Micro VRF (IVX Prime & IVX Comfort)

SEER 6.79 · SCOOP 4.77 · GENTLE COOL

EUROVENT CERTIFIED PERFORMANCE

IVX Prime (R32 or R410A)

THE FIRST VRF HITACHI TO R32 (4~6HP)

IVX Comfort (R410A)

Micro VRF with R32, the green choice

The R32 coolant has a number of advantages over the R410A coolant. Although both are “fluorinated greenhouse gases covered by the Kyoto Protocol,” the R32 has a lower global warming potential (GWP = 675) compared to the R410A (GWP = 2088). In addition, the use of R32 reduces the coolant load from 7% to 12% for the same installation on R410A. The reduces its environmental impact by 75% compared to R410: low GWP and less load on the system. This means it has a lower TeqCO2 equivalence, and a low load is needed to achieve better results because of its better thermodynamic characteristics. Another advantage of the R32 over the R410 is its greater ease of recovery and reuse, taking into account the fact that the installation and maintenance are very similar.

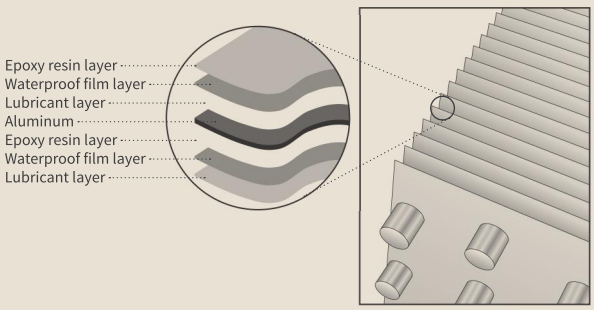
Flexible installation

The new 4 to 6Hp range with R32 and R410A has a static pressure of 30Pa. This allows the air to be recirculated.
Connect up to 4 indoor units in the Set free range (size 0.8Hp Mini compatible).

Large operating ranges

The Micro VRF will keep working in extreme temperatures: up to -20°C for heating and -15°C to 46°C for cooling (-5°C to 46°C at 4 to 6Hp). Features that make this a product for perfect year-round comfort.

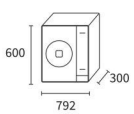
Advanced anti-corrosion treatment



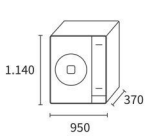
Customizable personal comfort

The temperature on each indoor unit is independently set according to requirements. Customize your comfort with the GENTLE COOL setting on the latest wired remote controls. In summer, cold drafts are as you can set the fan blower temperature to the minimum setting.

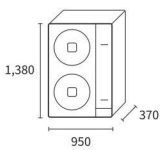
Outdoor units



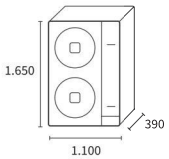
RAS-2HVNP1
RAS-2.5HVNP1
RAS-3HVNC1



RAS-4H(V)NP2E
RAS-5H(V)NP2E
RAS-6H(V)NP2E



RAS-8HNCE
RAS-10HNCE



RAS-12HNC

Micro VRF IVX PRIME

Preliminary data

		Version R32 (4 ~ 6Hp)			Version R410A (4 ~ 6Hp)		
Performance, cooling	**Unit**	**RAS-4H(V)RP2E**	**RAS-5H(V)RP2E**	**RAS-6H(V)RP2E**	**RAS-4H(V)NP2E**	**RAS-5H(V)NP2E**	**RAS-6H(V)NP2E**
Rated power, cooling (min-max)	kW	10.00 (4.50 - 11.20)	12.50 (5.70 - 14.00)	14.00 (6.00 - 16.00)	10.00 (4.50 - 11.20)	12.50 (5.70 - 14.00)	14.00 (6.00 - 16.00)
Rated power input cooling	kW	2.70	3.71	4.29	2.70	3.71	4.29
EER(1)	-	3.70	3.37	3.26	3.70	3.37	3.26
SEER (average climate)[1][5*]	-	6.57(V) - 6.41	6.1(V) - 6.06	5.88(V) - 5.85	6.57(V) - 6.41	6.1(V) - 6.06	5.88(V) - 5.85
Seasonable energy rating (cooling)	-		-			-	
Operating ranges in Cooling mode[1*]	-		-5°C / 46°C (DB)			-5°C / 46°C (DB)	
Performance, heating							
Rated power, heating (min-max)	kW	11.20 (5.00 - 14.00)	14.00 (5.00 - 18.00)	16.00 (5.00 - 20.00)	11.20 (5.00 - 14.00)	14.00 (5.00 - 18.00)	16.00 (5.00 - 20.00)
Rated power input heating	kW	2.45	3.60	3.78	2.45	3.60	3.78
COP[1][5*]	-	4.57	3.89	4.23	4.57	3.89	4.23
SCOP (average climate)[1][5*]	-	4.47	4	4.05	4.47	4	4.05
Seasonal energy rating (heating)	-		-			-	
Operating ranges heating	-		-20°C / 18°C (WB)			-20°C / 18°C (WB)	
Technical features							
Airflow (cooling)	m^3/h	4800	4800	4800	4080	4080	4800
Noise level in Cooling mode (night-time pressure)	dB(A)	52 (50)	53 (50)	55 (53)	52 (50)	54 (53)	55 (53)
Sound pressure	dB(A)	68	69	71	68	69	71
Net weight	kg		86 (84)			86 (84)	
Dimensions (H x L x D)	mm		1140 x 950 x 370			1140 x 950 x 370	
Min. power of indoor unit	Hp		0.8			0.8	
Number of units that can be connected (min - max)	-		1 - 4 [3*]			1 - 4 [3*]	
Available pressure for the fan	Pa		30			30	
Connectible power (min.-max.)	%		90% - 115%			90% - 115%	
Compressor	-		Inverter DC rotary unit			Inverter DC rotary unit	
Cooling properties							
Max. length / added with coolant	m/g/m		75 / 45			75 / 60	
Initial coolant fill	kg		3.0			3.2	
Prefilled for	m		30			30	
Min. length	m		5			5	
Max. level difference (outdoor unit above / below)	m		30 / 20			30 / 20	
Diameter of pipes (Liq / Gas)	mm inches		9.52 (3/8) - 15.88 (5/8)			9.52 (3/8) - 15.88 (5/8)	
Coolant	-		R32			R410A	
Electrical features, outdoor unit							
Power supply	-		3N~ 400V 50Hz (1~ 230V 50Hz)			3N~ 400V 50Hz (1~ 230V 50Hz)	
Max. current	A		15.0 (22.5)			15.0 (22.5)	
Cable width (EN 60 335-1)[4*]	mm^2		5 x 4.00 (3 x 6.00)			5 x 4.00 (3 x 6.00)	
Indoor/outdoor connection (protected)[2*]	mm^2		2 x 0.75 (2)			2 x 0.75 (2)	

[1] Preliminary data. Data shown is for indication purposes only. It is the installer's responsibility to ensure that these cable widths meet the needs of the facility and applicable standards.
[2] Performance values are stated for RCI-FSR cassette units in accordance with Eurovent benchmarks.
[3] Single-phase version

controls and compatible accessories (see the tab VRF TWIN controls)

Condensation drainage kit

DDB-26 (models IVX Prime and IVX Comfort 4 / 5 / 6 / 8 / 10 / 12 Hp)
DDB-12L (Comfort models 2 / 2.5 / 3 Hp)

Cooler connection kit

See page 290

Micro VRF IVX Comfort

		Available while stocks last					
Performance, cooling	**Unit**	**RAS-2HVNP1**	**RAS-2.5HVNP1**	**RAS-3HVNC1**	**RAS-8HNCE**	**RAS-10HNCE**	**RAS-12HNC**
Rated power in Cooling mode (min-max) (1*)	kW	5.00 (2.20 - 5.60)	5.60 (2.20 - 6.30)	7.10 (3.20 - 8.00)	20.00 (8.00 - 22.40)	25.00 (10.00 - 28.00)	30.00 (11.20 - 33.50)
Rated power input in Cooling mode (5*)	kW	1.24	1.34	2.26	5.95	8.28	11.67
EER	-	4.03	4.18	3.14	3.36	3.02	2.57
SEER (average climate) (5*)	-	6.49	6.05	6.00	6.79	6.61	5.30
Seasonable energy rating (cooling)	-	A++	A+	A		-	
Operating ranges in cooling mode*	-	(OPT -15°C) -5°C / 46°C (DB)					
Performance, heating							
Rated power in Heating mode (min-max) (1*)	kW	5.60 (2.20 - 7.10)	6.30 (2.20 - 8.00)	8.00 (3.50 - 10.60)	22.40 (6.30 - 28.00)	28.00 (8.00 - 35.00)	33.50 (9.00 - 37.50)
Rated power input heating	kW	1.20	1.28	2.00	5.88	7.71	13.04
COP (5*)	-	4.68	4.92	4	3.81	3.63	2.57
SCOP (average climate) (5*)	-	4.67	4.77	4.21	4.19	3.79	3.66
Seasonal energy rating (heating)	-	A++		A+		-	
Operating ranges heating	-	-20°C / 18°C (WB)					
Technical features							
Airflow (cooling)	m³/h	2436		2682	7620	8040	9780
Noise level in Cooling mode (night-time pressure)	dB(A)	44 (42)	45 (43)	48 (46)	57 (55)	58 (56)	59 (56)
Sound pressure	dB(A)	62	63	66	76		77
Net weight	kg	43		44	133	138	168
Dimensions (H x L x D)	mm	600 x 792 x 300			1380 x 950 x 370		1650 x 1100 x 390
Min. power of indoor unit	Hp	0.8			1.8		
Number of units that can be connected (min - max)	-	1 - 2 (6*)		1 - 2	1 - 4 (3*)		
Connectible power (min.-max.)	-	90% - 110%			See following page		
Compressor	-	SCROLL Inverter					
Cooling properties							
Max. length / added with coolant	m/g/m	50 / 30		50 / 40	100 / to be calculated according to technical documentation		
Initial coolant fill	kg	1.6		1.9	5.3	6	6.7
Prefilled for	m	30		20	30		
Max. level difference (outdoor unit above / below)	m	30 / 20					
Diameter of pipes (Liq / Gas)	inches	1/4 - 1/2*		3/8 - 5/8	3/8 - 1	1/2 - 1	
Coolant	-	R410A					
Electrical features, outdoor unit							
Power supply	-	1~ 230V 50Hz		1 ~ 230V 50Hz	3N ~ 400V 50Hz		3N ~ 400V 50Hz
Max. current	A	13.8	15.8	17.8	24		
Cable width (EN 60 335-1) (4*)	mm²	3 x 2.50	3 x 4.00		5 x 6.00		
Indoor/outdoor connection (protected) (2*)	mm²	2 x 0.75 (2)					

* To ensure cooling mode at -15°C, use the "cooling only" and "master/slave" switch settings.
(1*) If longer than 70 m, halve the diameter of the liquid pipe.
(2*) Shielding must be renewed every 300 m.
(3*) With 100% connection.
(4) Data shown is for indication purposes only. It is the installer's responsibility to ensure that these cable widths meet the needs of the facility and current standards.
(5*) Performance values are stated for RCI-FSN4 cassette units in accordance with Eurovent benchmarks.
(6*) Only with a connection rate of 50% to 100%; beyond that, max. 1 or 2 units respectively.
(V) Single-phase version.

controls and compatible accessories (see the tab VRF TWIN controls)

Condensation drainage kit

DDB-26 (IVX Comfort models 4 / 5 / 6 / 8 / 10 / 12 Hp) DDB-12L (Comfort models 2 / 2,5 / 3 Hp)

Cooler connection kit

See page 290

Installation rules
Micro VRF (IVX Prime and IVX Comfort)

Quantity of indoor units

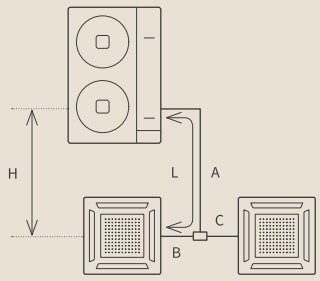
Outdoor unit (Hp)	2	2.5	3	4	5	6	8	10	12
Max. number of indoor units	2			4*			4		
Min. power of indoor unit	0.8						1.8		

Permitted connection rate

External unit	Hp	2	2.5	3	4	5	6	8	10	12
Max. number of indoor units	1	90~110%			90~115%			90~115%		
		1.8 to 2.2 Hp	2.25 to 2.75 Hp	2.7 to 3.3 Hp	3.6 to 4.6 Hp	4.5 to 5.75 Hp	5.4 to 6.9 Hp	7.2 to 9.2 Hp	9 to 11.5 Hp	10.8 to 13.8 Hp
	2	90~100%								
		1.8 to 2 Hp	2.25 to 2.5 Hp	2.7 to 3 Hp						
	3 or 4	-			90~100%					
		-			3.6 to 4 Hp	4.5 to 5 Hp	5.4 to 6 Hp			

Units 2 - 2.5 - 3 Hp: permitted installation (1 to 2 indoor units)

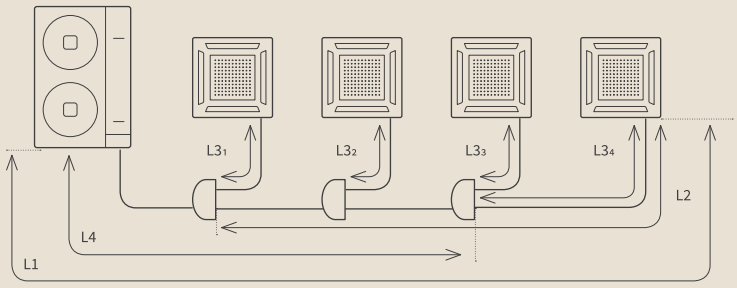
Installation with multikits.



Units 4 to 12 Hp: permitted installation (1 to 4 indoor units)

Installation with multikits. 1 main line. Constant diameter.


Multikit



Installing 3 Hp outdoor units is not permitted

External unit		Hp	2	2.5	3	4	5	6	8	10	12
Max. length between outdoor unit and the furthest indoor unit	Actual length	m	50			75	75		100		
	Equivalent length	m	70			95	95		125		
Max. level difference outdoor unit to indoor unit (H) (outdoor unit above/below)		m	30/20								
Max. level difference from indoor unit to indoor unit		m	3								
Max. level difference from Multikit to indoor unit / Multikit to Multikit		m	3								
Total length of the pipe		m	50		60	85 (with 2, 3, or 4 indoor units)	85 (with 2, 3, or 4 indoor units)		100	145	
Max. length of indoor unit to Multikit		m	10						15		
Max. length of first Multikit to indoor unit		m	-			15			25		
Length of main branch A		m	A > B, C			A > B, C, D, E, F, G					
Max. imbalance between branches	B-C	m	< 8m			< 10m					

Multikit part numbers		Hp	E-102SN4			E-162SN4	
Diameter of the main line			-		Constant diameter		
Diameter of outdoor unit - first multikit	Liq/Gas	-	1/4 - 1/2		3/8 - 5/8	3/8** - 1	1/2 - 1

Power of indoor unit	Hp	< 1.5	1.8 to 2	2.3 to 6
Diameter of the indoor unit multikit	-	1/4 - 1/2	1/4 - 5/8	3/8 - 5/8

Note: It is not possible to connect 8 Hp or 10 Hp indoor units.
* Caution: When connecting RCI cassette units, the max. number is limited to two. **If the pipe is longer than 70m, use a 1/2" liquid line instead of 3/8".