

Benefits

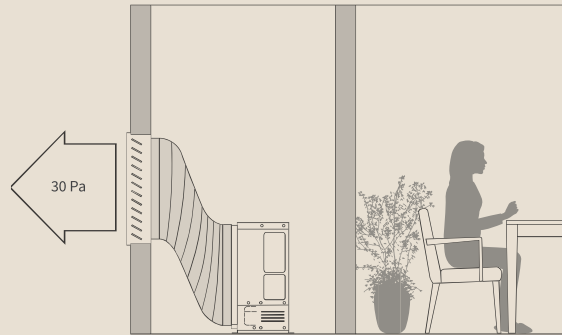
Micro VRF (IVX Prime and IVX Comfort)

1 The smallest VRF on the market, in the most extensive range of its category.



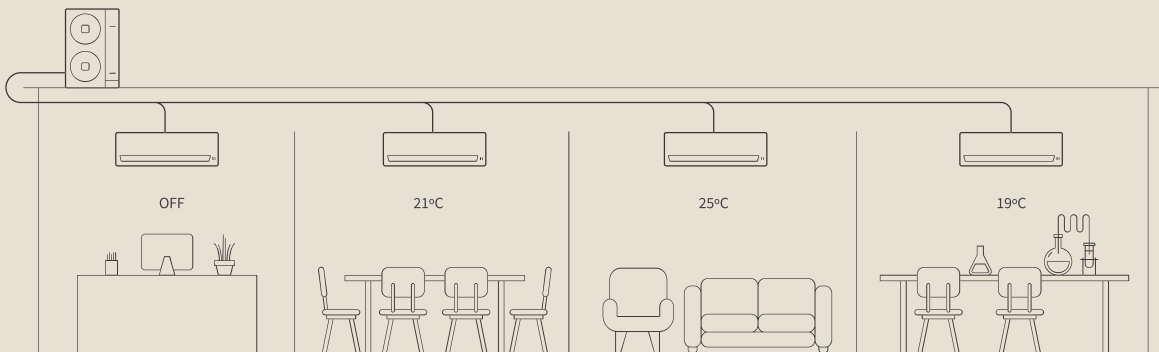
Small businesses and offices have a variety of air-conditioning requirements and demand the best level of comfort. Available from 10 kW to 30 kW, the Micro VRF range meets the needs of any projects, no matter how much space is available.

2 External static pressure available on IVX for flexible installations



The new 4 to 6 Hp single-fan range features 30Pa of static pressure. A unit of 14kW (6 Hp), with a single fan, has a footprint of just 0.35 m². No static pressure available on IVX Comfort units (8 to 12Hp).

3 Independently control indoor units IVX Prime and IVX Comfort



A comfortable indoor environment is achievable thanks to the ability to set different temperature set points. In many buildings, due to the orientation, the heating/cooling load may vary for each area. In such cases the option to individually set the temperature of each indoor unit is very useful.

Hitachi's Micro VRF range meets the comfort needs of every area, with individual temperature control. This solution is ideal for small and medium-sized commercial premises, with a single outdoor unit providing thermal comfort in 4 different rooms.

4 A wide choice of indoor units

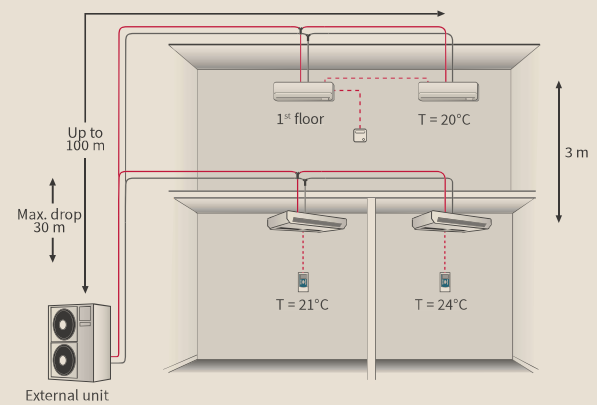


In the same building, the requirements in terms of aesthetics, space, and temperature are different in each room. So it fits into any space, the Micro VRF range is compatible with all SYSTEM FREE indoor units: Wall, ducted, cassette, console and under ceiling units.

5 Less refrigerant piping, more savings

The Micro VRF range is an interesting alternative to typical multi-split installations because it is easier to install. The refrigerant piping is in a single line with the same diameter throughout the main run. Multikits then branch off to the different indoor units, each with their own pipe sizes. This reduces the amount of refrigerant piping used and saves time as well as installation costs.

6 Even greater flexibility



The Micro VRF units have a total pipe run of up to 100 m and a 30-m level difference between the indoor unit and the outdoor unit. This makes it much easier to place the outdoor unit in a suitable location, such as on the roof of the building, without interfering with the aesthetics of the premises.

It's also possible to install indoor units on different floors connected to the same pipe run. For example, a single outdoor unit can provide air-conditioning to a 2-floor commercial space.

Micro VRF (IVX Prime & IVX Comfort)



IVX Prime (R32 or R410A)

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



IVX Comfort (R410A)

Micro VRF with R32, the green choice

The R32 refrigerant has a number of advantages over the R410A refrigerant. 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 refrigerant charge by 7% to 12% compared to the equivalent installation on R410A. This **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 lower charge will still 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.

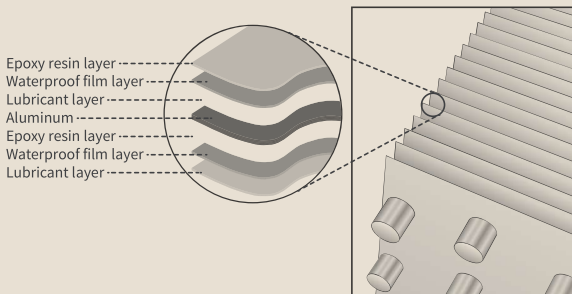
Flexible installation

The new 4 to 6Hp range with R32 and R410A has an external static pressure of 30Pa. This allows the condenser to be installed inside and ducted to outside. Connect up to 4 indoor units in the Set free range (size 0.8Hp units compatible).

Large operating ranges

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

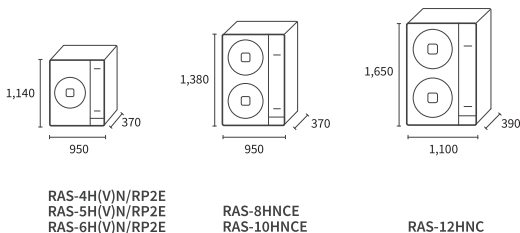
Advanced anti-corrosion treatment



Customizable personal comfort

The air off temperature on each indoor unit can be independently set according to requirements. Customize your comfort with the GENTLE COOL setting on the latest wired remote controls. In summer, cold drafts can be avoided as you can set the air off temperature to the maximum setting.

Outdoor units



Performance, cooling	Unit	Version R32 (4 ~ 6Hp)			Version R410A (4 ~ 6Hp)		
		RAS-4H(V)RP2E	RAS-5H(V)RP2E	RAS-6H(V)RP2E	RAS-4H(V)NP2E	RAS-5H(V)NP2E	RAS-6H(V)NP2E
Nominal cooling capacity (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	2.51	3.42	4.32	2.81	3.83	4.91
EER	-	3.98	3.66	3.24	3.56	3.26	2.85
SEER (average climate) ⁽²⁾	-	7.31(V) - 6.96	8.35(V) - 8.20	7.35(V) - 7.25	7.04(V) - 6.72	7.80(V) - 7.67	7.01(V) - 6.92
Seasonal energy class (cooling)	-	A++	-	-	A++	-	-
Working range in Cooling ⁽¹⁾	-	-5°C / 46°C (DB)			-5°C / 46°C (DB)		

Performance, heating							
Performance, heating	Unit	Version R32 (4 ~ 6Hp)			Version R410A (4 ~ 6Hp)		
		RAS-4H(V)RP2E	RAS-5H(V)RP2E	RAS-6H(V)RP2E	RAS-4H(V)NP2E	RAS-5H(V)NP2E	RAS-6H(V)NP2E
Nominal heating capacity (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	2.60	3.39	3.64	2.56	3.39	3.64
COP	-	4.31	4.13	4.40	4.38	4.13	4.40
SCOP (average climate) ⁽²⁾	-	4.60	4.75	4.73	4.64	4.68	4.71
Seasonal energy class (heating)	-	A++	-	-	A++	-	-
Working range in heating	-	-20°C / 18°C (WB)			-20°C / 18°C (WB)		


Technical features							
Airflow (cooling)	m³/h	4800	4800	4800	4800	4800	4800
Sound pressure in Cooling (night mode)	dB(A)	54 (51)	56 (51)	56 (51)	54 (51)	56 (51)	56 (51)
Sound power	dB(A)	70	72	72	70	72	72
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 static pressure	Pa	30			30		
Connectable index (min.-max.)	%	90% - 115%			90% - 115%		
Compressor	-	Inverter DC rotary unit			Inverter DC rotary unit		

Refrigeration characteristics							
Max. length / additional charge	m/g/m	75 / 45			75 / 60		
Initial refrigerant charge	kg	3.0			3.2		
Pre-charged 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)	inches	3/8 - 5/8			3/8 - 5/8		
Refrigerant	-	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)		
Recommended fuse size	A	20.0 (25.0)			20.0 (25.0)		
Cable width (EN 60 335-1) ⁽⁴⁾	mm²	5 x 4.00 (3 x 6.00)			5 x 4.00 (3 x 6.00)		
Indoor/outdoor connection (shielded) ⁽²⁾	mm²	2 x 0.75			2 x 0.75		

⁽¹⁾ 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 IXV Prime and IXV Comfort 4 / 5 / 6 / 8 / 10 / 12 Hp)
 DDB-12L (Comfort models 2 / 2.5 / 3 Hp)



Multi kit

Micro VRF IVX Comfort

Performance, cooling	Unit	RAS-8HNCE	RAS-10HNCE	RAS-12HNC
Nominal Cooling capacity (min-max)	kW	20.00 (8.00 - 22.40)	25.00 (10.00 - 28.00)	30.00 (11.20 - 33.50)
Rated power input in Cooling mode ⁽⁵⁷⁾	kW	5.95	8.28	11.67
EER	-	3.36	3.02	2.57
SEER (average climate) ⁽⁸⁾	-	6.79	6.61	5.30
Seasonal energy class	-	-		
Working range in cooling	-	(OPT -15°C)* -5°C / 46°C (DB)		

Performance, heating

Nominal Heating capacity (min-max)	kW	22.40 (6.30 - 28.00)	28.00 (8.00 - 35.00)	33.50 (9.00 - 37.50)
Rated power input heating	kW	5.88	7.71	9.46
COP	-	3.81	3.63	3.54
SCOP (average climate) ⁽⁸⁾	-	4.19	3.79	3.66
Seasonal energy class	-	-		
Working range in heating	-	-20°C / 15°C (WB)		

Technical features

Airflow (cooling)	m ³ /h	7620	8040	9780
Sound pressure in Cooling (night mode)	dB(A)	57 (55)	58 (56)	59 (56)
Sound power	dB(A)	76		77
Net weight	kg	136	138	168
Dimensions (H x L x D)	mm	1380 x 950 x 370		1650 x 1100 x 390
Min. power of indoor unit	Hp	1.8		
Number of units that can be connected (min - max)	-	1 - 4		
Connectable index (min.-max.)	-	See following page		
Compressor	-	SCROLL Inverter		

Refrigeration characteristics

Max. length / additional charge	m/g/m	100 / to be calculated according to technical documentation		
Initial refrigerant charge	kg	5.7	6.2	6.7
Pre-charged for	m	30		
Max. level difference (outdoor unit above / below)	m	30 / 20		
Diameter of pipes (Liq / Gas)	inches	3/8 - 1 1/8 ⁽¹⁾	1/2 - 1 1/8	
Refrigerant	-	R410A		

Electrical features, outdoor unit

Power supply	-	3N ~ 400V 50Hz		
Max. current	A	24		
Recommended fuse size	A	32		
Cable width (EN 60 335-1) ⁽⁴⁷⁾	mm ²	5 x 6.00		
Indoor/outdoor connection (shielded) ⁽²¹⁾	mm ²	2 x 0.75		

* 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.

⁽²¹⁾ Shielding must be renewed every 300 m.

⁽⁸⁾ Performance values are stated for RCI-FSN4 cassette units in accordance with Eurovent benchmarks.

⁽⁴⁷⁾ 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.

(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)



Multi kit

Installation rules

Micro VRF (IVX Prime and IVX Comfort)

Quantity of indoor units

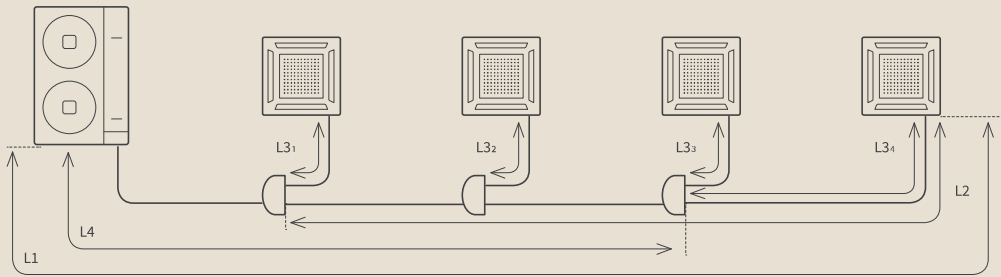
Outdoor unit (Hp)	4	5	6	8	10	12
Max. number of indoor units		4*			4	
Min. power of indoor unit		0.8			1.8	

Permitted connection rate

External unit	Hp	4	5	6	8	10	12
Max. number of indoor units	1	90~115%			90~115%		
	2	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
	3 or 4	3.6 to 4 Hp	4.5 to 5 Hp	5.4 to 6 Hp			

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

Installation with multikits. 1 main line. Constant diameter.



Installing 3 Hp outdoor units is not permitted

External unit	Hp	4	5	6	8	10	12
Max. length between outdoor unit and the furthest indoor unit	Actual length	m	75		75		100
	Equivalent length	m	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		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, D, E, F, G			
Max. imbalance between branches	B-C	m		< 10m			

Multikit part numbers	Hp	E-102SN4	E-162SN4
Diameter of the main line		Constant diameter	
Diameter of outdoor unit - first multikit	Liq/Gas	-	3/8 - 5/8
			3/8** - 1 1/8
			1 1/2 - 1 1/8
Power of indoor unit	Hp	< 1.5	1.8 to 2
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 on 6 Hp model. **If the pipe is longer than 70m, use a 1/2" liquid line instead of 3/8".