

SPLIT COMMERCIAL AIR CONDITIONER 
N Series 

HITACHI

 **Hitachi Appliances, Inc.**

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

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China Energy Conservation
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ISO9001

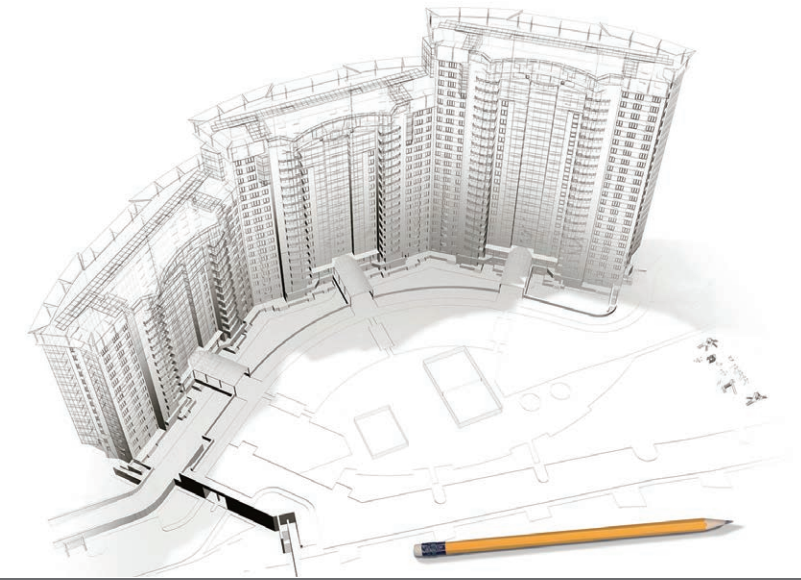


ISO14001

R410A



▶ **N** stands for a new series of split commercial air conditioner (word root “new”)
At the same time, N also associates with an environmentally friendly refrigerant R410A.



Hitachi for Quality Life

Hitachi N Series Split Commercial Air Conditioner is one specially-tailored competitive air conditioner for commercial space. It adopts R410A environmentally friendly refrigerant and high efficient compressor with low noise, low vibration. The cooling capacity range is from 2.5kW-12.3kW, plus it can realize rapid cooling and heating, superb energy saving, more sophisticated production, even air distribution and simple use.

A variety selection of models can meet the different requirements of home and commercial space. It can be widely used in apartments, villas, shops, offices, restaurant and etc. Hitachi Split Commercial Air Conditioner wholeheartedly creates a quiet, comfortable and reliable interior environment.



Characteristic

Split Commercial Air Conditioner N Series

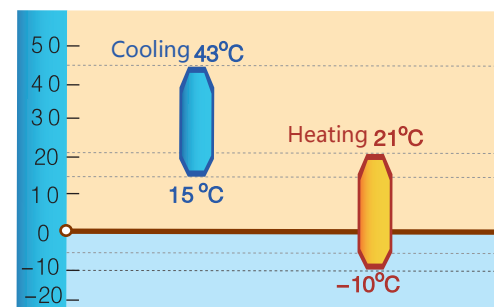
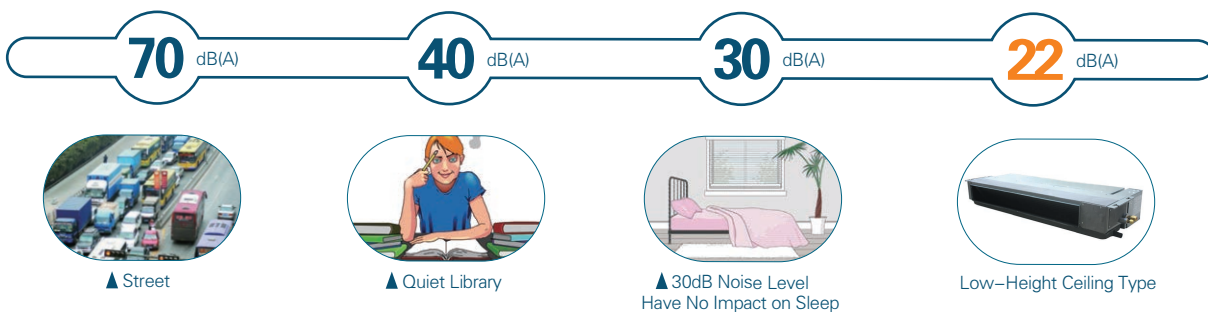


Scroll Compressor

In 1983, Hitachi invented the first air conditioning scroll compressor in the world and owned the patent. More than 20 years, professional experience in development and manufacturing of scroll compressor ensures more advanced technology, higher quality and stronger reliability.

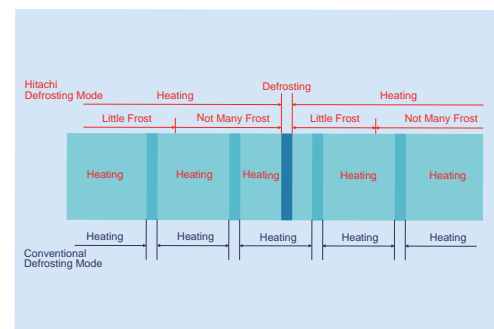
Top-Class Quiet Operation

Outdoor unit adopts super flow layer fan with optimized shape which has low sound pressure level. Indoor unit under top-class quiet operation offers quiet environment. Sound pressure level is only 22dB by the "Low" fan speed setting.



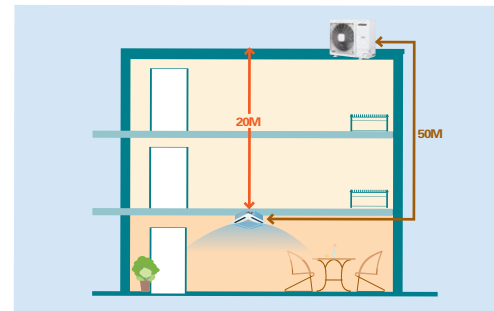
Wide Working Range

Cooling Operation: 15°C~43°C
Heating Operation: -10°C~21°C
This feature enables cooling capacity to be obtained even in winter by buildings with high internal cooling load due to lighting, people and machines, particularly in areas such as shops, lecture rooms, data processing rooms etc.



Intelligent Defrosting

Conventional split system adopts time defrosting mode (eg. Keep defrosting for 10 min. every other 40 min.), whereas Hitachi sets defrosting sensor on outdoor unit, so that defrosting can be conducted according to the actual frosting degree. Besides, defrosting can stop automatically if frost disappears. As a result, the defrosting time is shortened and heating efficiency is enhanced.



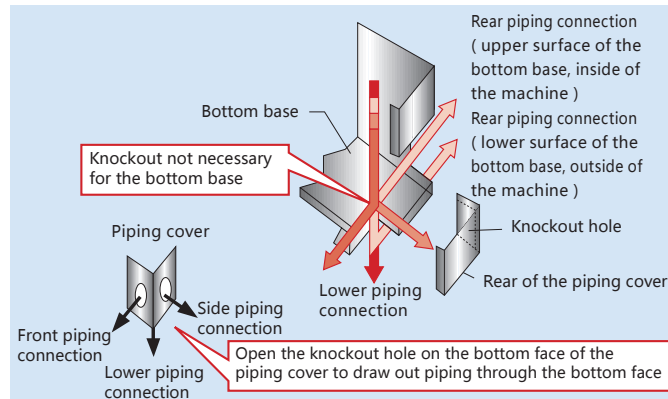
Long Piping Design

Due to the new control method, the actual piping length is up to 50m and pipe height can be up to 20m, which makes installation easier and more flexible.

Characteristic

Split Commercial Air Conditioner

N Series



Flexible Piping Connection

Outdoor unit (2.5~5HP) has four types of piping connection. (front, side, bottom and back surface). Back surface connection in particular now is much easier.

Automatic Reset Function

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



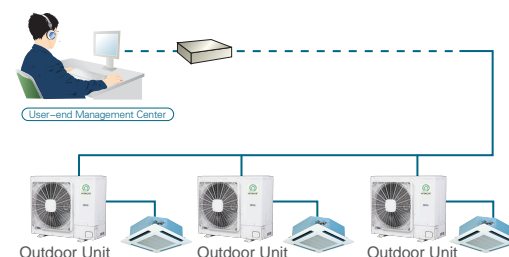
Flexible Control

Units are equipped with wireless remote switch (standard) and remote control switch (optional). System can realize node central control, RS-485 central control and central controller control, which can meet various control needs in many cases.



Node Central Control—Enable AC units to realize intelligent power on/off control for room card system in business hotels, save more energy.

RS-485 Central Control, Central Controller and CS-NET—Realize long-distance central control for many multi-split units, and facilitate management and maintenance.



Characteristic

Indoor Units

4-Way Cassette Type

RCI Technique Features →

Extremely Quiet Operation

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

Unified Panel Sizes

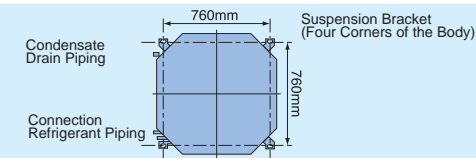
Panel sizes are unified to a 950mm square, neat and elegant, and well harmonized with decoration.

Input power reduced by applying of new developed DC fan motor

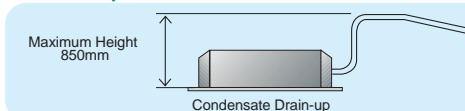
Employed several new technologies such as a ferritic magnetic surface-mounted rotor, centralized winding system and split core system, the motor efficiency is improved in all aspects, smaller and lighter.

Flexible Refrigerant Piping

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

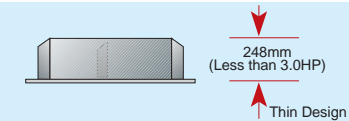


Drain-up Mechanism as Standard Part

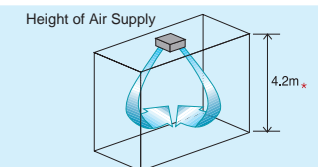


Compact and Thin

The height of the unit is just 248mm(Less than 3.0HP), so it can be in a small space inside a ceiling.



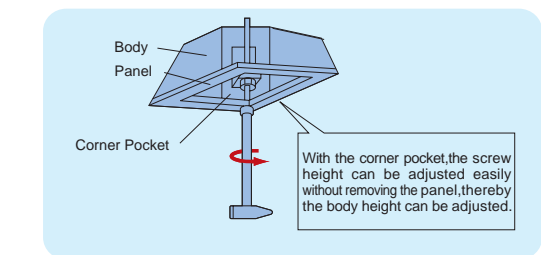
With broad range of air supply, is suitable to be used in high ceiling and great space



*When indoor unit model is RCI-5.0HNQ
When indoor unit model is RCI-2.0, 3.0HNQ, the value is 3.5m.

Body height easily adjustable in the corner pockets

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



Characteristic

Split Commercial Air Conditioner N Series Indoor Units

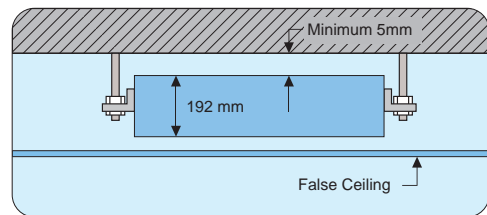
Low-height In-the-ceiling Type

RPIZ Technique Features →



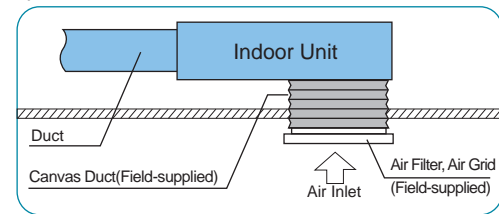
Installation Space-saving

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



Satisfy Varied Requests on Installation

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



(Installation Diagram of Air Bottom Inlet)

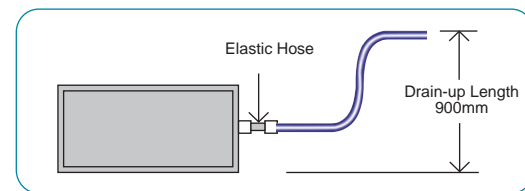
Quiet Operation

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

Model	High Sound Pressure(dB)	Low Sound Pressure(dB)
RPIZ-1.0HNQ	28	22
RPIZ-1.5HNQ	33	26
RPIZ-2.0HNQ	35	29
RPIZ-2.5HNQ	38	33
RPIZ-3.0HNQ	39	34

Drain-up Mechanism as Optional Part

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



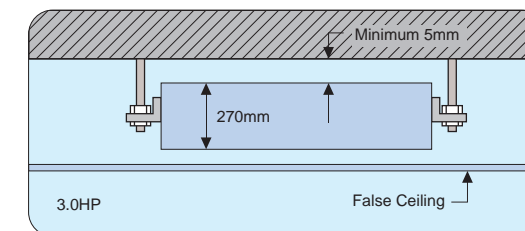
In-the-ceiling Type (Low Static Pressure)

RPI Technique Features →

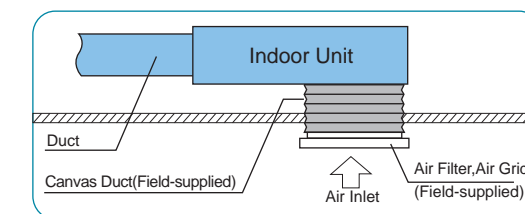


Installation Space-saving

Less than 270mm in height can be easily fit into the limited space in the false ceiling (3.0HP).



Flexibly supports a wide range of installation conditions at site



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

Fresh Indoor Air

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

Excellent Air Flow

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

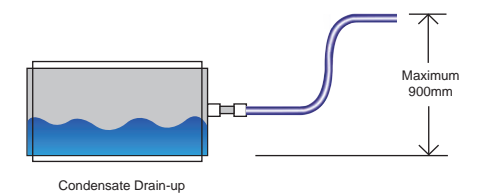
Quiet Operation

Far less noise, much quieter operation.

Model	High Fan Speed	Low Fan Speed
RPI-3.0HNQ	37dB	31dB
RPI-4.0HNQ	44dB	36dB
RPI-5.0HNQ	45dB	37dB

Optional Parts

Drain-up mechanism can be supplied as optional part



Condensate Drain-up



Characteristic

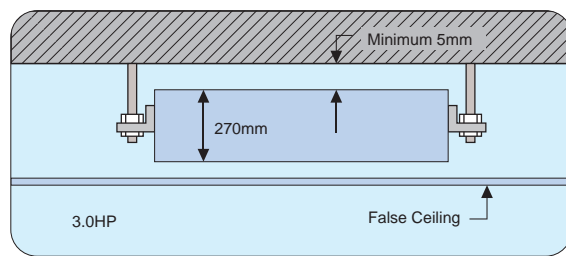
Split Commercial Air Conditioner N Series Indoor Units

In-the-ceiling Type (High Static Pressure)

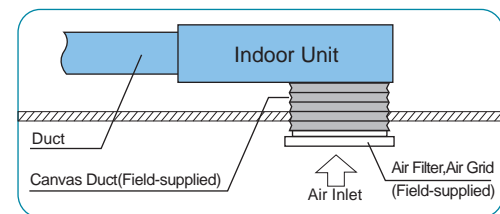
RPI Technique Features →

Installation Space-saving

Less than 270mm in height can be easily fit into the limited space in the false ceiling(3.0HP).

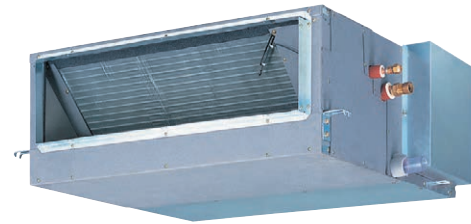


Flexibly supports a wide range of installation conditions at site



NOTE

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



Higher External Static Pressure

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

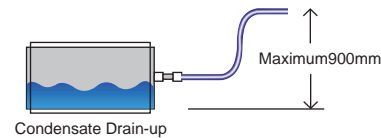
Quiet Operation

Far less noise, much quieter operation.

Model	High Fan Speed	Low Fan Speed
RPI-3.0HNQH	37dB	31dB
RPI-4.0HNQH	44dB	36dB
RPI-5.0HNQH	45dB	37dB

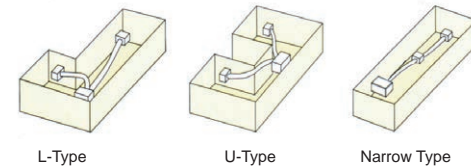
Optional Parts

Drain-up mechanism can be supplied as optional part.



Applicable for Various Types of Space

Distribute airflow to different rooms by the use of duct, even if in the anomalous shape room (L-type or U-type), still maintain comfortable environment.



Parameter

Indoor Units

Item		4-Way Cassette Type					
Model	Indoor Unit	RCI-2.0HNQ	RCI-2.5HNQ	RCI-3.0HNQ	RCI-4.0HNQ	RCI-5.0HNQ	
	Outdoor Unit	RAS-2.0HNQ	RAS-2.5HNQ	RAS-3.0HNQ	RAS-4.0HNQ	RAS-5.0HNQ	
Power Supply	Indoor Unit	AC1 Φ,220-240V/50Hz					
	Outdoor Unit	AC1 Φ,220-240V/50Hz			AC3 Φ,380-415V/50Hz		
Cooling	Nominal Cooling Capacity	kW	5	6.3	7.2	10	12.5
	Power Input	kW	1.61	2.41	2.61	3.46	4.06
Heating	Nominal Heating Capacity	kW	5.8	7.3	8	11.2	14
	Power Input	kW	1.57	2.46	2.66	3.46	4.06
Fan Air Flow Rate	Indoor Unit	m ³ /min	16-14-12	20-17-15	20-17-15	32-27-24	34-29-25
	Outdoor Unit	m ³ /min	46	72	72	105	105
Sound Pressure Level	Indoor Unit (High/Med/Low)	dB(A)	32-30-28	32-30-28	32-30-28	42-37-34	43-38-35
	Outdoor Unit	dB(A)	56	58	58	59	59
Net Weight	Indoor Unit	kg	24	24	24	29	29
	Outdoor Unit	kg	45	68	68	100	100
Outer Dimensions	Indoor Unit(H x W x D)	mm	248 x 840 x 840	248 x 840 x 840	248 x 840 x 840	298 x 840 x 840	298 x 840 x 840
	Outdoor Unit(H x W x D)	mm	640 x 900 x 300	800 x 950 x 370	800 x 950 x 370	1240 x 850 x 315	1240 x 850 x 315
Piping Size	Gas Line	mm	Φ 12.7	Φ 15.88	Φ 15.88	Φ 15.88	Φ 15.88
	Liquid Line	mm	Φ 6.35	Φ 9.53	Φ 9.53	Φ 9.53	Φ 9.53
	Max.Piping Length	m	20	20	20	50	50
	Max.Height Difference	m	5	10	10	20 (O-U is Lower:15)	20 (O-U is Lower:15)
	Condensate Drain		VP25(Outer Diameter Φ 32mm)				
Panel Model		P-N23NAQ2					

Parameter

Split Commercial Air Conditioner N Series Indoor Units

Item		Low-height In-the-ceiling Type					
Model	Indoor Unit	RPIZ-1.0HNQ	RPIZ-1.5HNQ	RPIZ-2.0HNQ	RPIZ-2.5HNQ	RPIZ-3HNQ	
	Outdoor Unit	RAS-1.0HNQ	RAS-1.5HNQ	RAS-2.0HNQ	RAS-2.5HNQ	RAS-3HNQ	
Power Supply	Indoor Unit	AC1 Φ,220-240V/50Hz					
	Outdoor Unit	AC1 Φ,220-240V/50Hz					
Cooling	Nominal Cooling Capacity	kW	2.5	3.5	5	6.3	7.2
	Power Input	kW	0.78	1.09	1.61	2.44	2.64
Heating	Nominal Heating Capacity	kW	2.8	4	5.8	7.3	8
	Power Input	kW	0.86	1.15	1.57	2.49	2.69
Fan Air Flow Rate	Indoor Unit	m ³ /min	8-7-6	10-8-7	15-13-11	16-14-12	17-14-12
	Outdoor Unit	m ³ /min	25	28	46	72	72
External Static Pressure	Pa	10	10	10	10	10	
Sound Pressure Level	Indoor Unit (High/Med/Low)	dB(A)	28-25-22	33-29-26	35-32-29	38-35-33	39-36-34
	Outdoor Unit	dB(A)	53	53	56	58	58
Net Weight	Indoor Unit	kg	20	20	24	24	24
	Outdoor Unit	kg	32	36	45	68	68
Outer Dimensions	Indoor Unit(H x W x D)	mm	192 x 900 x 447	192 x 900 x 447	192 x 1170 x 447	192 x 1170 x 447	192 x 1170 x 447
	Air Inlet(W x H)	mm	770 x 170	770 x 170	1040 x 170	1040 x 170	1040 x 170
	Air Outlet(W x H)	mm	700 x 115	700 x 115	970 x 115	970 x 115	970 x 115
	Outdoor Unit(H x W x D)	mm	570 x 800 x 260	570 x 800 x 260	640 x 900 x 300	800 x 950 x 370	800 x 950 x 370
Piping Size	Gas Line	mm	Φ 9.53	Φ 12.7	Φ 12.7	Φ 15.88	Φ 15.88
	Liquid Line	mm	Φ 6.35	Φ 6.35	Φ 6.35	Φ 9.53	Φ 9.53
	Max.Piping Length	m	10	10	20	20	20
	Max.Height Difference	m	5	5	5	10	10
	Condensate Drain		VP25(Outer Diameter Φ 32mm)				

N Parameter

Indoor Units

Item		In-the-ceiling Type(Low Static Pressure)			
Model	Indoor Unit	RPI-3.0HNQ	RPI-4.0HNQ	RPI-5.0HNQ	
	Outdoor Unit	RAS-3.0HNQ	RAS-4.0HNQ	RAS-5.0HYNQ	
Power Supply	Indoor Unit	AC1 Φ,220-240V/50Hz			
	Outdoor Unit	AC1 Φ,220-240V/50Hz		AC3 Φ,380-415V/50Hz	
Cooling	Nominal Cooling Capacity	kW	7.2	10	12.5
	Power Input	kW	2.71	3.6	4.2
Heating	Nominal Heating Capacity	kW	8	11.2	14
	Power Input	kW	2.76	3.595505618	4.2
Fan Air Flow Rate	Indoor Unit	m ³ /min	20-18-16	36-33-31	38-34-31
	Outdoor Unit	m ³ /min	72	105	105
External Static Pressure		Pa	20/50	20/50	20/50
Sound Pressure Level	Indoor Unit (High/Med/Low)	dB(A)	37-34-31	44-40-36	45-41-37
	Outdoor Unit	dB(A)	58	59	59
Net Weight	Indoor Unit	kg	36	49	49
	Outdoor Unit	kg	68	100	100
Outer Dimensions	Indoor Unit(H x W x D)	mm	270 x 1100 x 690	270 x 1380 x 690	270 x 1380 x 690
	Air Inlet(W x H)	mm	926 x 219	1293 x 219	1293 x 219
	Air Outlet(W x H)	mm	851 x 179	1131 x 179	1131 x 179
	Outdoor Unit(H x W x D)	mm	800 x 950 x 370	1240 x 850 x 315	1240 x 850 x 315
Piping Size	Gas Line	mm	Φ15.88	Φ15.88	Φ15.88
	Liquid Line	mm	Φ9.53	Φ9.53	Φ9.53
	Max.Piping Length	m	20	50	50
	Max.Height Difference	m	10	20 (O-U is Lower:15)	
Condensate Drain			VP25(Outer Diameter Φ32mm)		

N Parameter

Indoor Units

Accessory	Model	Application	Remark
Wireless Remote Control Switch	PC-LH3A	General Purpose	Standard
Receiver Kit	PC-RPH3Q	RPIZ-1.0~3.0HNQ RPI-3.0~5.0HNQ RPI-3.0~5.0HNQH	Standard
Receiver Plate	PC-RCH2Q	RCI-2.0~5.0HNQ	Standard
Remote Control Switch	PC-AR/PC-ARQ	General Purpose	Optional
Central Station	PSC-5S	General Purpose	Optional
Drain pump*	DUPI-15H2Q	R410A Fixed Speed Machine General Purpose	Optional

NOTES:

Drain Pump(Only for RPI and RPIZ type)

The Drain pump for Duct Type(optional)only allows external placement.

Parameter

Split Commercial Air Conditioner N Series Indoor Units

Item		In-the-ceiling Type(High Static Pressure)			
220V/380V	Indoor Unit	RPI-3.0HNQH	RPI-4.0HNQH	RPI-5.0HNQH	
	Outdoor Unit	RAS-3.0HNQ	RAS-4.0HNQ	RAS-5.0HYNQ	
Power Supply	Indoor Unit	AC1 Φ,220-240V/50Hz			
	Outdoor Unit	AC1 Φ,220-240V/50Hz		AC3 Φ,380-415V/50Hz	
Cooling	Nominal Cooling Capacity	kW	7.2	10	12.5
	Power Input	kW	2.72	3.7	4.3
Heating	Nominal Heating Capacity	kW	8	11.2	14
	Power Input	kW	2.77	3.7	4.3
Fan Air Flow Rate	Indoor Unit	m ³ /min	16-14-12	35-31-25	37-31-25
	Outdoor Unit	m ³ /min	72	105	105
External Static Pressure		Pa	50(80)	120(90)	120(90)
Sound Pressure Level	Indoor Unit (High/Med/Low)	dB(A)	37-34-31	44-40-36	45-41-37
	Outdoor Unit	dB(A)	58	59	59
Net Weight	Indoor Unit	kg	35	58	58
	Outdoor Unit	kg	68	100	100
Outer Dimensions	Indoor Unit(H x W x D)	mm	270 x 900 x 720	350 x 1300 x 800	350 x 1300 x 800
	Air Inlet(W x H)	mm	833 x 226	1233 x 306	1233 x 306
	Air Outlet(W x H)	mm	803 x 220	1203 x 300	1203 x 300
	Outdoor Unit(H x W x D)	mm	800 x 950 x 370	1240 x 850 x 315	1240 x 850 x 315
Piping Size	Gas Line	mm	Φ15.88	Φ15.88	Φ15.88
	Liquid Line	mm	Φ9.53	Φ9.53	Φ9.53
	Max.Piping Length	m	20	50	50
	Max.Height Difference	m	10	20 (O-U is Lower:15)	
Condensate Drain			VP25(Outer Diameter Φ32mm)		

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

Cooling Operation Conditions Indoor Air Inlet Temperature: 27°CDB(80° FDB) 19.0°CWB(66.2° FWB) Outdoor Air Inlet Temperature: 35°CDB(95° FDB) Piping Length: 7.5 Metes Piping Lift :0 Meter	Heating Operation Conditions Indoor Air Inlet Temperature: 20°CDB(68° FDB) Outdoor Air Inlet Temperature: 7°CDB(45° FDB) 6°CWB(43° FWB)
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2.The sound pressure level is based on following conditions. 1.5m beneath the unit.
The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.
When bottom air inlet is adopted,sound pressure will increase according to factors such as installation mode and room structure.

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



