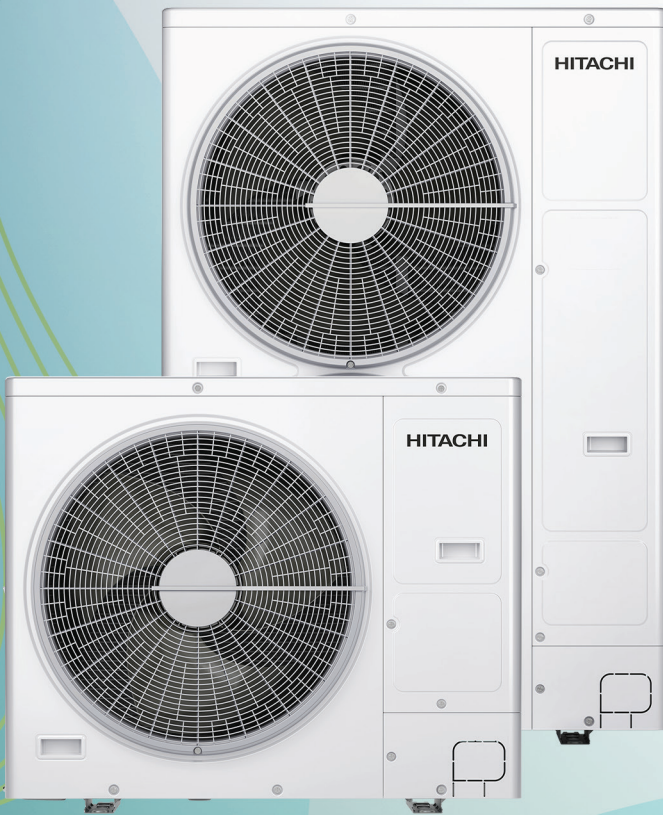


IVX

Helping you form an ideal living environment

We want to create a comfortable living environment where people can enjoy life to the hilt. MINI IVX embodies such a wish. A host of outdoor units, indoor units and control devices matches the needs of various living spaces, which is not only gratifying to the owners who use them, but also brings diverse benefits to architects, installers and other customers involved in space design.



AESTHETICS

We can offer you a number of options that help enhance the aesthetics of your building.

- Fashionable outdoor and indoor unit appearance
- Large capacity outdoor unit that saves installation space

DESIGN FLEXIBILITY

Any local requirements and constraints can be met with a number of improvements in the outdoor unit.

- Piping flexibility
- High external pressure of outdoor unit
- Wide indoor unit combination
- Small body with large capacity

ADAPTABILITY

Both the quality and capability of adjustment to your environment are benefits of the HNRQ Series.

- Noise reduction mode
- Up to 52.0°C ambient temperature for cooling operations
- As low as -20.0°C ambient temperature for heating operations

EASY INSTALLATION

Overall cost and time reduction can be achieved, thanks to our newly designed outdoor units and original H-LINK system.

- Slim and lightweight body
- H-LINK
- Four directions of piping in outdoor unit
- Diagnostics using the outdoor unit's 7-segment displays

HIGHER PERFORMANCE

We are committed to offering better energy-saving results with our improved outdoor units, indoor units and advanced control systems.

- Higher performance in both EER and COP
- Low standby power consumption design

COMFORT

Our units offer you a degree of comfort, even in winter or in high humidity environments.

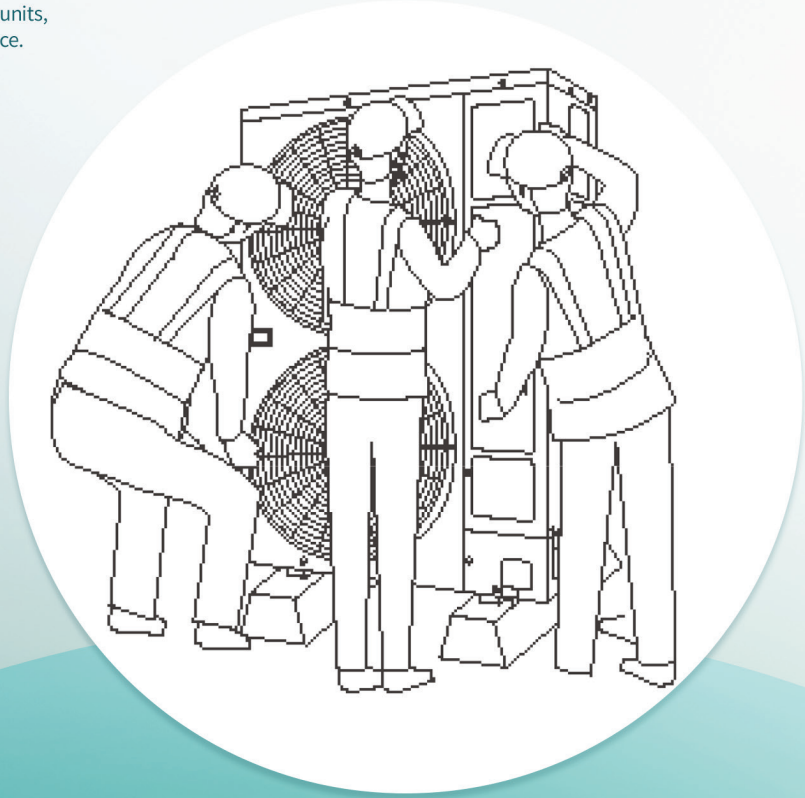
- Smart defrosting

EASY SERVICING AND MAINTAINANCE

CABINET DESIGNED FOR EASY MAINTAINANCE

Several DIP Switches are found in the front of the outdoor units, designed for easier test-run & diagnosis during maintenance. The advantages of this design are as follows:

- Monitors the unit's real-time working status
- Displays the fault code
- Shows the historical fault code
- Optimizes the control parameters on site



SET FREE mini HNSQ Series

HIGH EFFICIENCY / EASY SERVICING AND MAINTAINANCE



SPECIFICATIONS

HNSKQ Series

HP Class

Model



	unit	3.0	3.5	4.0	4.5	5.0	6.0	6.5	7.0	
		RAS-3.0HNSKQ	RAS-3.5HNSKQ	RAS-4.0HNSKQ	RAS-4.5HNSKQ	RAS-5.0HNSKQ	RAS-6.0HNSKQ	RAS-6.5HNSKQ	RAS-7.0HNSKQ	
Power Supply	V/Ph/Hz	220-240/1/60	220-240/1/60	220-240/1/60	220-240/1/60	220-240/1/60	220-240/1/60	220-240/1/60	220-240/1/60	
Capacity	Cooling	kW	8.0	10.0	11.2	12.5	14.0	15.5	18.0	20.0
	Heating	kW	9.5	11.2	12.5	14.0	16.0	17.0	20.0	22.4
Power Input	Cooling	kW	2.00	2.56	3.02	3.61	4.30	5.15	5.46	5.85
	Heating	kW	2.26	2.67	3.02	3.85	4.41	4.99	5.13	5.61
Air Flow Rate	Standard	m ³ /min	60	67	71	69	71	71	101	122
Dimensions	H×W×D	mm	800×950×320	800×950×320	800×950×320	990×950×320	990×950×320	990×950×320	1380×950×320	1380×950×320
Weight	Net	kg	74	74	74	87	87	87	118	118
Footprint Area		m ²	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Packaging Volume		m ³	0.47	0.47	0.47	0.51	0.51	0.51	0.76	0.76
Compressor Type			Rotary	Rotary	Rotary	Rotary	Rotary	Rotary	Rotary	
Refrigerant	Type		R410A	R410A	R410A	R410A	R410A	R410A	R410A	
	Charge Amount	kg	2.5	3.1	3.1	4	4	4	5.5	5.9
Refrigerant Oil	Model		α68HES-H	α68HES-H	α68HES-H	α68HES-H	α68HES-H	α68HES-H	α68HES-H	
	Charge Amount	L	0.88	0.88	0.88	1.65	1.65	1.65	1.8	1.8
Number of Fan Motors			1	1	1	1	1	2	2	
Capacity Ratio of IDU/ODU	%		50%~130%	50%~130%	50%~130%	50%~130%	50%~130%	50%~130%	50%~130%	
Sound Pressure Level	Semi-anechoic	dB(A)	51	54	56	54	54	56	56	58
Piping	Liquid	mm	φ9.53	φ9.53	φ9.53	φ9.53	φ9.53	φ9.53	9.53	9.53
	Gas	mm	φ15.88	φ15.88	φ15.88	φ15.88	φ15.88	φ15.88	15.88	15.88
Current	Max	A	25	25	25	30	31	33	32	32
	Breaker	A	32	32	32	40	40	40	40	40
	Cooling	A	9.18	11.75	13.87	16.42	19.25	23.79	25.07	26.86
Efficiency	Heating	A	10.38	12.26	13.87	15.31	19.94	22.4	23.55	25.76
	EER	W/W	4.00	3.91	3.71	3.46	3.26	3.01	3.30	3.42
COP		W/W	4.20	4.19	4.14	3.64	3.63	3.41	3.90	3.99
	Max IDU Connect Qty.		4	5	5	5	6	6	9	10
Working Temp. Range	Cooling		Stable Work at -5.0~48.0°C DB and Interval at 48.0~52.0°C DB							
	Heating		Stable Work at -15.0~24.0°C DB and Interval at -20.0~-15.0°C DB							
Refrigerant Control Mode		Microcomputer-controlled Electronic Expansion Valve								
Electronic Expansion Valve										
Tubing Connection Method		Flare Connection								
Maximum Piping Length	Total Liquid Pipe Length	m	30	40	40	70	70	70	120	120
	Between ODU and farthest IDU	m	25	25	25	60	60	60	75	75
	Between 1st Branch Multi Kit and Farthest IDU	m	20	20	20	30	30	30	30	30
	Between Each Multi Kit and Each IDU	m	10	10	10	10	10	10	10	10
Maximum Level Difference	Between ODU and IDU	m	20	20	20	30	30	30	30	30
		m	20	20	20	20	20	20	30	30
	Between IDUs	m	3.5	3.5	3.5	10	10	10	10	10

Notes:

1. The EER and COP are tested under the following working conditions, when the outdoor unit is connected to the special combination of indoor units.

Working conditions for testing EER

- Indoor temperature: 27.0°C DB/19.0°C WB
- Outdoor temperature: 35.0°C DB
- Pipe length: 10.0 metre
- Pipe lift: 0 metre

Working conditions for testing COP

- Indoor temperature: 20.0°C DB
- Outdoor temperature: 7.0°C DB/6.0°C WB
- Pipe length: 10.0 metre
- Pipe lift: 0 metre

2. Noise test conditions are specified below: Noise is tested 1.5 metre above ground level and 1.0 metre away from the surface of the external service board on the outdoor unit. Noise parameters are tested in a semi-anechoic chamber.

3. Please consult your local distributor for indoor unit combination limitations.

6.5HP, 7HP

* Indicates that there are pipe adapters in the outdoor unit, which are used to adjust the gas pipe between the outdoor unit and the first branch. Thus the φ19.05 diameter pipe is converted to φ22.2 diameter pipe in the model.

** Indicates that there is a pipe adapter in the model, which is used to adjust the gas pipe length between the outdoor unit and the first branch. Thus the φ19.05 diameter pipe is converted to a φ25.4 diameter pipe.



HP Class

Model

		unit	8.0	9.0	10.0	11.0	12.0
			RAS-080HNBSTQ	RAS-090HNBSTQ	RAS-100HNBSTQ	RAS-110HNBSTQ	RAS-120HNBSTQ
Power Supply	V/Ph/Hz		380-415/3/60	380-415/3/60	380-415/3/60	380-415/3/60	380-415/3/60
Capacity	Cooling	kW	22.4	24.1	28.0	30.0	33.5
	Heating	kW	25.0	26.0	31.5	33.0	37.5
Power Input	Cooling	kW	6.36	7.20	8.20	9.10	10.60
	Heating	kW	6.31	7.18	8.70	9.50	10.11
Air Flow Rate	Standard	m ³ /min	122	122	163	163	163
Dimensions	H×W×D	mm	1,380×950×320	1,380×950×320	1,650×1,100×390	1,650×1,100×390	1,650×1,100×390
Weight	Net	kg	122	122	147	165	165
Footprint Area		m ²	0.30	0.30	0.43	0.43	0.43
Packaging Volume		m ³	0.76	0.76	1.13	1.13	1.13
Compressor Type			Rotary	Rotary	Rotary	Rotary	Rotary
Refrigerant	Type		R410A	R410A	R410A	R410A	R410A
	Charge Amount	kg	5.9	5.9	5.5	6.5	6.5
Refrigerant Oil	Model		α68HES-H	α68HES-H	FW68DA or FVC68D	FW68DA or FVC68D	FW68DA or FVC68D
	Charge Amount	L	1.8	1.8	2.0	2.0	2.0
Number of Fan Motors			2	2	2	2	2
Capacity Ratio of IDU/ODU	%		50-130%	50-130%	50-130%	50-130%	50-130%
Sound Pressure Level	Semi-anechoic	dB(A)	55	56	58	59	59
Piping	Liquid	mm	9.52	9.52	12.70	12.70	12.70
	Gas	mm	19.05	19.05	22.20	25.40	25.40
Efficiency	Cooling EER	W/W	3.52	3.35	3.41	3.30	3.16
	Heating COP	W/W	3.96	3.62	3.62	3.47	3.71
Max IDU Connect Qty.			12	12	13	16	19
Working Temp. Range	Cooling		Stable Work at -5.0~48.0°C DB and Interval at 48.0~52.0°C DB				
	Heating		Stable Work at -15.0~15.5°C DB and Interval at -20.0~-15.0°C				
Refrigerant Control Mode			Microcomputer-controlled Electronic Expansion Valve				
Tubing Connection Method			Flare Connection				
Maximum Piping Length	Total Liquid Pipe Length	m	300	300	250	250	250
	Between ODU and farthest IDU	m	80	80	100	100	100
	Between 1st Branch Multi Kit and Farthest IDU	m	40	40	40	40	40
	Between Each Multi Kit and Each IDU	m	15	15	15	15	15
Maximum Level Difference	Between ODU and IDU	m	50	50	50	50	50
		m	40	40	40	40	40
	Between IDUs	m	15	15	15	15	15
1st branch Multi-Kit			E-102SN	E-102SN	E-162SN	E-162SN	E-162SN

Notes:

1. The EER and COP are tested under the following working conditions, when the outdoor unit is connected to the special combination of indoor units.

Working conditions for testing EER

- Indoor temperature: 27.0°C DB/19.0°C WB
- Outdoor temperature: 35.0°C DB
- Pipe length: 10.0 metre
- Pipe lift: 0 metre

Working conditions for testing COP

- Indoor temperature: 20.0°C DB
- Outdoor temperature: 7.0°C DB/6.0°C WB
- Pipe length: 10.0 metre
- Pipe lift: 0 metre

2. Noise test conditions are specified below: Noise is tested 1.5 metre above ground level and 1.0 metre away from the surface of the external service board on the outdoor unit. Noise parameters are tested in a semi-anechoic chamber.

3. Please consult your local distributor for indoor unit combination limitations.