

HITACHI

# Solutions for a perfect air

**SET FREE Σ**

**JNBBQ SERIES FOR HIGH AMBIENT REGION**  
**VRF SYSTEM, HEAT PUMP TYPE**

Cooling & Heating



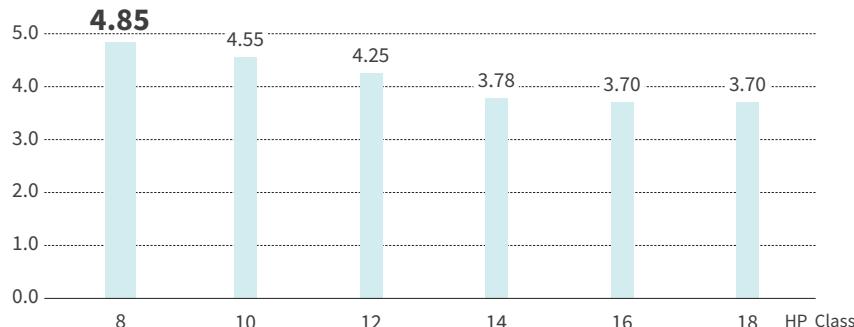
# OUTDOOR UNIT

## HIGH EFFICIENCY

### EFFICIENCY RATIO

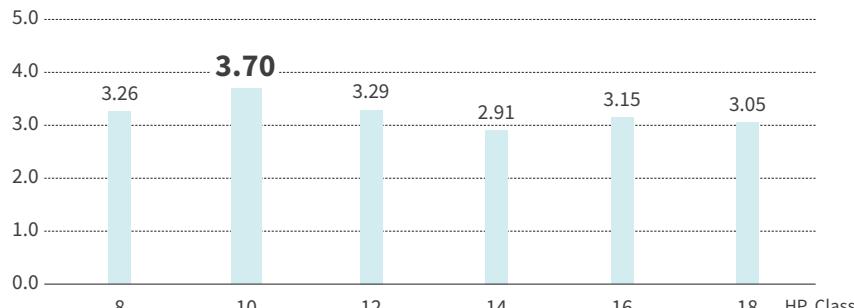
EER: Energy Efficiency Ratio

(T1)



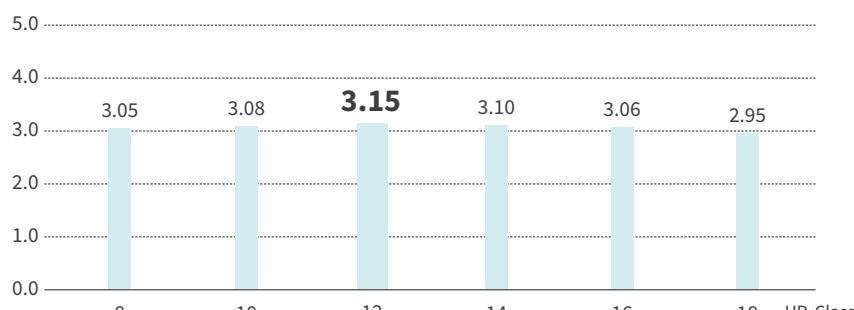
Cooling Operation Conditions:  
Indoor Air Inlet Temperature: 27°C DB 19°C WB  
Outdoor Air Inlet Temperature: 35°C DB

(T3)



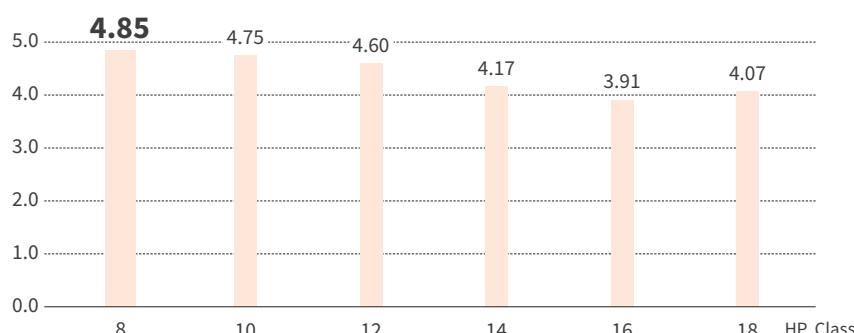
High Ambient Cooling Operation Conditions:  
Indoor Air Inlet Temperature: 29°C DB 19°C WB  
Outdoor Air Inlet Temperature: 46°C DB

(T2)



High Ambient Cooling Operation Conditions:  
Indoor Air Inlet Temperature: 26.7°C DB 19.4°C WB  
Outdoor Air Inlet Temperature: 48°C DB

COP: Coefficient Of Performance



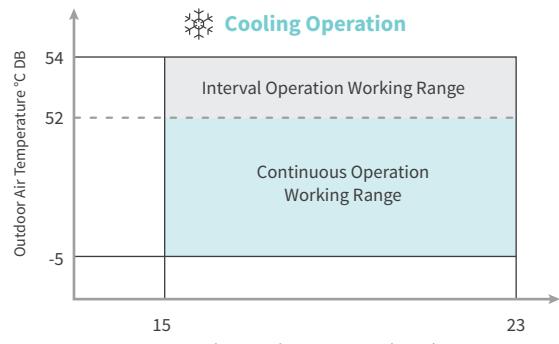
Heating Operation Conditions:  
Indoor Air Inlet Temperature: 20°C DB  
Outdoor Air Inlet Temperature: 8.3°C DB 6.1°C WB

## DESIGN FLEXIBILITY

### UP TO 72HP CLASS



### OPERATION TEMPERATURE RANGE



### BETTER PIPING LIMIT

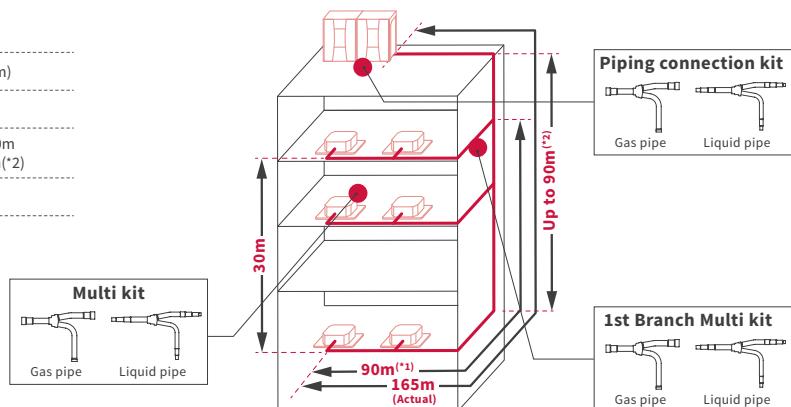
Total piping length	1,000m
Longest length actual (Equivalent)	165m (190m)
Longest length after first branch	90m(*1)
Level difference between ODU and IDU	Higher ODU Standard 50m Optional 90m(*2)
Lower ODU	40m
Level difference between IDUs	30m

\* Please refer to the technical catalog and consult your distributor for the details.

(\*1) 30m at maximum when the no# of connected IDUs is over the recommendation.

(\*2) Longer piping (up to 90m) is available for 8 to 48HP models only.

Maximu m piping length for 50-72HP is 70m.



### ADAPTABILITY

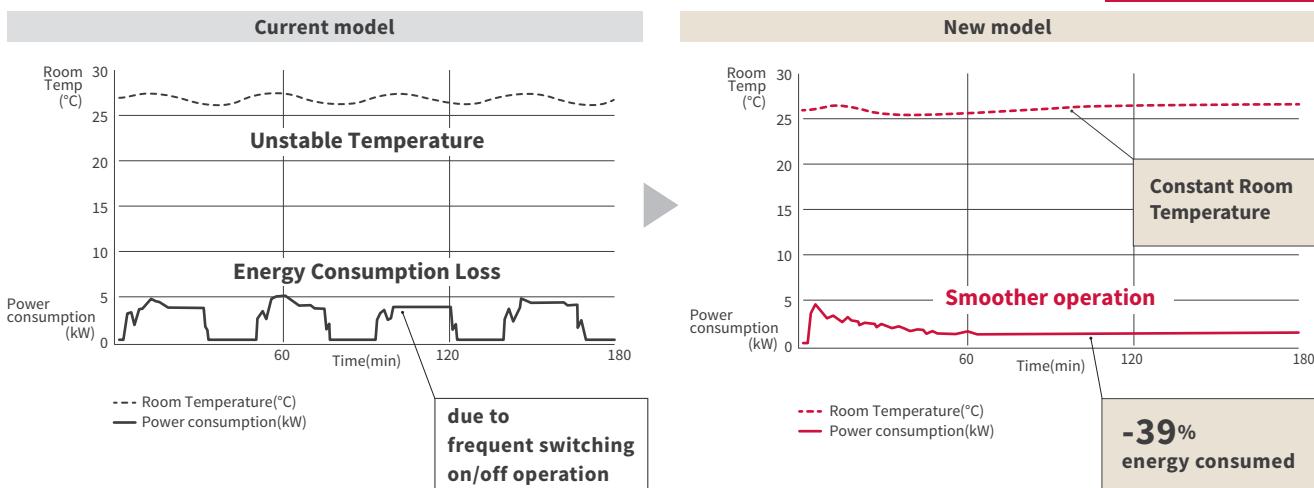
#### IMPROVED COMPRESSOR CONTROL

##### Smooth drive

The model calculates the appropriate amount of refrigerant supplied by the outdoor units on the basis of information about the required load from the individual indoor units. The model employs smooth operation control to control the number of revolutions of the inverter compressor. The model supplies the appropriate amount of refrigerant to the indoor units according to the required load. The model increases energy-saving efficiency by operating smoothly while controlling the switching on and off of the compressor at low-load operation.

##### Actual example of the new compressor control

Hitachi Original!



# INDOOR UNIT

## LINE UP OVERVIEW

### INDOOR UNIT

IDU Category	kW (Cooling)																							
	1.6	1.8	2.2	2.5	2.8	3.2	3.6	4.0	4.3	4.5	5.0	5.6	6.3	7.1	8.0	8.4	9.0	10.0	11.2	12.5	14.0	14.2	16.0	22.4
DUCTED	4-WAY CASSETTE TYPE 						●			●					●	●						●		
	4-WAY CASSETTE COMPACT TYPE 	●	●	●	●			●			●	●	●	●										
	HIGH ESP TYPE 															●	●	●	●	●	●	●	●	
	MEDIUM ESP TYPE 		●	●	●	●	●	●	●	●	●	●	●	●	●							●	●	
	LOW ESP TYPE 		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	SLIM TYPE 		●	●	●	●	●	●																
	COMPACT TYPE 		●	●	●	●	●	●																
	FLOOR / CEILING CONVERTIBLE TYPE 										●	●	●	●	●	●	●	●	●	●	●	●		
EXPOSED	WALL MOUNTED TYPE 		●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●			

### VENTILATION

ALL FRESH AIR UNIT		Cooling Capacity (kW)	14.0	22.4	28.0
RPI-KFNQ		Fresh air processing unit fan speed (m³/h)	1,080	1,680	2,100



## KEY INFORMATION

### CEILING CASSETTE



#### 4-WAY CASSETTE TYPE

**RCI-FSKDNQ** [1N~, 220-240V/50Hz] [1N~, 220V/60Hz]

- With area of air distribution with 4 direction of louvers (distribution with distance available with optional parts (duct flange))
- Motion sensor available for better energy saving operation
- Individual four-way louvres for greater comfort for individual users
- Ideal for a higher ceiling location for installation (up to 5.5m in cooling mode)

#### 4-WAY CASSETTE COMPACT TYPE

**RCIM-FSN4** [1N~, 220-240V/50Hz] [1N~, 220V/60Hz]

- Dimensions correspond with 600mm × 600mm architectural module ceiling design specifications
- Quiet operation level (as low as 24.5 dB(A))
- Wide range of air flow rate ideal for high ceiling installation with 4.6m air blow down in cooling mode

### DUCTED



#### HIGH ESP TYPE

**RPIH-HNAUNQ** [1N~, 220-240V/50Hz]

**RPI-FSNQH** [1N~, 220V/60Hz]

**RPI-FSNQ** [3N~, 380-415V/50Hz][3N~,380V/60Hz]

- High ESP (90/120Pa for 3.0-6.0 HP class, 180Pa for 8.0-10.0 HP class)
- Space saving design thanks to a height of only 300mm (3.0 - 6.0 HP class) or 470mm (8.0-10.0HP class)

#### MEDIUM ESP TYPE

**RPIM-HNAUNQ** [1N~, 220-240V/50Hz]

**RPI-FSNQH** [1N~, 220V/60Hz]

**RPI-FSN3Q** [3N~,380-415V/50Hz][3N~,380V/60Hz]

- 2 steps of medium ESP (50/80Pa for 0.8- 2.5 HP class, 100Pa for 8.0-10.0 HP class)
- Space saving design thanks to a height of only 270mm (0.8 - 2.5HP class) or 470mm (8.0 - 10.0HP class)

#### LOW ESP TYPE

**RPIIL-HNAUNQ** [1N~, 220-240V/50Hz]

**RPI-FSNQL** [1N~, 220V/60Hz]

- Low ESP (30Pa for 0.8-2.5 HP class, 60Pa for 3.0-6.0 HP class)
- Space saving design thanks to a height of only 270mm (0.8- 2.5HP class) or 350mm (3.0-6.0HP class)



#### SLIM TYPE

**RPIZ-FSNQS/P** [1N~, 220-240V/50Hz] [1N~, 220V/60Hz]

- Ideal for narrow ceiling voids installation thanks to low height up to 192mm & width just 700mm
- Drain-pump with 900mm lift as standard optional part
- Quiet operation level (as low as 22 dB(A))

#### COMPACT TYPE

**RPIZ-HNATNQ** [1N~, 220-240V/50Hz]

**RPIZ-HNDTSQ** [1N~, 220V/60Hz](DC)

- Ideal for installation over the closet or windows thanks to the up to the compactness with 192mm height
- Drain-pump with 900mm lift as standard optional part
- Quiet operation level (as low as 21dB(A))
- Fan air flow rate up to 6 taps (DC motor model only)

### EXPOSED



#### FLOOR/CEILING CONVERTIBLE TYPE

**RPFC-FSNQ** [1N~, 220-240V/50Hz] [1N~, 220V/60Hz]

- Fully [Floor mounted] or [Ceiling suspended] installation convertible
- Easy installation
- Fresh air-intake design
- Optional drain pump available

#### WALL MOUNTED TYPE

**RPK-FSNQS** [1N~, 220-240V/50Hz] [1N~, 220V/60Hz]

**RPK-FSN4M** [1N~, 220-240V/50Hz] [1N~,220-240V/60Hz]

- Simple installation procedure
- Flexible discreet design suitable to any interior

### VENTILATIONS



#### ALL FRESH AIR UNIT

**RPI-KFNQ AC 10**, [220-240V/50Hz] AC 10, [220V/60Hz]

- Creates a comfortable and healthy indoor environment thanks to introducing fresh air function and heat/cool function
- Various controllers can be selected and interfaced with the H-LINK system
- Longer ducts can be connected on-site, thanks to the higher ESP



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# -CONTROLLER

## LINE UP OVERVIEW

# COMPARING INDIVIDUAL CONTROLLERS

		WIRED REMOTE CONTROLLER	SIMPLIFIED WIRED REMOTE CONTROLLER	ADVANCED WIRED REMOTE CONTROLLER	ADVANCED WIRELESS REMOTE CONTROLLER	WIRELESS REMOTE CONTROLLER
	HCWA10NEGQ					
<b>Connection Capacity</b>	RCS Groups	1	1	1	-	-
	Indoor units (*1)	16	16	16	-	-
<b>Setting</b>	Temperature Setting Rate (*2)	°C (0.5/1) °F (1)	°C (0.5/1) °F (1)	°C (0.5/1) °F (1)	°C (0.5/1) °F (1)	°C (1)
	Indoor Fan Speed (*2) (*3)	3/4/6 taps	3/4/6 taps	3/4/6 taps	3/4/6 taps	3 taps
	Louver Direction (*2)	●	●	●	●	●
	Individual Louver Setting (*2)	●	-	●	●	●
	Remote Control Primary-Secondary Setting	-	●	●	-	-
	Function Selection	Automatic Restart with Eco-operation Automatic Reset Temperature (Cooling) Temperature Indication (*4)	- ● ●	- ● ●	- ● ●	- ● ●
	Filter Sign	●	●	●	-	-
	Filter Sign Reset	●	-	●	●	●
	Louver Open / Close	-	-	●	-	-
	Room Name Setting	-	-	●	-	-
	Alarm Sign	●	●	●	-	-
<b>Service &amp; Installation</b>	Identifying indoor units side-by-side	-	-	●	-	●
	Screen Adjustment	-	-	●	-	-
	Language	-	-	●	-	-
	Temperature Unit - °C / °F	●	● (*5)	●	●	-
	Adjusting Brightness of Run Indicator	-	-	●	-	-
	Sensor Condition Check	●	-	●	-	-
	Check Menu	Model Display (*2) Indoor / Outdoor PCB Check Alarm History Display	- - ●	- - ●	- - ●	- - ●
	Operation Lock / Set	● (*6)	-	●	-	-
	Lower Limit for Cooling Operation	●	●	●	-	-
	Upper Limit for Heating Operation	●	●	●	-	-
	Built-In Timer (On / Off)	●	-	●	●	●
<b>Management</b>	Adjusting Date / Time Setting	●	●	●	-	-
	Automatic OFF timer setting	-	●	●	-	-
	Weekly Schedule	-	-	●	-	-
	Schedule	Settable Timer Operation Times (Per Day) Holiday Setting Schedule On / Off	- - - 5	- - ●	- - ●	- - -
	Power Saving with Motion Sensor	-	-	●	-	-
	Outdoor Unit capacity control	Peak cut control moderate control	- -	● ●	- -	- -
	Indoor Unit Rotation Control	Indoor Unit Address Indoor Air Temperature difference	- -	● ●	- -	- -
	Automatic Fan Operation	-	-	●	-	-
	ODU silent mode	-	-	●	-	-
	Quick Function	-	-	●	-	-
	Comfort setting	Control Cool Air	-	●	-	-
	Saving/ODU Noise Reduction Schedule	-	-	●	-	-
	Daylight Saving Time	-	-	●	-	-
<b>MENU</b>	Power Consumption visualization	-	-	●	-	-

(\*1) All 16 indoor units need to be connected with transition wire.

- (\*) All 16 indoor units need to be connected with transition wire.
- (\*\*) Availability depends on the indoor unit type connected to the each individual controllers. Please consult your distributors for more details.

(\*3) 6 taps is available for Ducted indoor unit, compact type, RPIZ-HNDTSQ only.

(\*4) Indicated temperature can be selected from two options, the thermistor in the indoor unit or in the individual controller.

(\*5) Please contact your distributor in case temperature unit needs to be changed from °C to °F.

(\*6) Only "bulk operation lock" available

BMS ADAPTER



**BMS ADAPTER for BACnet®**  
**HC-A64BNP1**  
**Control up to 64 Indoor Units**



**BMS ADAPTER for LONWORKS®**  
**HARC70-PE1**  
**Bigger Connection Capacity**  
**(Up to 128 Indoor Units)**

## COMPARING CENTRALIZED CONTROLLERS

		CENTRAL STATION mini	CENTRAL STATION EZ	CENTRAL STATION EX	CENTRAL STATION	CENTRALIZED ON/OFF CONTROLLER	
							
		PSC-A32MN	PSC-A64GT	PSC-A128EX	PSC-A64S	PSC-A16RS	
Capacity comparison	Total Connection capacity	RCS group	32	64	2560 (*1)	64	16
	Group	4	64	2048 (*1)	64	-	
	Block	2/4/8/16	4	512 (*2)	4	-	
	Area	-	-	512 (*2)	-	-	
	Indoor unit	160	160	2560 (*1)	160	160	
	Outdoor unit	64	64	1024 (*1)	64	-	
Display	Building scale	Small	Medium	Large	Medium	Medium	
	Operation	Touch screen	Touch screen	Touch screen	Button	Button	
	Operation panel size options	4	2	7	-	-	
	Layout	-	-	●	-	-	
	List options	-	-	3	-	-	
	All together	●	●	●	●	●	
Operation unit	By layout	-	-	●	-	-	
	By area	-	-	●	-	-	
	By block	●	●	●	●	-	
	By group	-	-	●	-	-	
	By RCS group	●	●	-	●	●	
	By indoor unit	-	-	●	-	-	
Control Function	Main 5 functions (*5)	●	●	●	●	- (*6)	
	Individual controller lock	●	△ (*3)	●	●	-	
	Filter sign reset	●	●	●	●	-	
	Outdoor unit capacity control	△ (*4)	-	●	-	-	
	Outdoor unit noise control	-	-	●	-	-	
	Main 5 functions (*5)	●	●	●	●	-	
Monitor Function	Individual controller lock	●	●	●	●	-	
	Alarm status & code	●	●	●	●	- (*7)	
	Filter sign	●	●	●	●	-	
	Air inlet temperature of indoor unit	●	●	●	-	-	
	Air inlet temperature of outdoor unit	●	●	●	-	-	
	Weekly	●	●	●	- (*8)	- (*8)	
Schedule Function	Setting times per day	10	10	16	3 (*8)	3 (*8)	
	Special day setting	-	-	5	-	-	
	Annual/Summer/Winter schedule	-	-	●	-	-	
Other function	Alarm history (records number)	100	100	10000	-	-	
	External in/output history	-	-	1000	-	-	
	Management report visualization	●	●	●	-	-	
	Data output by external media	-	-	SD card, USB flash device	-	-	

(\*1) One external adapter can control [128 remote controller groups / 128 groups / 32 blocks], and Central Station EX can connect up to 15 adapters.

(\*2) No restriction on the number of H-LINK

(\*3) Individual Function Control in Each Remote Controller is not applicable

(\*4) Applicable by Schedule function or External Signal input

(\*5) Main 5 functions mean 1) Run/Stop 2) Operation mode 3) Temperature setting 4) Fan speed 5) Louver control

(\*6) Only Run/Stop is available

(\*7) Alarm Code cannot be displayed, but Operation indicator keeps flashing in red to inform abnormal condition

(\*8) Available with 7-day timer (PSC-A1T)