

HITACHI

— VRF System IVX Standard



Cooling & Heating

IVX Standard with VRF technology: a brilliant solution also for medium-small applications

1

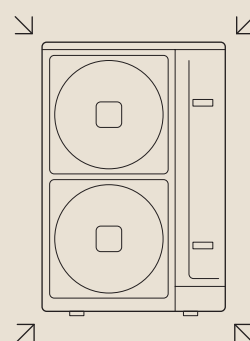
The smallest VRF unit on the market with the widest range in its category



Applications for small commercial premises may present the same requirements of flexibility and comfort as those of large properties. The IVX series starts from 5 kW cooling capacity. Japanese technology, serving the most demanding customers.

2

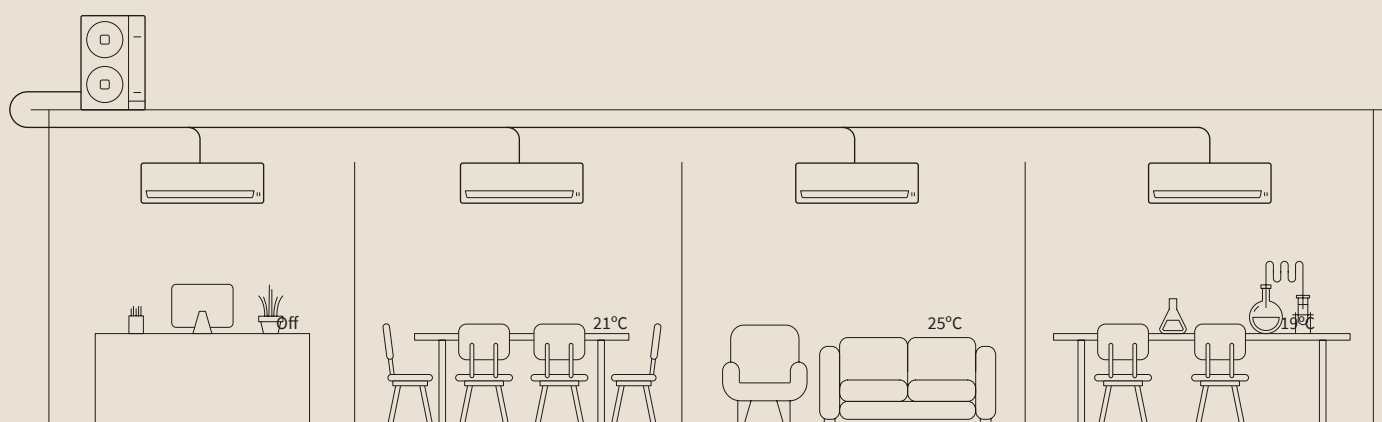
Compact systems to adapt to small spaces



The IVX Standard series comprises compact units starting from cooling capacity of 5 kW (2HP), thanks to the use of a DC Inverter scroll compressor.

3

Independent temperature in each zone



Customers' climate control requirements vary widely in accordance with the intended use of the individual zones and also based on the preferences of the people who occupy them for many hours each day.

Requirements are also influenced by building construction features: windows, lighting, etc. In this context, Hitachi IVX systems guarantee customised control of each of the 8 connectable indoor units.

4

Reduction in refrigerant piping, easier installation and lower cost

Installation of IVX units offers many benefits compared to a multi-split solution. Starting from the refrigerant pipes, which can follow a more rational and less invasive path since they allow very long connection distances.

5

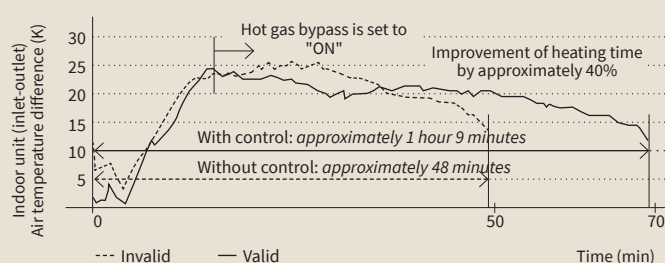
Choose the ideal indoor unit in relation to your requirements in terms of aesthetics and comfort



The same installation site may be associated with different aesthetic and functional requirements. In a clothing store, for example, you need the ideal temperature not simply in the display area, but also in the fitting rooms, in the tills area, and so forth. Thanks to the choice of indoor units, with the IVX range you can select the most suitable unit and control it independently for tailored comfort.

7

Continuous comfort during the heating season

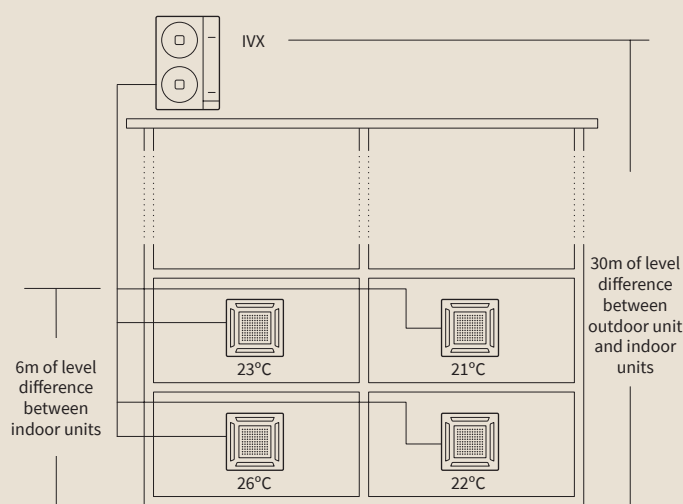


The IVX series features two important functions that limit the defrost cycles and increase efficiency of the system, even with very low outside temperatures. The system performs a "smart" defrost cycle, adapting the defrost period in accordance with historic data and thereby extending the heating time to guarantee continuous comfort in the heated premises.

In addition to this function, injection of hot gas on the outdoor heat exchanger limits the formation of ice, thus further reducing the required defrost time.

6

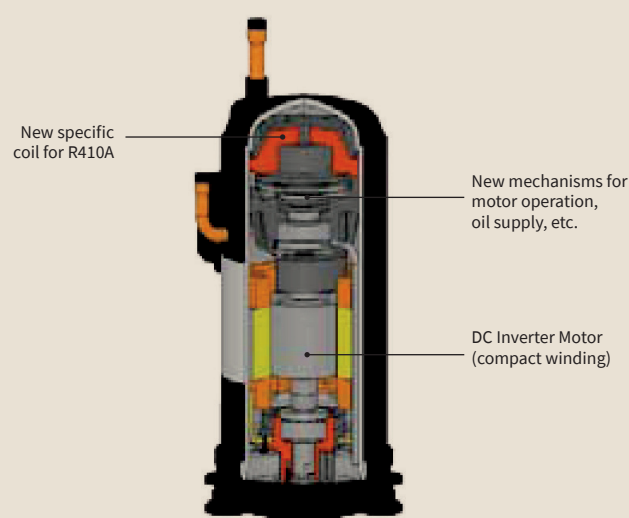
Flexibility for rooftop installations



Standard IVX systems allow refrigerant pipes of up to 100m in length with level differences of up to 30 m. This allows easy positioning of the outdoor unit on the roof without requiring use of ground level spaces. With our technology, with a single outdoor unit you can install indoor units on a 4-storey building.

8

DC Inverter Scroll Compressor

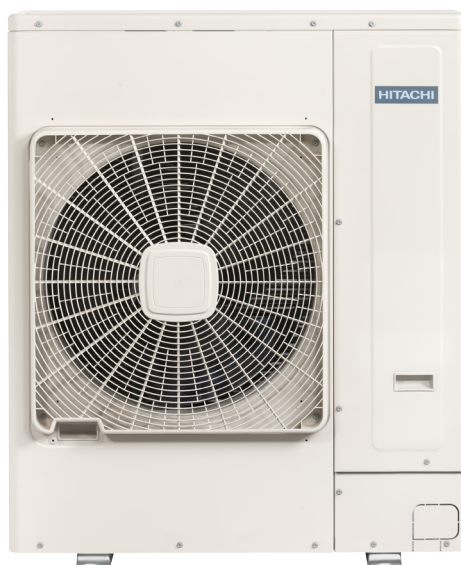


The characteristics of the DC Inverter Scroll compressor of the latest generation make it possible to achieve excellent seasonal performance combined with quiet operation and low running costs. The DC Inverter Scroll compressor manufactured by Hitachi can operate at very low revs (20 Hz) while guaranteeing correct lubrication of its parts. The flexibility introduced by this characteristic makes it possible to control performance also of just one indoor unit, preventing the system from wasting energy.



IVX Standard

VRF technology within reach of all
for small commercial applications



Independent control of indoor units

Independent operation of up to 4 indoor units. Each indoor unit, of any type, has its own control that can be set up with independent functions and temperature. (Fig. 1)

Long extension of refrigerant pipes

The presence of an expansion valve in each indoor unit ensures efficient operation even with level differences of up to 30m between outdoor unit and indoor units. (Fig. 2)

High Efficiency

Operation at extreme temperatures. Excellent efficiency from outside temperatures of -20 °C in winter up to 46 °C in summer

Building automation integration at low cost

Multiple functions of use for integration with elementary type external building automation systems by means of the 7-segment display on the outdoor unit circuit board.

Up to 3 input ports and 2 output ports can be programmed from the 7-segment display, with up to 21 functions.

Flexibility

Compatible with all the indoor units of the System Free series and connectable via the H-Link protocol to all individual and centralised control systems.

Easy installation

Installation is simplified by a single main refrigerant pipe with connections for the 4 indoor units.

Compact system

Up to 14 kW (6HP) with a single front Wdischarge fan.

Fig. 1

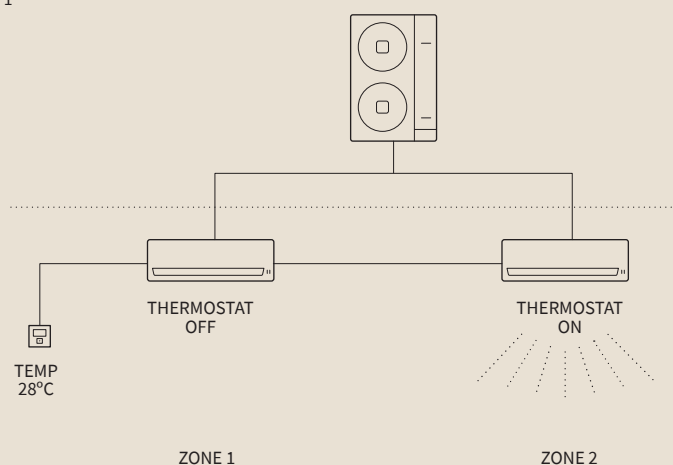
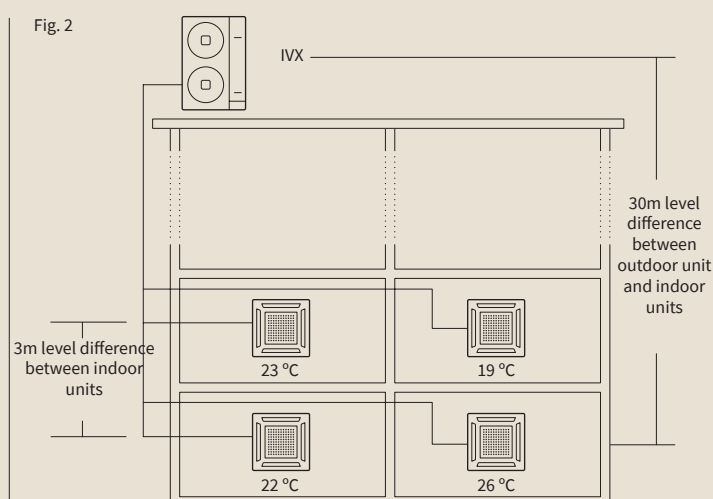
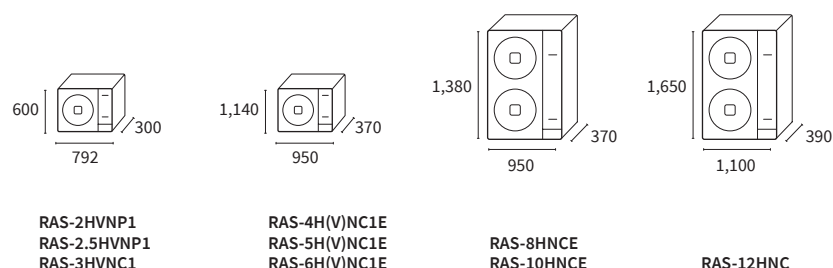


Fig. 2



Outdoor units



IVX Standard

Outdoor unit			RAS-2HVN1	RAS-2.5HVN1	RAS-3HVN1	RAS-4H(V)NC1E	RAS-5H(V)NC1E	RAS-6H(V)NC1E	RAS-8HNCE	RAS-10HNCE	RAS-12HNC
Maximum number of connectable indoor units			2	2	2	4	4	4	4	4	4
Capacity ratio *			%	90-110	90-110	90-110	90-115	90-115	90-115	90-115	90-115
Capacity	Cooling (min-nom-max)	kW	2.20-5.00-5.60	2.20-5.60-6.30	3.20-7.10-8	4.50-10.00-11.2	5.70-12.50-14	6.00-14.00-16	8.00-20.00-22.4	10.00-25.00-28	11.20-30.00-33.5
	Heating (min-nom-max)	kW	2.20-5.60-7.1	2.20-6.30-8.00	3.50-8.00-10.6	5.00-11.20-14	5.00-14.00-18	5.00-16.00-20	6.30-22.40-28	8.00-28.00-35	9.00-33.50-37.5
Consumption	Cooling (nom)	kW	1.24	1.34	2.26	2.7	3.71	4.29	5.95	8.28	11.67
	Heating (nom)	kW	1.2	1.28	2	2.45	3.6	4.49	5.88	7.71	13.04
EER				4.03	4.18	3.14	3.7	3.37	3.26	3.36	2.57
COP				4.68	4.92	4.00	4.57	3.89	3.56	3.81	3.54
SEER	Single-phase		6.49	6.05	6.00	6.57	6.1	5.88	-	-	-
	Three-phase		-	-	-	6.41	6.06	5.85	6.79	6.61	5.3
SCOP	Single-phase		4.67	4.77	4.21	4.47	4	4.05	-	-	-
	Three-phase		-	-	-	4.47	4	4.05	4.19	3.79	3.66
Energy class (medium climate)				A++/A++	A+/A++	A+/A+	A++/A+	-	-	-	-
Electrical power	Single-phase		1~230V 50Hz	1~230V 50Hz	1~230V 50Hz	1~230V 50Hz	1~230V 50Hz	1~230V 50Hz	-	-	-
	Three-phase		-	-	-	3N~400V 50Hz	3N~400V 50Hz	3N~400V 50Hz	3N~400V 50Hz	3N~400V 50Hz	3N~400V 50Hz
Maximum consumption	Single-phase	A	13.8	15.8	17.8	28.5	28.5	28.5	-	-	-
	Three-phase	A	-	-	-	15.5	15.5	15.5	24	24	24.3
Shielded bus cable section			mm ²	2x0.75	2x0.75	2x0.75	2x0.75	2x0.75	2x0.75	2x0.75	2x0.75
Working range	Cooling (DB)	°C	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46
	Heating (WB)	°C	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15
Air flow rate			m ³ /h	2,436	2,436	2,682	3,720	4,080	4,800	7,620	8,040
Sound pressure	Cooling	dB(A)	44	45	48	52	52	55	57	58	59
	Heating	dB(A)	46	47	50	54	54	57	59	60	61
Sound power			dB(A)	62	63	66	68	69	71	76	77
No. of fans				1	1	1	1	1	2	2	2
Refrigerant piping diameter (external Φ)			inches	1/4-1/2	1/4-1/2	3/8-5/8	3/8-5/8	3/8-5/8	3/8-1	1/2-1	1/2-1
Minimum piping length			m	5	5	5	5	5	5	5	5
Maximum piping length			m	50	50	50	70	75	75	100	100
Maximum level difference (highest OU/lowest OU)			m	30/20	30/20	30/20	30/20	30/20	30/20	30/20	30/20
Compressor				DC Inverter Scroll	DC Inverter Scroll	DC Inverter Scroll	DC Inverter Scroll	DC Inverter Scroll	DC Inverter Scroll	DC Inverter Scroll	DC Inverter Scroll
Refrigerant				R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Initial refrigerant charge (length without additional charge)			kg (m)	1.6 (30)	1.6 (30)	1.9 (20)	3.2 (30)	3.2 (30)	3.2 (30)	5.7 (30)	6.2 (30)
Additional refrigerant charge			g/m	30	30	40	40	60	60	to be calculated	to be calculated
Dimensions (H x W x D)			mm	600x792x300	600x792x300	600x792x300	1.140x950x370	1.140x950x370	1.140x950x370	1.380x950x370	1.380x950x370
Weight			kg	43	43	44	79	89	89	136	138
Bonus	Ecobonus		✓	✓	-	✓	✓	✓	✓	-	-
	Thermal Balance		✓	✓	✓	✓	✓	✓	✓	-	-

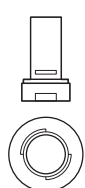
*Consult restrictions affecting compatibility of certain outdoor units.

Parameters EER and COP are defined in mono combination with indoor unit of identical capacity series RCI FSN4.

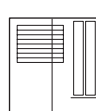
Compatible controls and accessories:



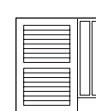
Drain pipe connection
DBS-12L
Compatible with
RAS-2/2.5HVN1
RAS-3HVN1



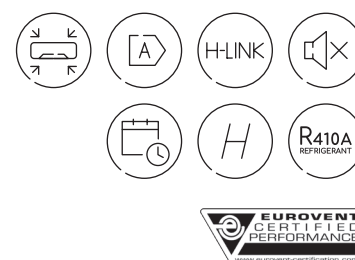
Drain pipe connection
DBS-26
Compatible with
RAS-4-12H(V)NC(1)(E)



Optional discharge grille
AG-264
Compatible with
RAS-3HVN1



Optional discharge grille
AG-335A
Compatible with
RAS-4-12H(V)NC(1)(E)



IVX Standard with wall-mounted unit

A flexible VRF system for all commercial applications



High efficiency with extreme temperatures

The system can operate at outside air temperatures of up to -20 °C in heating mode and 46 °C in cooling mode.

Expansion valve built into the indoor unit

The expansion valve incorporated in the indoor unit assures greater efficiency, elimination of pressure drops and more accurate temperature control.

Intelligent programming of defrost cycles

The system retains a record of previous defrost cycles to minimise the number of cycles while guaranteeing absolute comfort of indoor temperature conditions. The hot gas bypass on the outdoor unit heat exchanger further reduces the need for defrost cycles. (Fig. 1)

Compact system

A single fan up to the 6HP size (14 kW): 0.35 m² footprint.

Exceptional installation flexibility

The 3 and 4 HP systems allow refrigerant pipes of up to 70 equivalent linear metres and level differences of up to 30 m. (Fig. 2)

Installation of up to 4 indoor units

Up to 4 indoor units can be connected to provide climate control in 4 different zones with independent temperature control.

Fig. 1

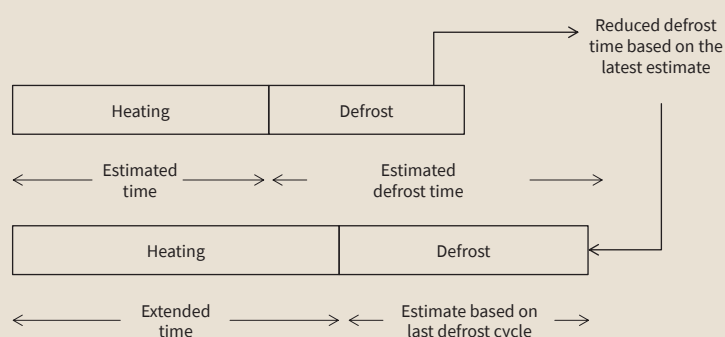
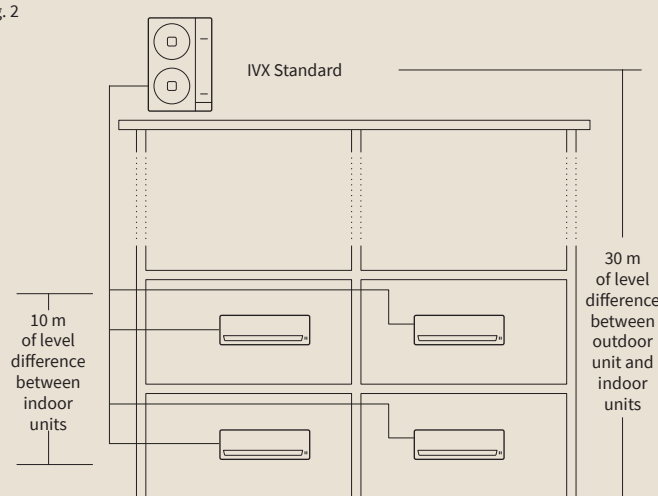
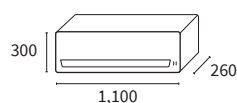


Fig. 2

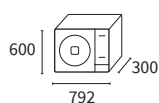


Indoor units

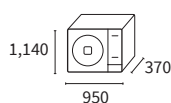


RPK-2.0FSN4M
RPK-2.5FSN4M
RPK-3.0FSN4M
RPK-4.0FSN4M

Outdoor units



RAS-2HVN1
RAS-2.5HVN1
RAS-3HVNC1



RAS-4H(V)NC1E

IVX Standard with wall-mounted unit

System			2HP	2.5HP	3HP	4HP
Capacity	Cooling (min-nom-max)	kW	2.20-5.00-5.60	2.20-5.60-6.30	3.20-7.10-8.00	4.50-10.00-11.20
	Heating (min-nom-max)	kW	2.20-5.60-7.10	2.20-6.30-8.00	3.50-8.00-10.60	5.00-11.20-14.00
Consumption	Cooling (nom)	kW	1.55	1.69	2.64	4.65
	Heating (nom)	kW	1.51	1.68	2.73	3.56
Electrical power	Single-phase		1~230V 50Hz	1~230V 50Hz	1~230V 50Hz	1~230V 50Hz
	Three-phase		-	-	-	3N~400V 50Hz
Shielded bus cable section		mm ²	2 x 0.75	2 x 0.75	2 x 0.75	2 x 0.75
EER			3.23	3.31	2.69	2.15
COP			3.7	3.75	2.93	3.15
SEER	Single-phase		5.47	5.24	5.35	5.56
	Three-phase		-	-	-	5.45
SCOP	Single-phase		4.01	4.14	3.8	3.83
	Three-phase		-	-	-	3.83
Energy class (medium climate)	Cooling/Heating		A/A+	A/A+	A/A	A/A
Working range	Cooling (DB)	°C	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46
	Heating (WB)	°C	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15
Refrigerant piping diameter	Liquid-gas	inches	1/4-1/2	1/4-1/2	3/8-5/8	3/8-5/8

Indoor unit			RPK-2.0FSN4M	RPK-2.5FSN4M	RPK-3.0FSN4M	RPK-4.0FSN4M
Air flow rate (low-medium-high-extra high)		m ³ /h	570-660-780-870	720-840-990-1,110	750-930-1,050-1,200	870-1,050-1,200-1,380
Sound pressure (low-medium-high-extra high)		dB(A)	31-34-37-40	35-38-42-45	35-40-44-47	39-44-48-51
Sound power (low-medium-high-extra high)		dB(A)	47-50-53-55	51-54-58-60	51-56-60-63	54-60-64-65
Dimensions (H x W x D)		mm	300x1.100x260	300x1.100x260	300x1.100x260	300x1.100x260
Weight		kg	14.5	15	15	15
Condensate drain connection (external Φ)		mm	20	20	20	20

Outdoor unit			RAS-2HVN1P1	RAS-2.5HVN1P1	RAS-3HVN1C1	RAS-4H(V)N1C1E
Air flow rate		m ³ /h	2,436	2,436	2,682	3,720
Sound pressure	Cooling	dB(A)	44	45	48	52
	Heating	dB(A)	46	47	50	54
Sound power		dB(A)	62	63	66	68
No. of fans			1	1	1	1
Maximum consumption	Single-phase	A	13.8	15.8	17.8	28.5
	Three-phase	A	-	-	-	15.1
Minimum piping length		m	5	5	5	5
Maximum piping length		m	50	50	50	70
Maximum level difference (highest OU/lowest OU)		m	30/20	30/20	30/20	30/20
Compressor			DC Inverter Scroll	DC Inverter Scroll	DC Inverter Scroll	DC Inverter Scroll
Refrigerant			R-410A	R-410A	R-410A	R-410A
Initial refrigerant charge (length without additional charge)		kg (m)	1.6 (30)	1.6 (30)	1.9 (20)	3.2 (30)
Additional refrigerant charge		g/m	30	30	40	40
Dimensions (H x W x D)		mm	600x792x300	600x792x300	600x792x300	1.140x950x370
Weight		kg	43	43	44	79
Bonus	Ecobonus		✓	✓	-	-
	Thermal Balance		✓	✓	-	-

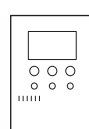
Compatible controls and accessories:



Wired control
PC-ARFP1E



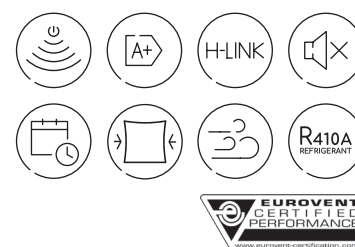
Remote control
PC-AWR



Compact wired control
PC-ARH1E

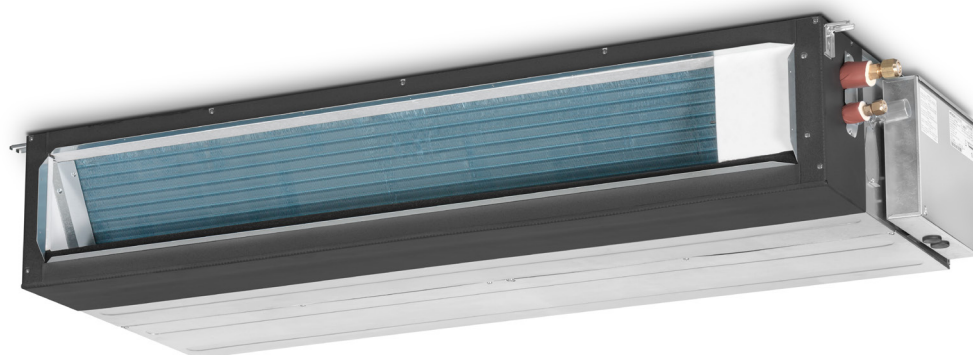
Accessories:

- PCC-1A
connector for input/output ports (5 pcs.)



IVX Standard with duct units

A flexible VRF system for all commercial applications



Built-in condensate pump

The condensate collected in the internal drain pan is automatically expelled by the pump built into the unit.

Compact system

A single fan up to the 6HP size (14kW).
0.35 m² footprint

Expansion valve built into the indoor unit

The expansion valve built into the indoor unit assures greater efficiency, elimination of pressure drops and more accurate temperature control.

Intelligent programming of defrost cycles

The system retains a record of previous defrost cycles to minimise the number of cycles while guaranteeing absolute comfort of indoor temperature conditions. The hot gas bypass on the outdoor unit heat exchanger further reduces the need for defrost cycles. (Fig. 1)

Exceptional installation flexibility

The 3 and 4 HP systems allow refrigerant pipes of up to 70 equivalent linear metres and level differences of up to 30 m. (Fig. 2)

Installation of up to 4 indoor units

Up to 4 indoor units can be connected to provide climate control in 4 different zones with independent temperature control.

Fig. 1

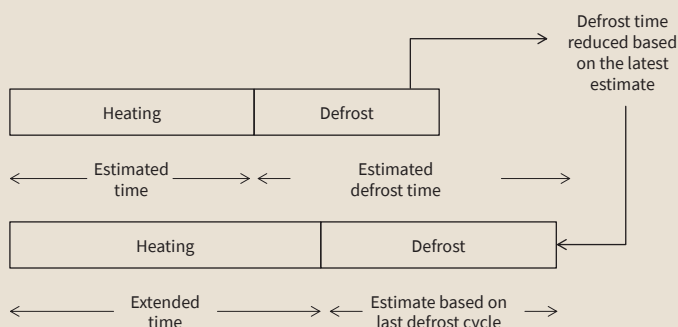
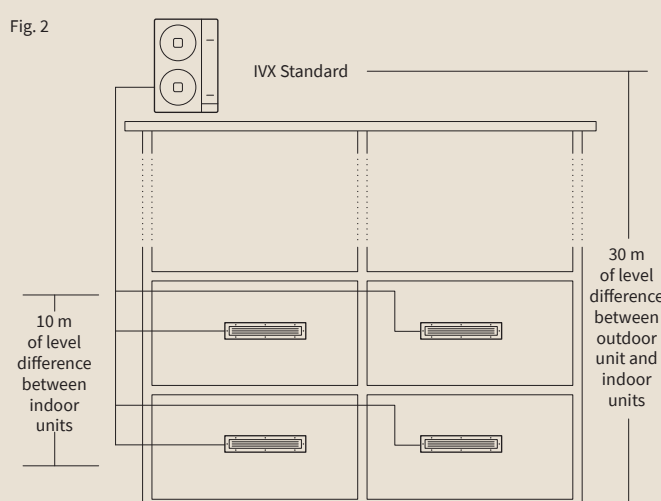
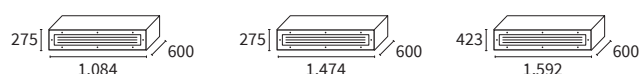


Fig. 2



Indoor units

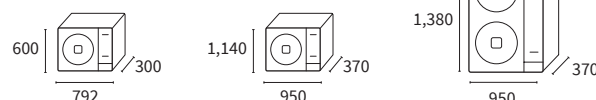


RPI-2.0FSN5E
RPI-2.5FSN5E
RPI-3.0FSN5E

RPI-4.0FSN5E
RPI-5.0FSN5E
RPI-6.0FSN5E

RPI-8.0FSN3E
RPI-10.0FSN3E

Outdoor units



RAS-2HVP1
RAS-2.5HVP1
RAS-3HVP1

RAS-4H(V)NC1E
RAS-5H(V)NC1E
RAS-6H(V)NC1E

RAS-8HNCE
RAS-10HNCE

IVX Standard with duct units

System			2HP	2.5HP	3HP	4HP	5HP	6HP	8HP	10HP
Capacity	Cooling (min-nom-max)	kW	2.20-5.00-5.60	2.20-5.60-6.30	3.20-7.10-8.00	4.50-10.00-11.20	5.70-12.50-14.00	6.00-14.00-16.00	8.00-20.00-22.40	10.00-25.00-28.00
	Heating (min-nom-max)	kW	2.20-5.60-7.10	2.20-6.30-8.00	3.50-8.00-10.60	5.00-11.20-14.00	5.00-14.00-18.00	5.00-16.00-20.00	6.30-22.40-28.00	8.00-28.00-35.00
Consumption	Cooling (nom)	kW	1.41	1.6	2.53	3.1	3.93	4.55	5.95	8.28
	Heating (nom)	kW	1.5	1.65	2.26	2.78	3.95	4.4	5.88	7.71
Electrical power	Single-phase		1~230V 50Hz	1~230V 50Hz	1~230V 50Hz	1~230V 50Hz	1~230V 50Hz	1~230V 50Hz	-	-
	Three-phase		-	-	-	3N~400V 50Hz	3N~400V 50Hz	3N~400V 50Hz	3N~400V 50Hz	3N~400V 50Hz
Shielded bus cable section		mm²	2 x 0.75	2 x 0.75	2 x 0.75	2 x 0.75	2 x 0.75	2 x 0.75	2 x 0.75	2 x 0.75
EER			3.54	3.49	2.81	3.23	3.18	3.08	3.36	3.02
COP			3.73	3.81	3.54	4.03	3.54	3.64	3.81	3.63
SEER	Single-phase		5.6	5.51	4.97	5.38	5.88	5.67	-	-
	Three-phase		-	-	-	5.27	5.84	5.64	6.79	6.61
SCOP	Single-phase		4.01	4.33	3.8	4.01	3.91	3.96	-	-
	Three-phase		-	-	-	4.01	3.9	3.96	4.19	3.79
Energy class (medium climate)	Cooling/ Heating		A+/A+	A/A+	B/A	A/A+	-	-	-	-
Working range	Cooling (DB)	°C	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46
	Heating (WB)	°C	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15
Refrigerant piping diameter	Liquid-gas	inches	1/4-1/2	1/4-1/2	3/8-5/8	3/8-5/8	3/8-5/8	3/8-5/8	3/8-1	1/2-1
Indoor unit			RPI-2.0FSN5E	RPI-2.5FSN5E	RPI-3.0FSN5E	RPI-4.0FSN5E	RPI-5.0FSN5E	RPI-6.0FSN5E	RPI-8.0FSN3E	RPI-10.0FSN3E
Air flow rate (low - medium - high)		m³/h	600-750-960	780-960-1,140	960-1,140-1,320	1,500-1,680-1,800	1,740-1,920-2,100	1,800-1,980-2,160	3,570-3,960-3,960	4,056-4,500-4,500
Static pressure (range)		Pa	30 (0-120)	30 (0-125)	30 (0-125)	45 (0-120)	50 (0-140)	50 (0-140)	180 (140-220)	180 (140-220)
Sound pressure (low-medium-high)		dB(A)	27-29-29	28-30-30	29-31-31	32-35-37	33-35-38	33-36-39	51-54-54	52-55-55
Sound power (high)		dB(A)	55	56	57	62	65	66	77	78
Dimensions (H x W x D)		mm	275x1.084x600	275x1.084x600	275x1.084x600	275x1.474x600	275x1.474x600	275x1.474x600	423x1.592x600	423x1.592x600
Weight		kg	35	36	36	48	48	48	85	87
Condensate drain connection (external Φ)		mm	32	32	32	32	32	32	25	25
Condensate pump			Included	Included	Included	Included	Included	Included	Included	Included
Max head		mm	850	850	850	850	850	850	-	-
Outdoor unit			RAS-2HVN1	RAS-2,5HVN1	RAS-3HVN1	RAS-4H(V)NC1E	RAS-5H(V)NC1E	RAS-6H(V)NC1E	RAS-8HNCE	RAS-10HNCE
Air flow rate		m³/h	2,436	2,436	2,682	3,720	4,080	4,800	7,620	8,040
Sound pressure	Cooling	dB(A)	44	45	48	52	52	55	57	58
	Heating	dB(A)	46	47	50	54	54	57	59	60
Sound power		dB(A)	62	63	66	68	69	71	76	76
No. of fans			1	1	1	1	1	1	2	2
Maximum consumption	Single-phase	A	13.8	15.8	17.8	28.5	28.5	28.5	-	-
	Three-phase	A	-	-	-	15.5	15	15.5	24	24
Minimum piping length		m	5	5	5	5	5	5	5	5
Maximum piping length		m	50	50	50	70	75	75	100	100
Maximum level difference (highest OU/lowest OU)		m	30/20	30/20	30/20	30/20	30/20	30/20	30/20	30/20
Compressor			Scroll DC Inverter	Scroll DC Inverter	Scroll DC Inverter	Scroll DC Inverter	Scroll DC Inverter	Scroll DC Inverter	Scroll DC Inverter	Scroll DC Inverter
Refrigerant			R-410A	R-410A	R410A	R410A	R410A	R410A	R410A	R410A
Initial refrigerant charge (length without additional charge)		kg (m)	1.6 (30)	1.6 (30)	1.9 (20)	3.2 (30)	3.2 (30)	3.2 (30)	5.7 (30)	6.2 (30)
Additional refrigerant charge		g/m	30	30	40	40	60	60	to be calculated	to be calculated
Dimensions (H x W x D)		mm	600x792x300	600x792x300	600x792x300	1.140x950x370	1.140x950x370	1.140x950x370	1.380x950x370	1.380x950x370
Weight		kg	43	43	44	79	89	89	136	138
Bonus	Ecobonus		✓	✓	-	✓	-	-	✓	-
	Thermal Balance		✓	✓	-	✓	-	-	✓	-

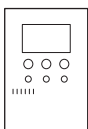
Compatible controls and accessories:



Wired control
PC-ARFP1E



Remote control
PC-AWR

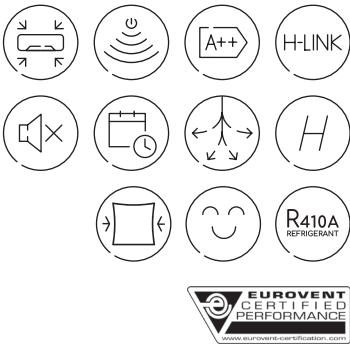


Compact
wired control
PC-ARH1E

Accessories:

- Presence sensor SOR-MSK.
Compatible with RPI-(0.4-3.0)FSN5E
- Connector for input/output ports
(5 pcs.) PCC- 1A

IVX Standard with 4-way mini cassette unit



Smart control of defrost cycles

The system saves previous defrost cycles to minimise the need to for defrosting thus guaranteeing a comfortable indoor temperature. The hot gas bypass on the outdoor unit heat exchanger further reduces the need for defrost cycles. (Fig. 1)

Optional presence sensor

The sensor is designed to identify the presence of human occupants and adapt performance accordingly.

The most compact VRF technology system

The perfect option for climate control of medium-small spaces, including stores, showrooms and offices.

Extended refrigerant pipes

Up to 50m in length and with 3m level difference between indoor units. (Fig. 2)

New design of louvers

The newly designed independently controlled air diffusion louvers promote the Coanda effect for optimal air distribution.

Individual control and simultaneous control

Simultaneous control of the 2 indoor units can be achieved by connecting the wired control only to one indoor unit, thus avoiding electrical wiring costs.

Fig. 1

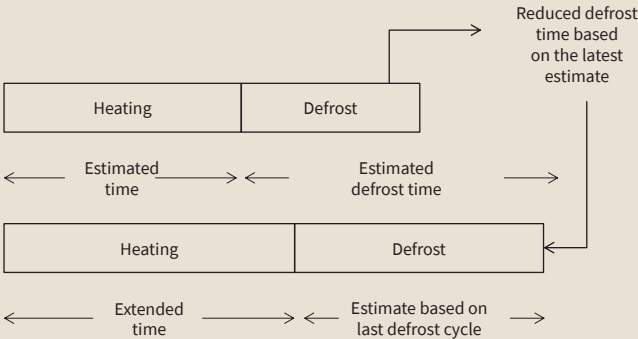
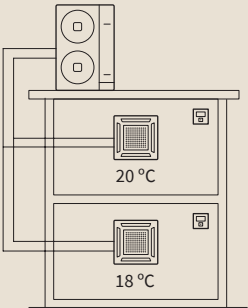
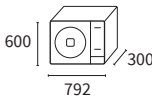
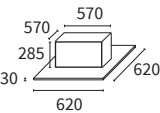


Fig. 2



Indoor units

Outdoor units



RCIM 2.0FSN4E
RCIM 2.5FSN4E

RAS-2HVN1
RAS-2,5HVN1

IVX Standard with mini cassette 4-way unit

System			2 HP	2.5 HP
Capacity	Cooling (min-nom-max)	kW	2.20-5.00-5.60	2.20-5.60-6.30
	Heating (min-nom-max)	kW	2.20-5.60-7.10	2.20-6.30-8.00
Consumption	Cooling (nom)	kW	1.45	1.72
	Heating (nom)	kW	1.47	1.57
Electrical power			1~230V 50Hz	1~230V 50Hz
Internal / external connection cross section (shielded)		mm ²	2 x 0.75	2 x 0.75
EER			3.45	3.25
COP			3.80	4.02
SEER	Single-phase		5.67	5.61
	Three-phase		-	-
SCOP	Single-phase		4.00	4.41
	Three-phase		-	-
Energy class (medium climate)		Cooling/Heating	A+/A+	A+/A+
Working range (Outdoor air temperature)	Cooling	°C	-5 ÷ 46	-5 ÷ 46
	Heating	°C	-20 ÷ 15	-20 ÷ 15
Refrigerant piping diameter	Liquid-gas	inches	1/4-1/2	3/8-5/8
Indoor unit			RCIM-2.0FSN4E	RCIM-2.5FSN4E
Air flow rate (low-medium-high-extra high)		m ³ /h	480-600-720-900	600-720-840-960
Sound pressure (low-medium-high-extra high)		dB(A)	31-35-39-45	35-39-43-47
Sound power		dB(A)	56	60
Dimensions (H x W x D)		mm	285-570-570	285-570-570
Weight		kg	17.0	17.0
Panel dimensions (H x W x D)		mm	30x620x620	30x620x620
Panel weight		kg	2.5	2.5
Condensate drain connection (external Φ)		mm	32	32
Condensate pump			Included	Included
Max head		mm	850	850
Outdoor unit			RAS-2HVN1P1	RAS-2.5HVN1P1
Air flow rate		m ³ /h	2,436	2,436
Sound pressure	Cooling	dB(A)	44	45
	Heating	dB(A)	46	47
Sound power		dB(A)	62	63
No. of fans			1	1
Maximum consumption	Single-phase	A	13.8	15.8
	Three-phase	A	-	-
Minimum piping length		m	5	5
Maximum piping length		m	50	50
Maximum level difference (highest OU/lowest OU)		m	30/20	30/20
Compressor			DC Inverter Scroll	DC Inverter Scroll
Refrigerant			R-410A	R-410A
Initial refrigerant charge (length without additional charge)		kg (m)	1.6 (30)	1.6 (30)
Additional refrigerant charge		g/m	30	30
Dimensions (H x W x D)		mm	600x792x300	600x792x300
Weight		kg	43.0	43.0
Bonus	Ecobonus		✓	✓
	Thermal Balance		✓	✓

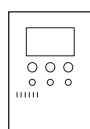
Compatible controls and accessories:



Wired control with display
PC-ARFP1E



Remote control
PC-AWR



Compact wired control
PC-ARH1E

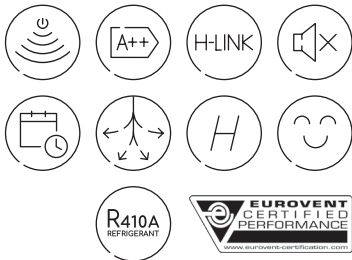
Accessories:

– SOR-NEC presence sensor.
Compatible with RCIM-FSN4E



IVX Standard with 4-way cassette unit

A flexible VRF system for all commercial applications



Built-in condensate pump

The condensate collected in the internal drain pan is automatically expelled by the pump built into the unit.

Presence sensor

Allows a presence sensor to be mounted in the panel to optimise energy consumption. (Fig. 1)

Expansion valve built into the indoor unit

The expansion valve incorporated in the indoor unit assures greater efficiency, elimination of pressure drops and more accurate temperature control.

Intelligent programming of defrost cycles

The system retains a record of previous defrost cycles to minimise the number of cycles while guaranteeing absolute comfort of indoor temperature conditions. The hot gas bypass on the outdoor unit heat exchanger further reduces the need for defrost cycles. (Fig. 1)

Exceptional installation flexibility

The 3 and 4 HP systems allow refrigerant pipes of up to 70 equivalent linear metres and level differences of up to 30 m. (Fig. 2)

Installation of up to 4 indoor units

Up to 4 indoor units can be connected to provide climate control in 4 different zones with independent temperature control.

Fig. 1

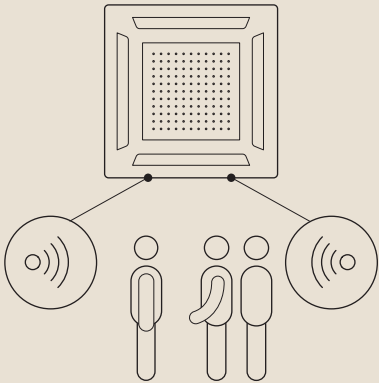
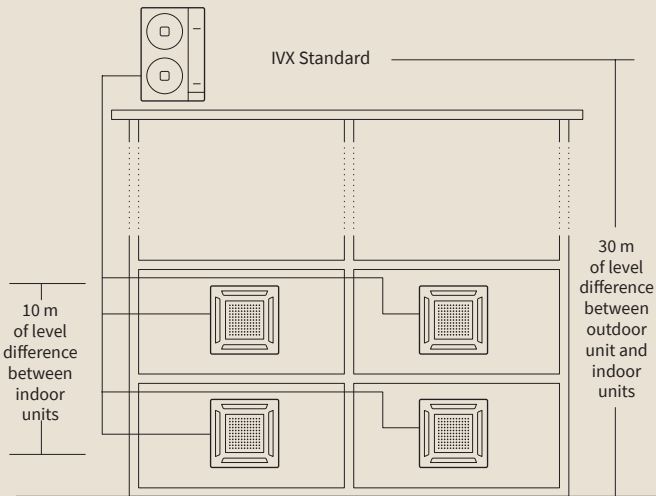
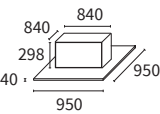


Fig. 2

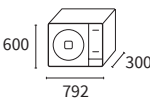


Indoor units

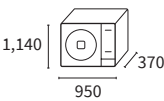


- RCI-2.0FSN4
- RCI-2.5FSN4
- RCI-3.0FSN4
- RCI-4.0FSN4
- RCI-5.0FSN4
- RCI-6.0FSN4

Outdoor units



- RAS-2HVNP1
- RAS-2.5HVNP1
- RAS-3HVNC1



- RAS-4H(V)NC1E
- RAS-5H(V)NC1E
- RAS-6H(V)NC1E

Standard IVX with 4-way cassette type unit

System			2HP	2.5HP	3HP	4HP	5HP	6HP
Capacity	Cooling (min-nom-max)	kW	2.20-5.00-5.60	2.20-5.60-6.30	3.20-7.10-8.00	4.50-10.00-11.20	5.70-12.50-14.00	6.00-14.00-16.00
	Heating (min-nom-max)	kW	2.20-5.60-7.10	2.20-6.30-8.00	3.50-8.00-10.60	5.00-11.20-14.00	5.00-14.00-18.00	5.00-16.00-20.00
Consumption	Cooling (nom)	kW	1.24	1.34	2.26	2.7	3.71	4.29
	Heating (nom)	kW	1.2	1.28	2	2.45	3.6	4.49
Electrical power	Single-phase		1~230V 50Hz	1~230V 50Hz	1~230V 50Hz	1~230V 50Hz	1~230V 50Hz	1~230V 50Hz
	Three-phase		-	-	-	3N~400V 50Hz	3N~400V 50Hz	3N~400V 50Hz
Shielded bus cable section		mm ²	2 x 0.75	2 x 0.75	2 x 0.75	2 x 0.75	2 x 0.75	2 x 0.75
EER			4.03	4.18	3.14	3.7	3.37	3.26
COP			4.68	4.92	4	4.57	3.89	3.56
SEER	Single-phase		6.49	6.05	6	6.57	6.1	5.88
	Three-phase		-	-	-	6.41	6.06	5.85
SCOP	Single-phase		4.67	4.77	4.21	4.47	4	4.05
	Three-phase		-	-	-	4.47	4	4.05
Energy class (medium climate)	Cooling/Heating		A++/A++	A+/A++	A+/A+	A++/A+	-	-
Working range	Cooling (DB)	°C	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46
	Heating (WB)	°C	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15
Refrigerant piping diameter	Liquid-gas	inches	1/4-1/2	3/8-5/8	3/8-5/8	3/8-5/8	3/8-5/8	3/8-5/8
Indoor unit			RCI-2.0FSN4	RCI-2.5FSN4	RCI-3.0FSN4	RCI-4.0FSN4	RCI-5.0FSN4	RCI-6.0FSN4
Air flow rate (low-medium-high-extra high)		m ³ /h	660-840-1,020-1,320	840-1,080-1,380-1,620	840-1,080-1,380-1,620	1,200-1,440-1,860-2,220	1,260-1,560-1,980-2,220	1,320-1,680-2,100-2,220
Sound pressure (low-medium-high-extra high)		dB(A)	27-30-32-37	28-32-36-42	28-32-36-42	33-39-43-48	35-40-45-48	37-41-46-48
Sound power (low-medium-high-extra high)		dB(A)	55	56	57	64	64	65
Dimensions (H x W x D)		mm	248x840x840	248x840x840	298x840x840	298x840x840	298x840x840	298x840x840
Weight		kg	21	22	26	26	26	26
Panel dimensions (H x W x D)		mm	40x950x950	40x950x950	40x950x950	40x950x950	40x950x950	40x950x950
Panel weight		kg	6.5	6.5	6.5	6.5	6.5	6.5
Condensate pipe diameter (external)		mm	32	32	32	32	32	32
Condensate pump			Included	Included	Included	Included	Included	Included
Max head		mm	850	850	850	850	850	850
Outdoor unit			RAS-2HVN1	RAS-2.5HVN1	RAS-3HVN1	RAS-4H(V)NC1E	RAS-5H(V)NC1E	RAS-6H(V)NC1E
Air flow rate		m ³ /h	2,436	2,436	2,682	3,720	4,080	4,800
Sound pressure	Cooling	dB(A)	44	45	48	52	52	55
	Heating	dB(A)	46	47	50	54	54	57
Sound power		dB(A)	62	63	66	68	69	71
No. of fans			1	1	1	1	1	1
Maximum consumption	Single-phase	A	13.8	15.8	17.8	28.5	28.5	28.5
	Three-phase	A	-	-	-	15.5	15.5	15.5
Minimum piping length		m	5	5	5	5	5	5
Maximum piping length		m	50	50	50	70	75	75
Maximum level difference (highest OU/lowest OU)		m	30/20	30/20	30/20	30/20	30/20	30/20
Compressor			DC Inverter Scroll	DC Inverter Scroll	DC Inverter Scroll	DC Inverter Scroll	DC Inverter Scroll	DC Inverter Scroll
Refrigerant			R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
Initial refrigerant charge (length without additional charge)		kg (m)	1.6 (30)	1.6 (30)	1.9 (30)	3.2 (30)	3.2 (30)	3.2 (30)
Additional refrigerant charge		g/m	30	30	40	40	60	60
Dimensions (H x W x D)		mm	600x792x300	600x792x300	600x792x300	1.140x950x370	1.140x950x370	1.140x950x370
Weight		kg	43	43	44	79	89	89
Bonus	Ecobonus		✓	✓	-	✓	✓	✓
	Thermal Balance		✓	✓	✓	✓	✓	✓

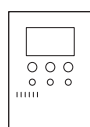
Compatible controls and accessories:



Wired control
PC-ARFP1E



Remote control
PC-AWR



Compact wired control
PC-ARH1E

Accessories:

- Presence sensor PS-MSK2.
Compatible with RCI-FSN4
- Connector for input/output ports
(5 pcs.) PCC- 1A



IVX Standard with ceiling unit

A flexible VRF system for all commercial applications



High efficiency with extreme temperatures

The system operates at outside air temperatures of up to -20 °C in heating mode and 46 °C in cooling mode.

Comfortable temperature

The new design of the automatic louvre prevents the creation of cold draughts and aids correct air distribution.

Suitable for rooms with very high ceilings

A very high fan speed can be selected on the system to guarantee optimal air distribution.

Presence sensor

The system can be equipped with a presence sensor to optimise energy consumption. (Fig. 1)

Exceptional installation flexibility

Installation of the 3 and 4 HP models offers the facility to install units with refrigerant pipes of up to 70 m in length and with a level difference of 30 m. (Fig. 2)

Installation of up to 4 indoor units

Up to 4 indoor units can be connected to provide climate control in 4 different zones with independent temperature control.

Fig. 1

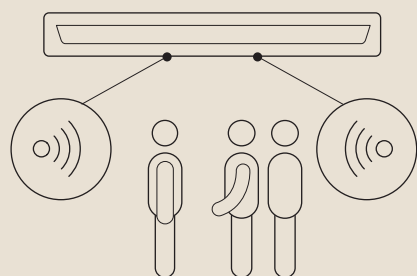
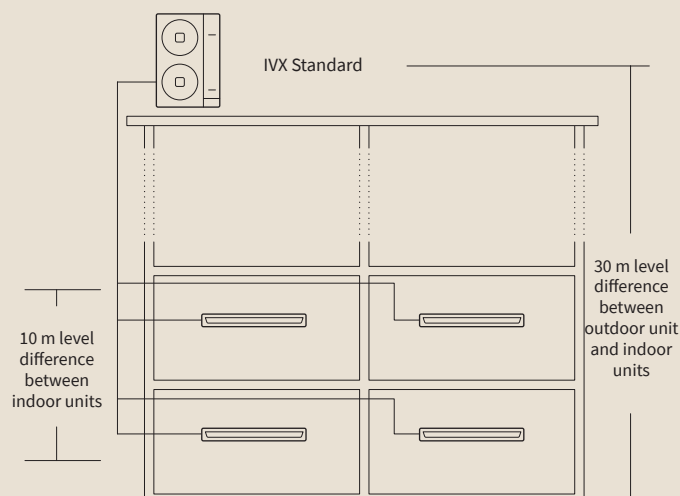
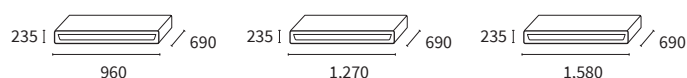


Fig. 2



Indoor units



RPC-2.0FSN3
RPC-2.5FSN3

RPC-3.0FSN3

RPC-4.0FSN3
RPC-5.0FSN3
RPC-6.0FSN3

Outdoor units



RAS-2HVN1
RAS-2.5HVN1
RAS-3HVN1

RAS-4H(V)NC1E
RAS-5H(V)NC1E
RAS-6H(V)NC1E

Standard IVX with ceiling unit

System			2 HP	2.5 HP	3HP	4HP	5HP	6HP
Capacity	Cooling (min-nom-max)	kW	2.20-5.00-5.60	2.20-5.60-6.30	3.20-7.10-8.00	4.50-10.00-11.20	5.70-12.50-14.00	6.00-14.00-16.00
	Heating (min-nom-max)	kW	2.20-5.60-7.10	2.20-6.30-8.00	3.50-8.00-10.60	5.00-11.20-14.00	5.00-14.00-18.00	5.00-16.00-20.00
Consumption	Cooling (nom)	kW	1.34	1.4	2.29	3.25	4.6	5.49
	Heating (nom)	kW	1.38	1.53	2.33	2.91	3.94	4.4
Electrical power	Single-phase		1~230V 50Hz	1~230V 50Hz	1~230V 50Hz	1~230V 50Hz	1~230V 50Hz	1~230V 50Hz
	Three-phase		-	-	-	3N~400V 50Hz	3N~400V 50Hz	3N~400V 50Hz
Shielded bus cable section		mm ²	2 x 0.75	2 x 0.75	2 x 0.75	2 x 0.75	2 x 0.75	2 x 0.75
EER			3.72	4.00	3.1	3.08	2.72	2.55
COP			4.06	4.12	3.43	3.85	3.55	3.64
SEER	Single-phase		5.63	5.49	5.29	5.02	5.74	5.56
	Three-phase		-	-	-	4.93	5.71	5.53
SCOP	Single-phase		4.44	4.49	4.13	3.9	4	4.04
	Three-phase		-	-	-	3.9	4	4.04
Energy class (medium climate)	Cooling/Heating		A+/A+	A/A+	A/A+	B/A	-	-
Working range	Cooling (DB)	°C	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46	-5 ÷ 46
	Heating (WB)	°C	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15	-20 ÷ 15
Refrigerant piping diameter	Liquid-gas	inches	1/4-1/2	3/8 - 5/8	3/8-5/8	3/8-5/8	3/8-5/8	3/8-5/8
Indoor unit			RPC-2.0FSN3	RPC-2.5FSN3	RPC-3.0FSN3	RPC-4.0FSN3	RPC-5.0FSN3	RPC-6.0FSN3
Air flow rate (low-medium-high-extra high)		m ³ /h	540-660-780-900	690-840-990-1,140	750-930-1,110-1,260	1,020-1,320-1,590-1,800	1,200-1,530-1,860-2,100	1,260-1,620-1,950-2,220
Sound pressure (low-medium-high-extra high)		dB(A)	28-31-35-38	28-31-35-38	29-33-37-40	32-37-42-44	35-41-45-48	36-42-47-49
Sound power (low-medium-high-extra high)		dB(A)	43/46/50/54	44/47/50/54	44/48/52/56	47/52/57/60	50/56/60/64	51/57/62/65
Dimensions (H x W x D)		mm	235x960x690	235x1.270x690	235x1.270x690	235x1.580x690	235x1.580x690	235x1.580x690
Weight		kg	27	35	35	41	41	41
Condensate drain connection (external Ø)		mm	25	25	25	25	25	25
Outdoor unit			RAS-2HVN1	RAS-2.5HVN1	RAS-3HVN1	RAS-4H(V)NC1E	RAS-5H(V)NC1E	RAS-6H(V)NC1E
Air flow rate		m ³ /h	2,436	2,436	2,682	3,720	4,080	4,800
Sound pressure	Cooling	dB(A)	44	45	48	52	52	55
	Heating	dB(A)	46	47	50	54	54	57
Sound power		dB(A)	62	63	66	68	69	71
No. of fans			1	1	1	1	1	1
Maximum consumption	Single-phase	A	13.8	15.8	17.8	28.5	28.5	28.5
	Three-phase	A	-	-	-	15.5	15.5	15.5
Minimum piping length		m	5	5	5	5	5	5
Maximum piping length		m	50	50	50	70	75	75
Maximum level difference (highest OU/lowest OU)		m	30/20	30/20	30/20	30/20	30/20	30/20
Compressor			DC Inverter Scroll	DC Inverter Scroll	DC Inverter Scroll	DC Inverter Scroll	DC Inverter Scroll	DC Inverter Scroll
Refrigerant			R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
Initial refrigerant charge (length without additional charge)		kg (m)	1.6 (30)	1.6 (30)	1.9 (20)	3.2 (30)	3.2 (30)	3.2 (30)
Additional refrigerant charge		g/m	30	30	40	40	60	60
Dimensions (H x W x D)		mm	600x792x300	600x792x300	600x792x300	1.140x950x370	1.140x950x370	1.140x950x370
Weight		kg	43	43	44	79	89	89
Bonus	Ecobonus		✓	✓	-	-	-	-
	Thermal Balance		✓	✓	-	✓	-	-

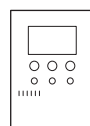
Compatible controls and accessories:



Wired control
PC-ARFP1E



Remote control
PC-AWR



Compact wired control
PC-ARH1E

Accessories:

- Connector for input/output ports (5 pcs.) PCC- 1A
- Condensate pump:
DUPC-63K1 compatible with RPC-1.5FSN3.
DUPC-71K1 compatible with RPC-2.0FSN3.
DUPC-160K1 compatible with RPC-2.5-6FSN3

Johnson Controls Hitachi Air Conditioning Conditioning Europe SAS

This brochure has been carefully prepared by us to the best of our knowledge and exclusively taking into account the information available to us. We assume no responsibility for the completeness and accuracy of this or for the reliability and usability of the information given in this Brochure illustrated products or services for a particular purpose or field of application does not guarantee and / or express a tacit guarantee. Changes to prices, technical data and / or the equipment can be provided at any time without notice. We don't accept any liability for direct or indirect damages, of whatever kind, resulting from the use or interpretation of this brochure. The Copyrights of all texts or images are owned by Johnson Controls Hitachi Air Conditioning Europe SAS (JCH), unless otherwise stated in this brochure. This brochure is not a binding offer from JCH.

www.hitachiaircon.com

in Hitachi Cooling & Heating Global

tw @Hitachicool_GB

f Hitachi Cooling & Heating Global

ig hitachicoolingheatingglobal

yt Hitachi Cooling & Heating Global