FSXNH
HIGH PERFORMANCE

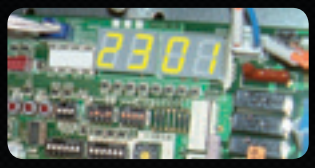
LARGE COMMERCIAL PREMISES AND OFFICES WITH VERY HIGH ENERGY EFFICIENCY

Functions

2 -PIPE/ 3-PIPE
Hitachi exclusive.

THE ONLY 5HP 3-PIPE ON THE MARKET (10 UNITS)

EASY DIAGNOSTICS
- The fault codes can be viewed by users on the remote control.
- The operational parameters of the units (temperature, pressure etc.) can be accessed by installation engineers directly on the outdoor units.



PRECISION CONTROL
The compressor control is very precise: 10 to 115 Hz, accurate up to 0.01 Hz with increments ranging from 0.125 Hz/s to 3 Hz/s (5 levels). It is possible to respond to the demands of the smallest units (one 0.6HP (fixed) unit) as well as transitional overloading.

- The FSXNH obtained a distinction for performance in the ECA program (Enhanced Capital Allowance) in the United Kingdom. It is a program designed to give companies tax relief when they invest in energy efficient equipment.
- Possibility to have a cool area with the 3-pipe installation.
- Ability to operate locked in heating only.

COP 4.80

EER 4.66

SEER 8.79

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

SYSTEM FREE INDOORS

CASSETTE

FLOOR-MOUNTED

CEILING SUSPENDED

DUCTED

WALL-MOUNTED

Design

- All of the Hitachi indoor units are compatible.

FSXNH

VRF Modular Hi Efficiency 2 or 3-pipe

"PLUS" HIGH PERFORMANCE

RESULT

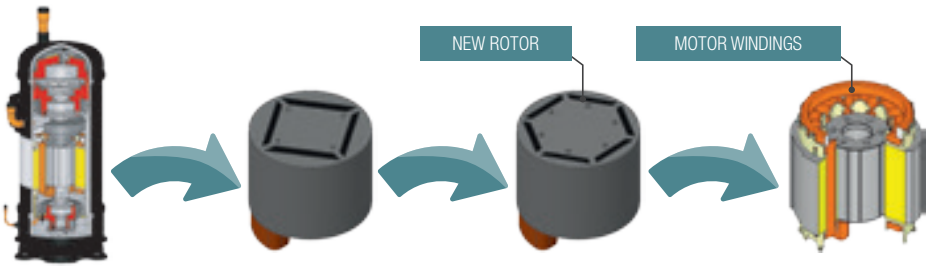
Improved performance: +25% when cooling and +14% when heating.

COP

The 17 models in the range all have a COP over 4! And the best COP on the market for this type of unit: 4.80 (5HP).

MORE ENVIRONMENTALLY FRIENDLY COMPRESSOR MOTOR

Thanks to the unique technology the new Hitachi multi-polar compressor motor allows the amount of rare elements (Neodymium) used to be drastically reduced whilst increasing efficiency (torque).



Rare earth elements are a group of 17 minerals used principally in high-tech products as well as products using new green technologies. Because of the environmental impact, exploitation of these rare elements is closely monitored around the world.

Wide range

RESPONDS EXACTLY TO YOUR NEEDS

Responds appropriately to your needs for air conditioning and induced heating by continuous regulating the temperature. An oversized unit is more likely to work 'all or nothing', reducing comfort and increasing consumption.

SET FREE FSXNH
(pages 182 to 185)
from **5** to **36HP**

- The only range to have a high performance 3-pipe in 5 and 6HP (Hitachi exclusive).

Outdoor Units

SET FREE FSXNH

2-PIPE AND 3-PIPE HI-EFFICIENCY

Set Free VRF Systems

		RAS 5FSXNHE	RAS 6FSXNHE	RAS 8FSXNHE	RAS 10FSXNHE	RAS 12FSXNHE
Outdoor Combination		-	-	-	-	-
Power supply		400V / 3Ph / 50Hz				
Nominal Cooling Capacity(1)	kW	14.0	16.0	22.4	28.0	33.5
Nominal Heating Capacity(2)	kW	16.0	18.0	25.0	31.5	37.5
Maximum Indoor Units(3)		10	13	17	21	26
Minimum - Maximum connected capacity		50% - 130%	50% - 130%	50% - 130%	50% - 130%	50% - 130%
Nominal Load Efficiency EER / COP(4)		4.49 / 4.80	4.56 / 4.58	4.66 / 4.67	4.22 / 4.44	3.93 / 4.11
Energy Class (Cool/Heat)		A / A	A / A	A / A	A / A	A / A
ESEER		8.4	8.53	8.72	8.12	7.35
Noise level (sound pressure)(5) (night mode)	dB(A)	55 (52)	56 (52)	58 (53)	59 (54)	61 (56)
Noise level (sound power)(6)	dB(A)	75	76	78	79	81
Airflow (Cooling / Heating)	m^3/h	8400	9300	9600	10500	11700
Dimensions (H x W x D)(4)	mm	1720 x 950 x 765	1720 x 950 x 765	1720 x 1210 x 765	1720 x 1210 x 765	1720 x 1210 x 765
Weight	kg	215	215	260	260	260
Piping diameter Liquid /(Gas x 2)	Inch	3/8 / (5/8/1/2)	3/8 / (3/4/5/8)	3/8 / (3/4/5/8)	3/8 / (7/8/3/4)	1/2 / (1 1/8/7/8)
	mm	9.52 / (15.88/12.70)	9.52 / (19.05/15.88)	9.52 / (19.05/15.88)	9.53 / (22.20/19.05)	12.70 / (28.60/22.2)
Total Piping Length / Height Difference	m	1000 / 90	1000 / 90	1000 / 90	1000 / 90	1000 / 90
Max Piping Length (outdoor to indoor)	m	165	165	165	165	165
Current Quantity of Refrigerant	kg	5.6	5.6	7.7	7.7	8.3
Chargeless / Additional Refrigerant Charge	m / g/m	calculate	calculate	calculate	calculate	calculate
Recommended fuse size	A	16	16	16	20	25
Starting current	A	8	8	8	8	8
Running current (cooling / heating)	A	5.0 / 5.3	5.6 / 6.2	7.7 / 8.6	10.3 / 10.8	13.7 / 14.5
Working Range (cooling / heating)	°C	-5ºC~43(db)ºC / -20ºC~15(wb)ºC				
Refrigerant / GWP		R410a / 1975	R410a / 1975	R410a / 1975	R410a / 1975	R410a / 1975
Compressor type		Scroll	Scroll	Scroll	Scroll	Scroll

		RAS 12FSXNHE-P	RAS 14FSXNHE	RAS 16FSXNHE	RAS 18FSXNHE	RAS 20FSXNHE
Outdoor Combination		6 + 8	6 + 8	8 + 8	8 + 10	8 + 12
Power supply		400V / 3Ph / 50Hz				
Nominal Cooling Capacity(1)	kW	33.5	40.0	45.0	50.0	56.0
Nominal Heating Capacity(2)	kW	37.5	45.0	50.0	56.0	63.0
Maximum Indoor Units(3)		26	30	34	39	43
Minimum - Maximum connected capacity		50% - 130%	50% - 130%	50% - 130%	50% - 130%	50% - 130%
Nominal Load Efficiency EER / COP(4)		4.70 / 4.73	4.58 / 4.59	4.65 / 4.67	4.48 / 4.68	4.19 / 4.31
Energy Class (Cool/Heat)		A / A	A / A	A / A	A / A	A / A
ESEER		8.79	8.57	8.7	8.38	7.84
Noise level (sound pressure)(5) (night mode)	dB(A)	61 (56)	61 (56)	61 (56)	62 (57)	63 (58)
Noise level (sound power)(6)	dB(A)	81	81	81	82	83
Airflow (Cooling / Heating)	m^3/h	18900	18900	19200	20100	9600 + 11700
Dimensions (H x W x D)(4)	mm	1720 x 2180 x 765	1720 x 2180 x 765	1720 x 2440 x 765	1720 x 2440 x 765	1720 x 2440 x 765
Weight	kg	475	475	520	520	520
Piping diameter Liquid /(Gas x 2)	Inch	1/2 / (1 1/8/7/8)	1/2 / (1 1/8/7/8)	1/2 / (1 1/8/7/8)	5/8 / (1 1/8/7/8)	5/8 / (1 1/8/7/8)
	mm	12.70 / (28.60/22.2)	12.70 / (28.60/22.2)	12.70 / (28.60/22.2)	15.88 / (28.60/22.2)	15.88 / (28.60/22.2)
Total Piping Length / Height Difference	m	1000 / 50	1000 / 50	1000 / 50	1000 / 50	1000 / 50
Max Piping Length (outdoor to indoor)	m	165	165	165	165	165
Current Quantity of Refrigerant	kg	13.3	13.3	15.4	15.5	16.0
Chargeless / Additional Refrigerant Charge	m / g/m	calculate	calculate	calculate	calculate	calculate
Recommended fuse size	A	16 & 16	16 & 16	16 & 16	16 & 20	16 & 25
Starting current	A	17	17	17	17	17
Running current (cooling / heating)	A	11.4 / 12.6	13.9 / 15.6	15.5 / 17.2	17.9 / 19.2	21.4 / 23.3
Working Range (cooling / heating)	°C	-5ºC~43(db)ºC / -20ºC~15(wb)ºC				
Refrigerant / GWP		R410a / 1975	R410a / 1975	R410a / 1975	R410a / 1975	R410a / 1975
Compressor type		Scroll	Scroll	Scroll	Scroll	Scroll

(1) Nominal Cooling: Internal temperature 27°C db (19°C wb) - Ambient 35°C
(2) Nominal Heating: Internal temperature 20°C - Ambient 7°C db (6°C wb)
(3) Maximum Indoor Units - restrictions apply see Technical Catalogue
(4) Nominal load efficiency (Cooling 35°C/27°C, Heating 7°C/20°C)
(5) Sound pressure level is measured at 1.0m from the unit front surface and 1.5m from floor level (Measured in an anechoic chamber).
(6) Sound power level is the A-weighted sound power level [dB(A)] measured at standard rated conditions for the "cooling" mode operation in accordance to EN12102.

CH BOXES

IT IS NECESSARY TO PURCHASE CHANGEOVER BOXES FOR 3-PIPE SYSTEMS. PLEASE REFER TO PAGE 186 FOR FURTHER DETAILS AND PRICES.

Outdoor Units

SET FREE FSXNH

2-PIPE AND 3-PIPE HI-EFFICIENCY

Set Free VRF Systems

		RAS 22FSXNHE	RAS 24FSXNHE	RAS 24FSXNHE-P	RAS 26FSXNHE	RAS 28FSXNHE
Outdoor Combination		10 + 12	12 + 12	8 + 8 + 10	8 + 8 + 10	8 + 8 + 12
Power supply		400V / 3Ph / 50Hz				
Nominal Cooling Capacity[1]	kW	61.5	69.0	69.0	73.0	80.0
Nominal Heating Capacity[2]	kW	69.0	77.5	77.5	82.5	90.0
Maximum Indoor Units[3]		47	52	52	56	60
Minimum - Maximum connected capacity		50% - 130%	50% - 130%	50% - 130%	50% - 130%	50% - 130%
Nominal Load Efficiency EER / COP[4]		4.11 / 4.35	3.91 / 4.09	4.64 / 4.64	4.53 / 4.66	4.30 / 4.39
Energy Class (Cool/Heat)		A / A	A / A	A / A	A / A	A / A
ESEER		7.69	7.32	8.68	8.48	8.05
Noise level (sound pressure)[5] (night mode)	dB(A)	64 (59)	64 (59)	64 (59)	64 (59)	64 (59)
Noise level (sound power)[6]	dB(A)	84	84	84	84	84
Airflow (Cooling / Heating)	m^3/h	22200	23400	29700	29700	30900
Dimensions (H x W x D)[4]	mm	1720 x 2440 x 765	1720 x 2440 x 765	1720 x 3670 x 765	1720 x 3670 x 765	1720 x 3670 x 765
Weight	kg	520	520	780	780	780
Piping diameter Liquid /(Gas x 2)	Inch	5/8 / (1 1/8/11/8)	5/8 / (1 1/8/11/8)	3/4 / (1 1/4/11/8)	3/4 / (1 1/4/11/8)	3/4 / (1 1/4/11/8)
	mm	15.88 / (28.60/28.60)	15.88 / (28.60/28.60)	19.05 / (31.75/28.60)	19.05 / (31.75/28.60)	19.05 / (31.75/28.60)
Total Piping Length / Height Difference	m	1000 / 50	1000 / 50	1000 / 50	1000 / 50	1000 / 50
Max Piping Length (outdoor to indoor)	m	165	165	165	165	165
Current Quantity of Refrigerant	kg	16.0	16.6	23.0	23.0	23.7
Chargeless / Additional Refrigerant Charge	m / g/m	calculate	calculate	calculate	calculate	calculate
Recommended fuse size	A	20 & 25	25 & 25	16 & 16 & 20	16 & 16 & 20	16 & 16 & 25
Starting current	A	17	17	25	25	25
Running current (cooling / heating)	A	24.0 / 25.3	28.3 / 30.1	23.9 / 26.8	25.8 / 28.4	29.8 / 32.8
Working Range (cooling / heating)	°C	-5ºC~43(db)ºC / -20ºC~15(wb)ºC				
Refrigerant / GWP		R410a / 1975	R410a / 1975	R410a / 1975	R410a / 1975	R410a / 1975
Compressor type		Scroll	Scroll	Scroll	Scroll	Scroll

		RAS 30FSXNHE	RAS 32FSXNHE	RAS 34FSXNHE	RAS 36FSXNHE
Outdoor Combination		8 + 10 + 12	8 + 12 + 12	10 + 12 + 12	12 + 12 + 12
Power supply		400V / 3Ph / 50Hz			
Nominal Cooling Capacity[1]	kW	85.0	90.0	95.0	100.0
Nominal Heating Capacity[2]	kW	95.0	100.0	106.0	112.0
Maximum Indoor Units[3]		64	64	64	64
Minimum - Maximum connected capacity		50% - 130%	50% - 130%	50% - 130%	50% - 130%
Nominal Load Efficiency EER / COP[4]		4.24 / 4.42	4.09 / 4.24	4.05 / 4.27	3.93 / 4.11
Energy Class (Cool/Heat)		A / A	A / A	A / A	A / A
ESEER		7.93	7.65	7.58	7.35
Noise level (sound pressure)[5] (night mode)	dB(A)	65 (60)	65 (60)	66 (61)	66 (61)
Noise level (sound power)[6]	dB(A)	85	85	86	86
Airflow (Cooling / Heating)	m^3/h	31800	33000	33900	35100
Dimensions (H x W x D)[4]	mm	1720 x 3670 x 765	1720 x 3670 x 765	1720 x 3670 x 765	1720 x 3670 x 765
Weight	kg	780	780	780	780
Piping diameter Liquid /(Gas x 2)	Inch	3/4 / (1 1/4/11/8)	3/4 / (1 1/4/11/8)	3/4 / (1 1/4/11/8)	3/4 / (1 1/2/11/8)
	mm	19.05 / (31.75/28.60)	19.05 / (31.75/28.60)	19.05 / (31.75/28.60)	19.05 / (38.10/28.60)
Total Piping Length / Height Difference	m	1000 / 50	1000 / 50	1000 / 50	1000 / 50
Max Piping Length (outdoor to indoor)	m	165	165	165	165
Current Quantity of Refrigerant	kg	23.7	24.3	24.3	24.9
Chargeless / Additional Refrigerant Charge	m / g/m	calculate	calculate	calculate	calculate
Recommended fuse size	A	16 & 20 & 25	16 & 25 & 25	20 & 25 & 25	25 & 25 & 25
Starting current	A	25	25	25	25
Running current (cooling / heating)	A	32.2 / 34.3	35.3 / 37.6	37.7 / 39.5	40.8 / 43.2
Working Range (cooling / heating)	°C	-5ºC~43(db)ºC / -20ºC~15(wb)ºC			
Refrigerant / GWP		R410a / 1975	R410a / 1975	R410a / 1975	R410a / 1975
Compressor type		Scroll	Scroll	Scroll	Scroll

(1) Nominal Cooling: Internal temperature 27°C db (19°C wb) - Ambient 35°C
(2) Nominal Heating: Internal temperature 20°C - Ambient 7°C db (6°C wb)
(3) Maximum Indoor Units - restrictions apply see Technical Catalogue
(4) Nominal load efficiency (Cooling 35°C/27°C, Heating 7°C/20°C)
(5) Sound pressure level is measured at 1.0m from the unit front surface and 1.5m from floor level (Measured in an anechoic chamber).
(6) Sound power level is the A-weighted sound power level [dB(A)] measured at standard rated conditions for the "cooling" mode operation in accordance to EN12102.

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