

VRF SET FREE Sigma Standard



The widest single-module range on the market

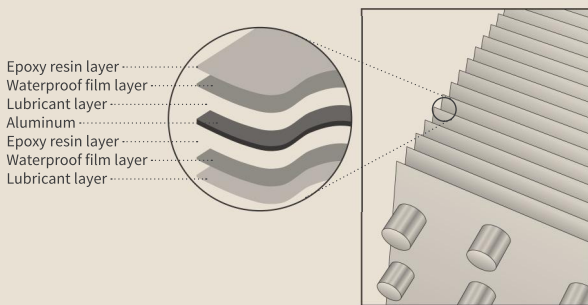
Compact and lightweight the SET FREE SIGMA Standard Hitachi range comes exclusively in 8 Hp to 24 Hp models.

Exclusive solution

3-pipe / 2-pipe single unit to meet the needs of both energy recovery applications and reversible heat pump uses.

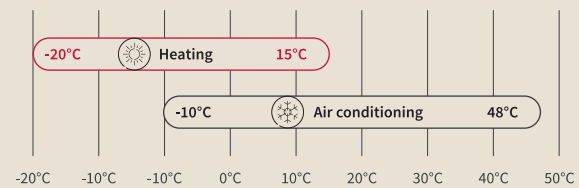
Advanced anti-corrosion treatment

With its triple handling, the SIGMA offers the best protection on the market for use in tough environments.



Large operating ranges

Outside temperature operating range

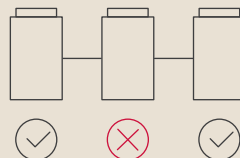


Variable evaporation temperature

The control logic built into SIGMA units saves more energy and increases user comfort during the summer. Set a high evaporative target temperature to suit the building's heating needs and the SIGMA becomes ever more economical to use. Choose a low target temperature to suit heat requirements and the SIGMA provides comfort even faster in cooling mode. Complemented by the GENTLE COOL setting, which limits the minimum fan blower temperature to avoid cold drafts, the SIGMA is the most comfortable VRF on the market.

Backup function

Isolates an outdoor unit for maintenance while other units continue to operate.



Outdoor units

Model	Height (mm)	Width (mm)
RAS-8FSXNSE RAS-10FSXNSE RAS-12FSXNSE	1.725	959
RAS-14FSXNSE RAS-16FSXNSE RAS-18FSXNSE	1.725	1.219
RAS-20FSXNSE RAS-22FSXNSE RAS-24FSXNSE	1.725	1.609

Performance, cooling	Unit	RAS-8FSXNSE	RAS-10FSXNSE	RAS-12FSXNSE	RAS-14FSXNSE	RAS-16FSXNSE	RAS-18FSXNSE	RAS-20FSXNSE	RAS-22FSXNSE	RAS-24FSXNSE
Rated power Cooling	kW	22.4	28	33.5	40	45	50	56	61.5	67
Rated power input Cooling	kW	5.40	7.27	8.89	12.12	13.85	14.9	18.6	20.4	22.4
EER	-	4.15	3.85	3.77	3.30	3.25	3.35	3.01	3.01	2.99
SEER	-	7.50	7.17	6.97	7.47	7.30	6.96	6.29	6.76	6.20
Operating ranges Cooling	-	-10°C / 48°C DB								

Performance, heating	Unit	RAS-8FSXNSE	RAS-10FSXNSE	RAS-12FSXNSE	RAS-14FSXNSE	RAS-16FSXNSE	RAS-18FSXNSE	RAS-20FSXNSE	RAS-22FSXNSE	RAS-24FSXNSE
Rated power Heating	kW	25	31.5	37.5	45	50	56	63	69	77.5
Rated power input Heating	kW	5.26	6.89	9.15	12.03	15	17	19	22	23
Power at -7°C ⁽¹⁾	kW	19.92	25.1	26.46	33.08	35.57	39.73	44.70	48.95	51.7
Power at -15°C (or -20°C) ⁽¹⁾	kW	15.8	19.8	20.3	25.5	27	30.20	34	37.30	39.5
COP	-	4.75	4.57	4.10	3.74	3.37	3.29	3.35	3.19	3.4
SCOP	-	4.17	4.11	4.29	4.48	4.42	4.18	4.14	4.43	4.43
Operating ranges heating	-	-20°C / 15°C WB								

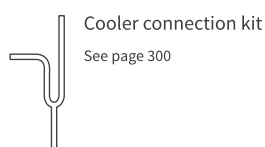
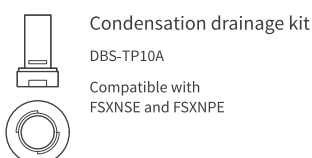
Technical features	Unit	RAS-8FSXNSE	RAS-10FSXNSE	RAS-12FSXNSE	RAS-14FSXNSE	RAS-16FSXNSE	RAS-18FSXNSE	RAS-20FSXNSE	RAS-22FSXNSE	RAS-24FSXNSE
Airflow	m ³ /h	9900	10200	11400	14340	15360	15360	19740	19740	20880
Adjustable static pressure	Pa	30 / 60 / 80								
Number of fans	-	1				2				
Sound pressure	dB(A)	80	82	82	85	85	86	86	84	86
Sound pressure ⁽²⁾ (Night mode)	dB(A)	58 (53)	60 (55)	59 (54)	63 (58)	63 (58)	65 (60)	65 (60)	64 (59)	66 (61)
Dimensions (H x L x D)	mm	1725 x 959 x 784			1725 x 1219 x 784			1725 x 1609 x 784		
Net weight	kg	210		233	289	332	333	382	396	397
Type of compressor	-	DC Scroll Inverter								
Compressor number	-	1				2				
Max. number of indoor units that can be connected	-	26	32	39	45	52	58	64		
Connection rate ⁽³⁾	-	50 - 130%								

Cooling properties	Unit	RAS-8FSXNSE	RAS-10FSXNSE	RAS-12FSXNSE	RAS-14FSXNSE	RAS-16FSXNSE	RAS-18FSXNSE	RAS-20FSXNSE	RAS-22FSXNSE	RAS-24FSXNSE
Coolant	-	R410A								
Coolant load	kg	5		7.20	8.90	9.90	10.70	11.30	11.30	11.6
Dimension of cooler connections	Liquid	inches 3/8		1/2		1/2	5/8			
	Low pressure gas	inches 3/4	7/8	1			1 - 1/8			
	High pressure gas	inches 5/8	3/4	7/8				1		

Electrical features	Unit	RAS-8FSXNSE	RAS-10FSXNSE	RAS-12FSXNSE	RAS-14FSXNSE	RAS-16FSXNSE	RAS-18FSXNSE	RAS-20FSXNSE	RAS-22FSXNSE	RAS-24FSXNSE
Power supply	-	3N - 400V 50Hz								
Max. current	A	15.50	21.50	24	29.50	33	37.50	44.50	45	53
Indoor/outdoor connection (protected) ⁽⁴⁾	mm	2 x 0.75								

⁽¹⁾ When set to 20°C, with a connection rate of 100%. ⁽²⁾ Anchoil chamber readings taken 1.5 m from the front of the appliance.
⁽³⁾ Depending on the application; refer to the technical documentation. ⁽⁴⁾ Volume to regenerate every 300 m.

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



		RAS-26FSXNSE	RAS-28FSXNSE	RAS-30FSXNSE	RAS-32FSXNSE	RAS-34FSXNSE	RAS-36FSXNSE	RAS-38FSXNSE	RAS-40FSXNSE
Unit 1 name		RAS-12FSXNSE	RAS-12FSXNSE	RAS-12FSXNSE	RAS-14FSXNSE	RAS-16FSXNSE	RAS-18FSXNSE	RAS-14FSXNSE	RAS-18FSXNSE
Unit 2 name		RAS-14FSXNSE	RAS-16FSXNSE	RAS-18FSXNSE	RAS-18FSXNSE	RAS-18FSXNSE	RAS-18FSXNSE	RAS-24FSXNSE	RAS-22FSXNSE

Performance, cooling	Unit								
Rated power Cooling	kW	73	77.5	85	90	95	100	106	112
Rated power input Cooling	kW	23.38	22.44	24.24	29.58	28.77	29.85	36.71	35.52
EER	-	3.12	3.45	3.51	3.04	3.30	3.35	2.89	3.15
SEER	-	7.30	7.10	7.11	7.36	7.18	7.20	6.63	6.93
Operating ranges Cooling	-	-10°C / 48°C DB							

Performance, heating	Unit								
Rated power Heating	kW	82.5	90	95	100	106	112	118	125
Rated power input Heating	kW	21.18	24.67	26.59	28.77	31.86	34.04	33.55	38.65
Power at -7°C ⁽¹⁾	kW	59.54	63.70	67.25	72.09	76.41	79.46	81.66	88.68
Power at -15°C (or -20°C) ⁽¹⁾	kW	45.8	48.65	51.31	55.15	58.46	60.40	62.61	67.50
COP	-	3.90	3.65	3.57	3.48	3.33	3.29	3.52	3.23
SCOP	-	4.39	4.35	4.22	4.30	4.28	4.18	4.45	4.30
Operating ranges heating	-	-20°C / 15°C WB							

Technical features									
Airflow	m ³ /h	11140 + 14340	11140 + 15360		14340 + 15360	15360 + 15360		14340 + 20280	15360 + 19740
Adjustable static pressure	Pa	30 / 60 / 80							
Number of fans	-	3			4				
Sound pressure	dB(A)	87			89				88
Sound pressure ⁽²⁾ (night mode)	dB(A)	64.50 (59.50)	64.50 (59.50)	66 (61)	67 (62)		68 (63)		67.50 (62.50)
Dimensions (H x L x D)	mm	1725 x 2198 x 784			1725 x 2458 x 784	1725 x 2858 x 784		1725 x 2848 x 784	
Net weight	kg	233 + 289	233 + 332	233 + 333	289 + 333	332 + 333	333 + 333	289 + 397	333 + 396
Type of compressor	-	DC Scroll Inverter							
Compressor number	-	2	3			4			
Max. number of indoor units that can be connected	-	64							
Connection rate ⁽³⁾	-	50 - 130%							

Cooling properties										
Coolant	-	R410A								
Coolant load	kg	16.1	17.1	17.9	19.6	20.6	21.4	20.5	22	
Dimension of cooler connections	Liquid	inches	3/4							
	Low pressure gas	inches	1 - 1/4				1 - 1/2			
	High pressure gas	inches	1	1 - 1/8				1 - 1/4		

Electrical features									
Power supply	-	3N - 400V 50Hz							
Max. current	A	53	56.5	61	66.5	70.5	75	82.5	82
Indoor/outdoor connection (protected) ⁽⁴⁾	mm	2 x 0.75							

⁽¹⁾ When set to 20°C with a connection rate of 100%. ⁽²⁾ Anchoid chamber readings taken 1.5 m from the front of the appliance.

⁽³⁾ Depending on the application; refer to the technical documentation. ⁽⁴⁾ Volume to regenerate every 300 m.

	RAS-42FSXNSE	RAS-44FSXNSE	RAS-46FSXNSE	RAS-48FSXNSE	RAS-50FSXNSE	RAS-52FSXNSE	RAS-54FSXNSE
Unit 1 name	RAS-18FSXNSE	RAS-22FSXNSE	RAS-22FSXNSE	RAS-24FSXNSE	RAS-14FSXNSE	RAS-16FSXNSE	RAS-18FSXNSE
Unit 2 name	RAS-24FSXNSE	RAS-22FSXNSE	RAS-24FSXNSE	RAS-24FSXNSE	RAS-18FSXNSE	RAS-18FSXNSE	RAS-18FSXNSE
Unit 3 name	-	-	-	-	RAS-18FSXNSE	RAS-18FSXNSE	RAS-18FSXNSE

Performance, cooling	Unit							
Rated power Cooling	kW	118	122	128	136	140	145	150
Rated power input Cooling	kW	37.65	40.53	42.67	45.48	44.5	43.7	44.78
EER	-	3.13	3.01	3	2.99	3.15	3.32	3.35
SEER	-	6.57	6.75	6.45	6.19	7.30	7.18	7.20
Operating ranges Cooling	-	-10°C / 48°C DB						

Performance, heating	Unit							
Rated power Heating	kW	132	140	145	150	155	160	165
Rated power input Heating	kW	39.37	43.89	43.97	44.12	45.49	48.28	50.15
Power at -7°C ⁽¹⁾	kW	90.38	99.32	99.62	100.06	111.10	113.51	117.06
Power at -15°C (or -20°C) ⁽¹⁾	kW	68.9	75.58	76.01	76.45	84.81	86.32	88.98
COP	-	3.35	3.19	3.30	3.40	3.41	3.31	3.29
SCOP	-	4.31	4.42	4.43	4.43	4.26	4.25	4.18
Operating ranges heating	-	-20°C / 15°C WB						

Technical features								
Airflow	m ³ /h	15360 + 20880	19740 + 19740	19740 + 20880	20880 + 20880	14340 + 15360 + 15360		
Adjustable static pressure	Pa	30 / 60 / 80						
Number of fans	-	4						
Sound pressure	dB(A)	89	87	88	89	89	87	88
Sound pressure ⁽²⁾ (Night mode)	dB(A)	68.50 (63.50)	67 (62)	68 (63)	69 (64)	68.50 (63.50)	67 (62)	68 (63)
Dimensions (H x L x D)	mm	1725 x 2848 x 784	1725 x 3238 x 784	1725 x 3238 x 784	1725 x 3238 x 784	1725 x 2848 x 784	1725 x 3238 x 784	1725 x 3238 x 784
Net weight	kg	333 + 397	396 + 396	396 + 397	397 + 397	333 + 397	396 + 396	396 + 397
Type of compressor	-	DC Scroll Inverter						
Compressor number	-	4				5	6	
Max. number of indoor units that can be connected	-	64						
Connection rate ⁽³⁾	-	50 - 130%						

Cooling properties								
Coolant	-	R410A						
Coolant load	kg	22.30	22.60	22.90	23.20	30.30	31.30	32.10
Dimension of cooler connections	Liquid	inches	3/4					
	Low pressure gas	inches	1 - 1/2					
	High pressure gas	inches	1 - 1/4					

Electrical features								
Power supply	-	3N - 400V 50Hz						
Max. current	A	90.50	89.50	98	106	104	108	112
Indoor/outdoor connection (protected) ⁽⁴⁾	mm	2 x 0.75						

⁽¹⁾ When set to 20°C with a connection rate of 100%. ⁽²⁾ Anchoic chamber readings taken 1.5 m from the front of the appliance.

⁽³⁾ Depending on the application; refer to the technical documentation. ⁽⁴⁾ Volume to regenerate every 300 m.

To find out the features of **56 Hp** to **96 Hp** outdoor units, please refer to the technical documentation.

Cooling connections

VRF SET FREE Sigma Standard

Composition of multi-module outdoor units

Outdoor unit	2-pipe combination	Multikit	Outdoor unit	3-pipe combinations.	Multikit
RAS-8FSXNSE	Single module	-	RAS-8FSXNSE-3T	Single module	-
RAS-10FSXNSE	Single module	-	RAS-10FSXNSE-3T	Single module	-
RAS-12FSXNSE	Single module	-	RAS-12FSXNSE-3T	Single module	-
RAS-14FSXNSE	Single module	-	RAS-14FSXNSE-3T	Single module	-
RAS-16FSXNSE	Single module	-	RAS-16FSXNSE-3T	Single module	-
RAS-18FSXNSE	Single module	-	RAS-18FSXNSE-3T	Single module	-
RAS-20FSXNSE	Single module	-	RAS-20FSXNSE-3T	Single module	-
RAS-22FSXNSE	Single module	-	RAS-22FSXNSE-3T	Single module	-
RAS-24FSXNSE	Single module	-	RAS-24FSXNSE-3T	Single module	-
RAS-26FSXNSE	RAS-14FSXNSE - RAS-12FSXNSE	MC-21AN1	RAS-26FSXNSE-3T	RAS-14FSXNSE - RAS-12FSXNSE	MC-21XN1
RAS-28FSXNSE	RAS-16FSXNSE - RAS-12FSXNSE	MC-21AN1	RAS-28FSXNSE-3T	RAS-16FSXNSE - RAS-12FSXNSE	MC-21XN1
RAS-30FSXNSE	RAS-18FSXNSE - RAS-12FSXNSE	MC-21AN1	RAS-30FSXNSE-3T	RAS-18FSXNSE - RAS-12FSXNSE	MC-21XN1
RAS-32FSXNSE	RAS-18FSXNSE - RAS-14FSXNSE	MC-21AN1	RAS-32FSXNSE-3T	RAS-18FSXNSE - RAS-14FSXNSE	MC-21XN1
RAS-34FSXNSE	RAS-18FSXNSE - RAS-16FSXNSE	MC-21AN1	RAS-34FSXNSE-3T	RAS-18FSXNSE - RAS-16FSXNSE	MC-21XN1
RAS-36FSXNSE	RAS-18FSXNSE - RAS-18FSXNSE	MC-21AN1	RAS-36FSXNSE-3T	RAS-18FSXNSE - RAS-18FSXNSE	MC-21XN1
RAS-38FSXNSE	RAS-24FSXNSE - RAS-14FSXNSE	MC-21AN1	RAS-38FSXNSE-3T	RAS-24FSXNSE - RAS-14FSXNSE	MC-21XN1
RAS-40FSXNSE	RAS-22FSXNSE - RAS-18FSXNSE	MC-21AN1	RAS-40FSXNSE-3T	RAS-22FSXNSE - RAS-18FSXNSE	MC-21XN1
RAS-42FSXNSE	RAS-24FSXNSE - RAS-18FSXNSE	MC-21AN1	RAS-42FSXNSE-3T	RAS-24FSXNSE - RAS-18FSXNSE	MC-21XN1
RAS-44FSXNSE	RAS-22FSXNSE - RAS-22FSXNSE	MC-21AN1	RAS-44FSXNSE-3T	RAS-22FSXNSE - RAS-22FSXNSE	MC-21XN1
RAS-46FSXNSE	RAS-24FSXNSE - RAS-22FSXNSE	MC-21AN1	RAS-46FSXNSE-3T	RAS-24FSXNSE - RAS-22FSXNSE	MC-21XN1
RAS-48FSXNSE	RAS-24FSXNSE - RAS-24FSXNSE	MC-21AN1	RAS-48FSXNSE-3T	RAS-24FSXNSE - RAS-24FSXNSE	MC-21XN1
RAS-50FSXNSE	RAS-18FSXNSE - RAS-18FSXNSE - RAS-14FSXNSE	MC-30AN1	RAS-50FSXNSE-3T	RAS-18FSXNSE - RAS-18FSXNSE - RAS-14FSXNSE	MC-30XN1
RAS-52FSXNSE	RAS-18FSXNSE - RAS-18FSXNSE - RAS-16FSXNSE	MC-30AN1	RAS-52FSXNSE-3T	RAS-18FSXNSE - RAS-18FSXNSE - RAS-16FSXNSE	MC-30XN1
RAS-54FSXNSE	RAS-18FSXNSE - RAS-18FSXNSE - RAS-18FSXNSE	MC-30AN1	RAS-54FSXNSE-3T	RAS-18FSXNSE - RAS-18FSXNSE - RAS-18FSXNSE	MC-30XN1

Part numbers of cooler accessories

Multikit



2 pipes

E-102SN4
E-162SN4
E-242SN3
E-302SN3
MW-NP2682A3

3 pipes

E-52XN3
E-102XN3
E-162XN3
E-202XN3
E-242XN3
E-322XN3

Collector



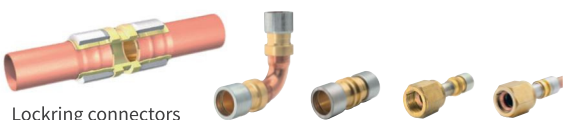
2 pipes

MH-84AN1
MH-108AN

3 pipes

MH-108XN

Compatible accessories



Lockring connectors