

# Hitachi Air Conditioning

Engineered for tomorrow.

SYSTEM  
FREE



Utopia  
Split Systems

## Utopia IVX Centrifugal

Hitachi's range of Utopia IVX Centrifugal units can be installed indoors with field supplied ductwork – ideal for situations where installations have to be hidden or where circumstances do not allow for the use of traditional styled outdoor units.



### Features and Benefits

- ✔ Capacities from 12.5kW to 25kW
- ✔ R410A refrigerant
- ✔ Installed indoors with field-supplied ductwork – ideal where external installation space is limited or planning restrictions apply
- ✔ Improved connectivity – up to 4 indoors per outdoor unit minimising pipework required
- ✔ Zone-by-zone individual control
- ✔ Simple Wiring -Only one connection is required for the wiring between the indoor unit and outdoor unit and the total wiring length is reduced. Easy wiring connection to the central controllers
- ✔ Low temperature operation as standard - Wide working range including Outdoor Unit Fan Control in cooling mode for operating at low ambient temperature as standard (-5°C to 43°C cooling)
- ✔ Flexible inlet air and outlet air option for easy installation - Four different configurations for Inlet and Outlet Air are available. Side panels and grilles could be changed in the field depending on each installation's needs
- ✔ Compatibility - Compatible with all Hitachi System Free indoor units.

Outdoor Unit		RASC 5HVRNM1E	RASC 10HRNM1E
Power supply (1Ø/3Ø)		230V / 1Ph / 50Hz	400V / 3Ph / 50Hz
Nominal Cooling Capacity (min - max)	kW	12.5 (4.7 - 14.0)	23.0 (10.3 - 25.0)
Nominal Heating Capacity (min - max)	kW	14.0 (5.0 - 16.0)	25.0 (9.4 - 26.0)
UK Cooling Capacity (sensible) <sup>(3)</sup>	kW	12.6 (9.3)	22.7 (16.3)
Minimum - Maximum Indoor Units		1 - 3	1 - 4
Nominal Load Efficiency EER / COP <sup>(2)</sup>		2.77 / 3.15	2.88 / 3.09
Energy Class (Cool/Heat)		D / D	C / D
Noise level cooling (sound pressure) (night mode)	dB(A)	55 (51)	56 (52)
Noise level heating (sound pressure)	dB(A)	56	57
Noise level (sound power) <sup>(1)</sup>	dB(A)	71	75
Air flow (Cooling / Heating)	m <sup>3</sup> /h	3900	6300
Dimensions (W x D x H)	mm	1250 x 1300 x 430	1850 x 985 x 640
Weight	Kg	176	269
Piping diameter (Liquid / Gas)	Inch	3/8 / 5/8	1/2 / 11/8
	mm	9.53 / 15.88	12.07 / 28.61
Refrigerant / GWP		R410a / 1975	R410a / 1975
Compressor type		Scroll	Scroll

<sup>(1)</sup> 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

<sup>(2)</sup> Nominal load efficiency (Cooling 35°C/27°C, Heating 7°C/20°C)

<sup>(3)</sup> Data specified includes connection to RCI-FSN3E indoor unit

## BMS Interface Controls

### Optional Individual Controls

- ✔ PC-LH3A - Wireless remote controller
- ✔ PC-LH3B - Wireless remote controller
- ✔ PC-ARH - Simple wired remote controller
- ✔ PC-ART - Standard wired remote controller (inc. 7-day timer)
- ✔ PC-ARF - Advanced wired LED controller (inc. 7-day timer)

MODBUS



LONWORKS



PC-LH3A



PC-LH3B



PC-ARH



PC-ART



PC-ARF

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RASC-H(V)RNM1E

SYSTEM FREE



## Utopia IX Centrifugal – Multi Combinations

Utopia IX Centrifugal (5 ~ 10HP)									
Model	1 Unit	2 Units				3 Units			
		Header Piping		Line Branch Piping		Header Piping		Line Branch Piping	
	Combination	Combination	Header Joint	Combination	Joint(s)	Combination	Joint(s)	Combination	Joint(s)
RASC 5HVRNM1E	5	2.5/2.5 3.0/(2.3) 4.0/1.5	TE-56N1	2.5/2.5 3.0/(2.3) 4.0/1.5	E-102SN2	(1.8)/(1.8)/1.5	TRE-46N1	(1.8)/(1.8)/1.5	E-162SN2 + E-102SN2
RASC 10HRNM1E	10	5.0/5.0 6.0/4.0 8.0/2.0	TE-10N <sup>(*)</sup>	5.0/5.0 6.0/4.0 8.0/2.0	E-162SN2	3.0/3.0/3.0 4.0/3.0/3.0 6.0/2.0/2.0	TRE-812N1	3.0/3.0/3.0 4.0/3.0/3.0 6.0/2.0/2.0	E-162SN2 + E-102SN2

Utopia IX Centrifugal (5 ~ 10HP)						
Model	4 Units					
	Header Piping		Line Branch Piping			
	Combination	Joint(s)	Combination	Joint(s)		
RASC 5HVRNM1E	Not Possible	Not Possible	Not Possible	Not Possible		
RASC 10HRNM1E	2.5/2.5/2.5/2.5 3.0/2.5/2.5/2.5 3.0/2.5/2.5/2.0 3.0/3.0/(2.3)/(2.3) 3.0/3.0/(2.3)/2.0	3.0/3.0/2.5/2.0 3.0/3.0/2.0/2.0 3.0/3.0/(2.3)/(2.3) 3.0/2.5/2.5/(2.3) 3.0/2.5/2.5/(2.3)	QE-812N1 Main Joint: TE-10N Second Joints: Cap. after branch ≤ 1.5HP: TE-03N1 Cap after branch ≥ 2.3HP: TE-03N1	2.5/2.5/2.5/2.5 3.0/2.5/2.5/2.5 3.0/2.5/2.5/2.0 3.0/3.0/(2.3)/(2.3) 3.0/3.0/(2.3)/2.0	3.0/3.0/2.5/2.0 3.0/3.0/2.0/2.0 3.0/3.0/(2.3)/(2.3) 3.0/2.5/2.5/(2.3) 3.0/2.5/2.5/(2.3)	2 x E-162SN2 + E-102SN2

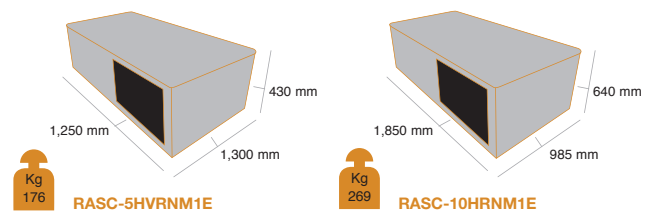
<sup>(\*)</sup> In case of (8.0/2.0 HP) combination use the E-102SN2.

<sup>(1)</sup> Adjusted capacity: In the 2.0 and 2.5HP RPI, RCI, RCD, RPK, RPC units, the capacity can be adjusted to 1.8 and 2.3HP respectively by configuring the DSW3.

### Piping lengths

Maximum length of the piping		5.0	10.0
Length	Actual length of the pipe	70	50
	Equivalent pipe length	90	70
Height	Outdoor unit higher than indoor unit	30	30
	Indoor unit higher than outdoor unit	20	20
	Height difference between indoor units	3	3

### Weights and measurements



Model	Liquid	6.35 (1/4)				9.53 (3/8)				12.7 (1/2)				15.88 (5/8)		
	Gas	9.53 (3/8)	12.7 (1/2)	12.7 (1/2)	15.88 (5/8)	19.05 (3/4)	22.2 (7/8)	25.4 (1)	15.88 (5/8)	19.05 (3/4)	22.2 (7/8)	25.4 (1)	28.6 (1 1/8)	22.2 (1)	25.4 (1)	28.6 (1 1/8)
RASC 5HVRNM1E		5 <sup>(2)</sup>	5 <sup>(2)</sup>	35 <sup>(1)</sup>	70	-	-	-	25 <sup>(3)</sup>	-	-	-	-	-	-	-
RASC 10HRNM1E		-	-	-	-	-	-	-	-	-	25 <sup>(1)</sup>	50	25	25 <sup>(1)(3)</sup>	25 <sup>(3)</sup>	25 <sup>(3)</sup>

<sup>(1)</sup> If the gas pipe is smaller, the cooling performance drops, and the operating range is reduced because the pressure loss in the gas pipe increases.

<sup>(2)</sup> Reducing liquid pipe size will narrow operation range due to the relation with expansion valve capacity. In these cases, set the DSW2-1 to ON position.

<sup>(3)</sup> If the liquid pipe is larger refrigerant has to be added.

Standard Specification