 x 888 | 398 x 1,004 x 1,164 | 398 x 1,231 x 1,164 |
| Net Weight | | kg | 21 | 33 | 61 | 72 |
| Approximate Packing Measurement | | m ³ | 0.26 | 0.46 | 0.70 | 0.84 |



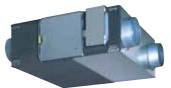


So compact that it fits into even a tiny space.

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.

NOTES:

- 1. The nominal cooling and heating capacity is the combined capacity of the HITACHI standard split system, and is based on the JIS standard B8616.
 - **Cooling Operation Conditions** Indoor Air Inlet Temperature: 27°C DB (80°F DB) *1)19.5°C WB (67°F WB) *2)19.0°C WB (66.2°F WB) Outdoor Air Inlet Temperature: 35°C DB (95°F DB) 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) Piping Length: 7.5 Meters Piping Lift: 0 Meter
- 2. The sound pressure level is based on following conditions. 1.5 Meters from the Unit and
- 1.5 Meters from Floor Level. The left data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.



NOTES:

- *1. Use it under the following conditions. KPI-8021: 29Pa or more, KPI-10021: 49Pa or more
- *2. The sound pressure level is based on following conditions. 1.5 Meter beneath the unit and this data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.
- *3. The sound pressure level is based on the total heat exchange mode. In case of the bypass ventilation mode, the sound pressure level is incrased by approximately 1dB(A).

Optional Parts

Indoor Units

HP

Filter Box

Drain-up Mechanism Kit

| HP | | 1.0 ~ 2.5 | 3.0 ~ 6.0 | |
|-----------------------------|------------------|--------------|-----------|--|
| Air Panel | | P-AP160NA1/P | -AP160NAE | |
| 3-Way Outlet Parts Set | | PI-160 | LS1 | |
| Kit for | Deodorant Filter | F-71L-D1 | F-160L-D1 | |
| Deodorant Filter Filter Box | | B-160H2 | | |
| Antibacterial Long | -life Filter | F-160L-K | | |
| Fresh Air Intake K | it *1 | OACI-160K2 | | |
| T-Pipe Connection Kit *2 | | TKCI-160K | | |
| Duct Adapter *3 | | PD-75A (| φ75) | |

2-Way Cassette Type

8 and 10

-

DU-M280PIS

| HP | | 1.0 ~ 3.0 | 4.0 and 5.0 |
|-----------------------------------|------------------|-----------|-------------|
| Air Panel | | P-N23DNA | P-N46DNA |
| Receiver Kit for Wireless Control | | PC-A | ALHD |
| Kit for | Deodorant Filter | F-23LD4-D | F-46LD4-D |
| Deodorant Filter | Filter Box | B-23HD4 | B-46HD4 |
| Antibacterial Long | -life Filter | F-23LD4-K | F-46LD4-K |
| Fresh Air Intake K | it *1 | OACID-231 | OACID-461 |
| Box Connection Kit *4 | | TBC | CID-1 |

Floor and Ceiling Types

| НР | RPF(I) | RPC |
|--------------------------------------|-------------|-----------|
| | 1.0 and 1.5 | 2.0 ~ 5.0 |
| Receiver Kit for Wireless Control | PC-ALHZ | PC-ALHP |

*3. Used when fresh air intake duct are connected to the indoor unit directly. *4. Used when both of the Fresh Air Intake Kit and Filter Box are used.

> Model MEF-NP1500A

> > Model

MH-108XN

No. of

Header Branches

8

• : Applicable × : Not Applicable

Strainer Kit Product Name

Strainer Kit

HP

5 to 10

NOTES: *1. It is necessary to use the Fresh Air Intake Kit to connect the fresh air intake duct to the unit. *2. Used when two air intakes (ϕ 100 x 2) of the Fresh Air Intake Kit are changed to one air intake (ϕ 150 x 1).

0.8 ~ 1.5 2.0 and 2.5 3.0

B-15MI3C B-23MI3C B-23MI3

F-15LI3C F-23LI3C

Standard DUPI-132C

4.0

F-34LI3

DUPI-162

PC-ALHZ

B-34MI3 B-46MI3

F-23LI3

5.0

F-46LI3

Piping Connection Kit

Long-Life Filter Kit Long-Life Filter

Receiver Kit for Wireless Control

| | Applicable Outdoor Unit | | | D | | |
|------|--|-----------------|---------------------|----------|------------|---|
| Item | Operation Type | Outdoor Unit HP | Connectivity Number | Model | Piping Set | Remarks |
| | for | 20 to 24 | 2 | MC-20AN | 1 Set | 2 pipes type |
| | Piping Connection Kit for Heat Recovery | 26 to 36 | 2 | MC-21AN | 1 Set | for Gas: 1 set |
| | | 38 to 54 | 3 | MC-30AN | 2 Set | for Liquid: 1 set |
| | | 20 to 24 | 2 | MC-20XN | 1 Set | 3 pipes type |
| | | 26 to 36 | 2 | MC-21XN | 1 Set | for High Pressure Gas: 1 set for Low Pressure Gas: 1 set |
| | Operation | 38 to 54 | 3 | MC-30XN | 2 Set | • for Liquid: 1 set |

Multi-kits

0

Multi-kit for 2 Pipe Heat Pump Operation < Li

| < Line Branch > | | _ | < Header Bran | ch > | |
|--------------------|----------|---|----------------------|---------------------------|----------|
| Outdoor Unit HP | Model | | Total Indoor Unit | No. of Header Branches | Model |
| 8 and 10 | MW-102AN | 1 | HP | Theader Branchee | |
| 12 to 16 | MW-162AN | | 5 to 8 | 4 | MH-84AN |
| 18 to 24 | MW-242AN | | 5 to 10 | 8 | MH-108AN |
| 26 to 54 | MW-302AN | | | | |

NOTE: After the second branch, please refer to the technical manual.

< Line Branch > < Header Branch > Outdoor U Total Indoor Unit

Multi-kit for Heat Recovery Operation

| Uutdoor U HP | Jnit | Model |
|-----------------|------|----------|
| 8 and | 10 | MW-102XN |
| 12 to | 16 | MW-162XN |
| 18 and | 20 | MW-202XN |
| 22 and | 24 | MW-242XN |
| 26 to | 54 | MW-322XN |

| Control | Custom |
|---------|--------|
| JUIIIIU | System |

| | | RCI-FSN3 | RCD-FSN2 | RPI-FSN(2) | RPC-FSN2 | RPK-FSNSM2 | RPF(I)-FSN2E | KPI |
|---------------------------------|-------------------------------------|-----------------|----------|------------|----------|------------|--------------|-----|
| Descrite October October | PC-AR ^{*1} (Without cable) | × | • | • | • | • | • | • |
| Remote Control Switch | PC-ARF | •*5 | | | • | | | |
| Wireless Remote Control Switch | PC-LH3A | × | • | • | • | • | • | × |
| Half-size Remote Control Switch | PC-ARH ^{*2} | × | • | • | ٠ | • | • | X |
| 7-Day Timer | PSC-A1T ^{*3} | • | • | | • | • | • | X |
| Central Station | PSC-5S, PSC-A64S ^{*4} | •* ⁶ | • | • | • | • | • | |
| Central Station DX | PSC-128WX + PSC-AS2048WXB | •*6 | • | • | • | • | • | |
| Centralized ON/OFF Controller | PSC-A16RS | • | | | • | | | |
| Remote Control Cable | PRC-5K,10K,15Kfor PC-AR | • | • | • | • | • | • | • |
| 3P Connector Cable | PCC-1A | • | • | • | • | • | • | • |
| Remote Sensor | THM-R2A | • | • | • | • | × | • | X |
| P/C Network System CS-NET | PSC-6WTX | | | | | | | X |

NOTES: *1. As the PC-AR does not include a remote control cable,

prepare one in the field, or use PRC-5K, 10K, or 15K. *2. Make sure that it is used with PC-AR or CS-NET.

*3. Scheduled operation is possible by using in combination with Central Station, Remote Control Switch and Centralized ON/OFF Controller.

*4. Supply 220V or 240V.

*5. When FSN3 4-way cassette type indoor unit is used with the remote control switch, PC-ARF must be used.

*6. These central stations are not supported the air flow volume function "HIGH 2" of FSN3 4way cassette type. Therefore, when FSN3 4-way cassette type indoor unit is used with the central stations, the remote control switch (PC-ARF) must be required.

Remote Controllers

| NEW | 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 the 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 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 andoutdoor 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 I | One-touch handy operation, no wiring work required. Two or more units can be operated simultaneously by reme * Receiver kit is required. | ote control. |
| 000 000 000 | 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 hotel | "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. s. |
| 0 0 00 | 7 Day Timer PSC-A1T Compatible with the H-LINK II | By using with PSC-5S, PSC-A64S and PC-AR controllers, the air conditioners controlled by them can be operated according to a schedule. The timer can be set at 7-day intervals, and operation/stop can be set 3 times daily. Remote control can be prohibited in accordance with the OFF time (when used with PSC-5S, PSC-A64S and PC-AR). | Two types of weekly schedule (A and B) can be set, and can easily be changed for summer and winter. Settings are all digitally displayed, allowing operations and settings to be checked easily. The power failure backup function prevents the timer from being stopped by a power failure lasting up to 2 weeks. |
| | Central Station PSC-A64S 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 control, such as settings for operation/stop, the operation mode and temperature, the air quantity and auto louver can be set. If a problem occurs, an alarm code immediately shows the details of the problem. | An external input terminal is provided as standard. External signals enable thefollowing functions: central operation/stop, demand control, emergency stop, central operation output, and central alarm output. Can be used in combination with the One-touch Controller. |
| | Centralized ON/OFF Controller PSC-A16RS Compatible with the H-LINK II Up to 160 indoor units Up to 16 remote control groups | Only performs operation/stop control per remote control group. By connecting to the H-LINK, up to 16 remote control groups and 160 indoor units can be controlled. Up to 8 units can be connected to the H-LINK. Make sure to use it with a remote control switch. Indoor units cannot be use There are restrictions on remote group registration. Please contact our sales | |

Network Systems

H-LINK · · ·

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

Flexible Wiring Routes

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

H-LINK II

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

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

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

Example Outdoor Unit (Max. 64 Refrigerant System)* Indoor Unit (Max. 160 Units)* <u></u> Ľ * : The above example shows the case that central control device, indoor units and remote control switch are all corresponding to H-LINK II system. **CS-NET** 200 3 **Central Station Centralized ON/OFF** 7 Day Timer Controller PSC-5S PSC-A1T HARC70-P1 HC-A64BNP PSC-A64S PSC-A16RS

Compare with H-LINK System

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

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

Mixture of H-LINK and H-LINK ${\rm I\!I}$

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

| | Outdoor Unit | 1(One) H-LINK (${\mathbb I}$) System | | |
|-----------------------|--|--|--------------|--|
| Control System Device | Indoor Unit | Outdoor Units (Number of Ref. Groups) | Indoor Units | |
| H-LINK II | H-LINK II | 64 | 160 | |
| | H-LINK II / H -LINK Mixed | 16 * | 128 | |
| | H-LINK II | 16 | 128 | |
| H-LINK | $\operatorname{H-LINK} \mathbb{I} \operatorname{/} \operatorname{H-LINK} \operatorname{Mixed}$ | 16 | 128 | |

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

 Outdoor unit corresponding to H-LINK II connected with the indoor unit corresponding to H-LINK More than 17 indoor units are available to connect with the 1 outdoor unit depending on the outdoor unit capacity. In that case, 2 ref. groups are required for 1 outdoor unit.

System Configuration

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

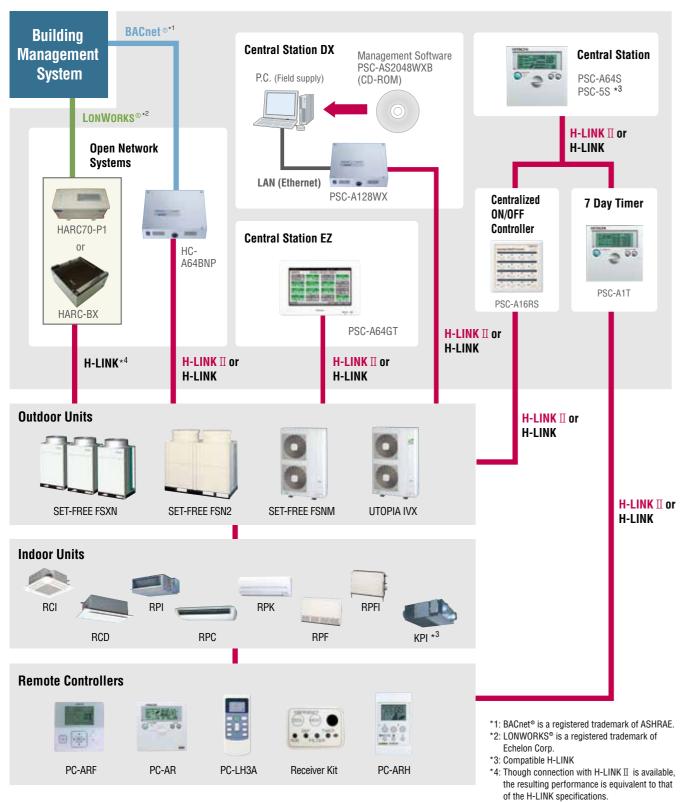
*2): These functions can be set by wired remote control switch (PC-AR) only.

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

Network Systems

CS-NET

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



Interface (Option)

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

| HC-A64BNP (for BACnet $^{\circ}$) |
|---------------------------------------|
| |
| n sons |
| Connecting the HC-A64BNP to an H-LINK |

(communication line between machines) allows

the use of up to 8 refrigerant cycles and control

of up to 64 indoor units. Up to eight HC-A64BNP

HARC70-P1 (for LONWORKS®)

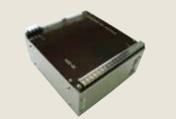
can be connected to the same H-LINK.

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

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

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

HARC-BX (for LONWORKS[®])



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

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

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

| Connection Method to Upper System | Connection by SNVT (Standard Network Variable Type) to LONWORKS [®] Network | | |
|--------------------------------------|---|------------------------------------|-------------------------------|
| Quantity of Connection | • 64 Indoor Units | | |
| Control Item at | On/Off Order | Temperature | Setting |
| Upper System | Operation Mode Setting | All On/Off Ord | ler |
| Monitoring Item at | On/Off State & Alarm | Temperature | Setting |
| Upper System | Operation Mode State | Individual The | ermostat State |
| HARC-BX E (Option | A) | | |
| Connection Method to Upper System | Connection by SNVT (Sta LONWORKS [®] Network | ndard Network Variable Typ | be) to |
| Quantity of Connection | • 64 Indoor Units | | |
| Control Item at | On/Off Order | Temperature Setting | • Fan Speed Setting |
| Upper System | Operation Mode Setting | All On/Off Order | R.C.Sw Permission/Prohibition |
| Monitoring Item at | On/Off State & Alarm | | |
| | | | |

| Control Item at Upper System | |
|---------------------------------|--|
| Monitoring Item at | |

| ļ | HARC-BX E (Option | B) |
|---|--------------------------------------|-------------------|
| | Connection Method to Upper System | • |
| | Quantity of Connection | |
| | Control Item at Upper System | • (• (•] |
| | | • (|

Monitoring Item at **Upper System**

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| Connection by SNVT (Standard Network Variable Type) to LONWORKS[®] Network | | | |
|---|--|--|--|
| 32 Indoor Units | | | |
| • On/Off Order • Operation Mode Setting • Temperature Setting | Fan Speed Setting R.C.Sw Permission /Prohibition | All On/Off OrderLouver Position Setting | |
| • On/Off State & Alarm • Operation Mode State • Fan Speed Setting | Temperature Setting Louver Position Alarm Code | Inlet Air Temperature Outlet Air Temperature Outdoor Air Temperature | |