


# Utopia Prime (Twin, Triple, Quad) R410A or R32



# Benefits Utopia Prime

## Range overview

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% for the same installation with R410A. The R32 reduces its environmental impact by 75% compared to the R410a: low GWP and less charge 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.

Outdoor units	Rated cooling capacity (Hp)	Technology	Supply voltage	Connection rate range	Max. number of connected indoor units	Min. power of connected indoor units	Max. pipe length	Max. level difference between outdoor unit and indoor unit (outdoor unit above / below)	Max. level difference between indoor units	Operating ranges
	3 4 5 6									
 Utopia Prime (R32 3-6 Hp) (R410A 4-6 Hp)	• • • •	Mono-split TWIN TRIPLE QUAD	400V / 3 / 50Hz and 230V / 1 / 50Hz (depending on the model)	90 - 115% according to the usage	4	0.8 Hp (2 kW cooling)	From 50 to 75 m	30 m / 20 m	3 m	Heating -20° ~ 18° WB cooling -5° (-15° optional) ~46° DB

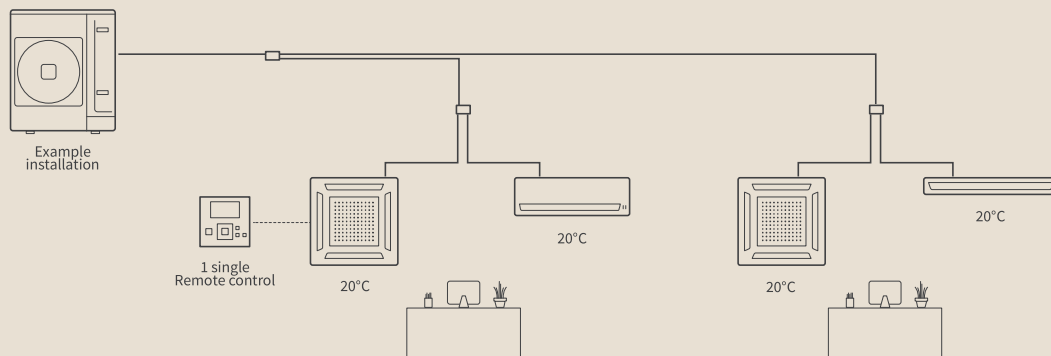
## UNIQUE! Infinite number of combinations available for R410A or R32

At 4Hp, up to 4 indoor units per outdoor unit: Option to mix unit types and their capacities on the same installation



Indoor units and remote controls common with the VRF outdoor systems\*  
 (size 0.8Hp Mini-compatible; incompatible with console units)  
\*Refer to the section TWIN-VRF indoor units to discover the entire range

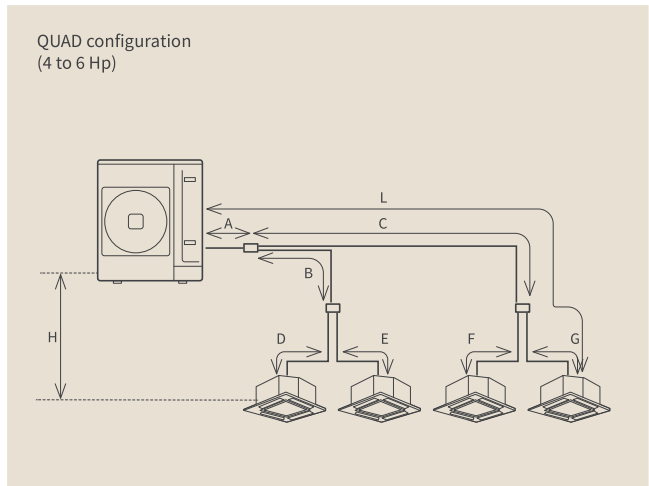
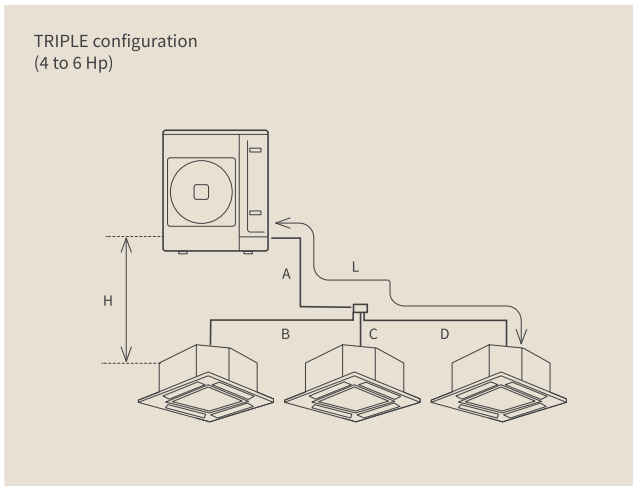
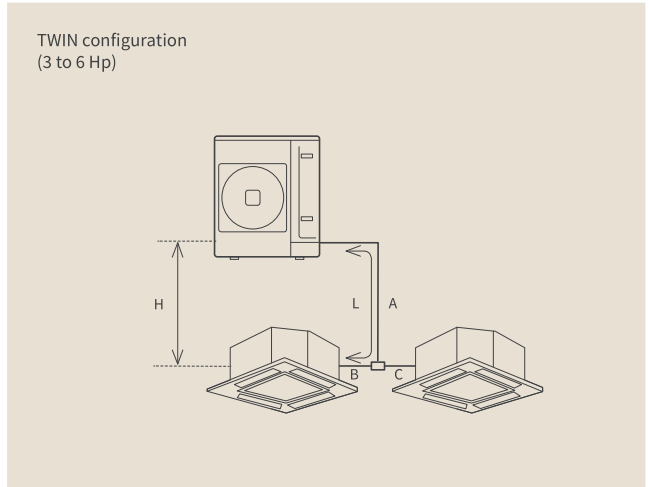
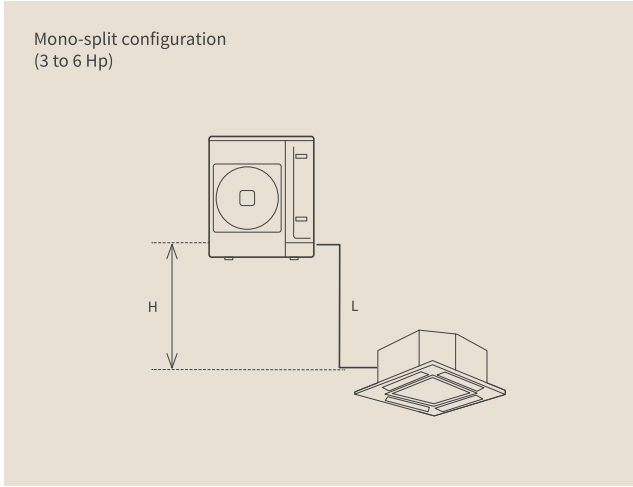
## UNIQUE! Renewed master-slave control for more energy savings



Outdoor unit Utopia Prime	Cassette unit	Wall unit	Cassette unit	Ceiling unit
<b>Startup if</b> All units are in Thermo ON mode	Thermo ON	Thermo ON	Thermo ON	Thermo ON
<b>Stop if</b> At least one unit is in Thermo OFF mode	Thermo ON	Thermo OFF	Thermo ON	Thermo ON

# Installation Guide

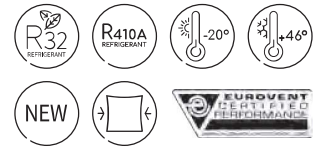
## Utopia Prime



Outdoor units		3 Hp	4 Hp	5 Hp	6 Hp
Max. length between outdoor unit and the furthest indoor unit	Actual length (L)	50		75	
	Equivalent length (EL)	70		95	
Total length of the pipe	2 indoor units (A+B+C)	50		85	
	3 indoor units (A+B+C+D)	-		85	
	4 indoor units (A+B+C+D+E+F+G)	-		85	
Max. length after first branch	2 indoor units (B, C)	15		15	
	2 and 3 indoor units (B, C, D)	-		15	
	4 indoor units (B+D, B+E, C+F, C+G)	-		15	
Max. level difference of outdoor unit to indoor units (H) (outdoor unit above/below)			30 / 20		
Max. level difference of indoor units to indoor units			3		
Max. level difference of multikit to indoor units / Multikit-Multikit			3		
Max. imbalance between branches	Example: (B-C) (2 and 3 indoor units) (B-D) (3 indoor units)(C-D) (3 indoor units) (C+G)-(C+F) (4 indoor units) (B+E)-(B+D) (4 indoor units) (C+G)-(B+E) (4 indoor units) (C+G)-(B+D) (4 indoor units) (C+F)-(B+E) (4 indoor units) (C+F)-(B+D) (4 indoor units)		< 8	< 10	

# Utopia Prime

A TWIN to QUAD solution with a choice of R410A or R32 to provide heating solutions and air-conditioning for large spaces.



**EXCLUSIVITY  
HITACHI**

**NEW**

## Twin and VRF shared indoor unit groups

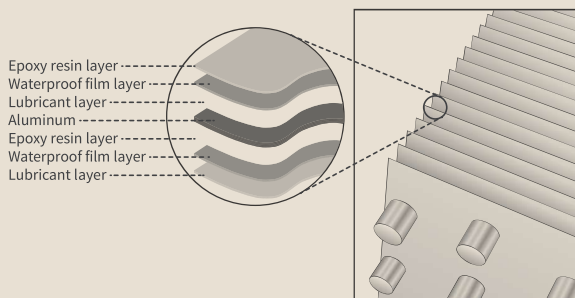
The UTOPIA PRIME range comes with all the advantages of VRF indoor units, so you can make use of a wide range of combinations. Different types of indoor units can be mixed on the same installation.

## Flexible installation

UNIQUE! The new range of 4 to 6Hp can come in TWIN, TRIPLE, or QUAD configurations for R32 and R410A and 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; console units not compatible).

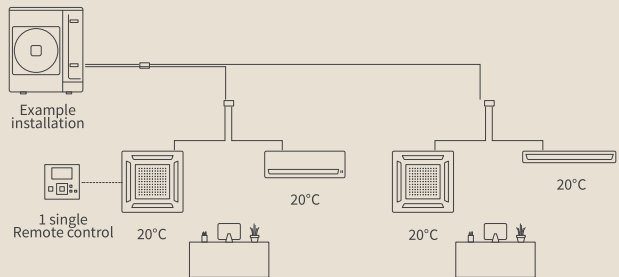
## Advanced anti-corrosion treatment

With its triple coating, Utopia Prime offers the best protection on the market for use in tough environments.



## Reinvented master-slave control for more energy savings

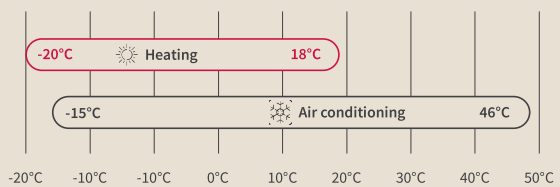
The outdoor unit will start up only if all 4 indoor units need cooling or heating. The shutdown of the group is triggered as soon as one of the indoor units no longer requires heat/cooling, which promises real energy savings.



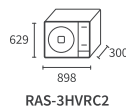
## Large operating ranges

Utopia Prime will keep working in extreme temperatures: down 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.

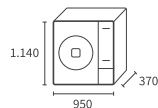
Outside temperature operating range



## Outdoor units



RAS-3HVRC2



RAS-4H(V)RC2E  
RAS-5H(V)RC2E  
RAS-6H(V)RC2E  
RAS-4H(V)NC2E  
RAS-5H(V)NC2E  
RAS-6H(V)NC2E

R32 REFRIGERANT						R410A REFRIGERANT		
		RAS-3HVRC2	RAS-4H(V)RC2E	RAS-5H(V)RC2E	RAS-6H(V)RC2E	RAS-4H(V)NC2E	RAS-5H(V)NC2E	RAS-6H(V)NC2E
Performance, cooling	Unit	3Hp	4Hp	5Hp	6Hp	4Hp	5Hp	6Hp
Nominal cooling capacity	kW	7.1	10.00	11.90	14.00	10.00	11.90	14.00
UK total cooling capacity	kW	7.41	10.30	12.70	13.60	10.30	12.70	13.60
Rated power input cooling	kW	1.67	2.56	3.38	4.32	2.86	3.78	4.91
EER	-	3.93	3.90	3.52	3.24	3.50	3.15	2.85
SEER (average climate)	-	7.33	6.93(V) - 6.62	6.60(V) - 6.37	7.35(V) - 7.25	6.69(V) - 6.42	6.35(V) - 6.13	7.01(V) - 6.92
Energy class (cooling)	-	A++			-	A++		
Working range in Cooling	-	-15°C / +46°C (DB)			-	-15°C / +46°C (DB)		
<b>Performance, heating</b>								
Nominal heating capacity	kW	8.00	11.20	14.00	16.00	11.20	14.00	16.00
Rated power input heating	kW	1.94	2.65	3.52	3.64	2.60	3.52	3.64
COP	-	4.11	4.23	3.98	4.40	4.30	3.98	4.40
SCOP (average climate)	-	4.20	4.36(V) - 4.36	4.26(V) - 4.25	4.73(V) - 4.73	4.40(V) - 4.40	4.24(V) - 4.23	4.71(V) - 4.73
Energy class (heating)	-	A+			-	A+		
Working range in Heating	-	-20°C / 18°C (WB)			-	-20°C / 18°C (WB)		
<b>Technical features</b>								
Airflow (cooling)	m³/h	2700	4800	4800	4800	4800	4800	4800
Sound pressure in cooling mode (nightmode) <sup>(1)</sup>	dB(A)	54 (48)	54 (51)	54 (51)	56 (51)	52 (50)	54 (53)	55 (53)
Sound power	dB(A)	69	70	70	72	68	69	71
Net weight	kg	48	84		84	84		
Dimensions (H x L x D)	mm	629 x 799 x 300		1140 x 950 x 370		1140 x 950 x 370		
Min. power of indoor unit	Hp	0.8	0.8		0.8	0.8		
Number of connectible units (min - max)	-	1 - 2	1 - 4		1 - 4	1 - 4		
Capacity ratio (min - max)	%	90% - 100%	90% - 115%		90% - 115%	90% - 115%		
Compressor	-	Inverter DC rotary unit						
<b>Refrigeration characteristics</b>								
Max. length / Additional charge	m/g/m	50 / 45	75 / 45		75 / 45	75 / 60		
Initial refrigerant charge	kg	1.7	3.0		3.0	3.2		
Pre-charged for	m	20	30		30	30		
Min. length	m	5	5		5	5		
Max. level difference (outdoor unit above / below)	m	30 / 20	30 / 20		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)		9.52 (3/8) - 15.88 (5/8)		
Refrigerant	-	R32		R32		R410A		
<b>Electrical features</b>								
Power supply	-	1~ 230V 50Hz	1~ 230V 50Hz or 3N~ 400V 50Hz		1~ 230V 50Hz or 3N~ 400V 50Hz	1~ 230V 50Hz or 3N~ 400V 50Hz		
Max. current	A	15.8	22.5 or 15		22.5 or 15	22.5 or 15		
Recommended fuse size	A	20	25 or 20		25 or 20	25 or 20		
Cable width (EN 60 335-1)*	mm²	3 x 4.00	3 x 6.00 or 5 x 4.00		3 x 6.00 or 5 x 4.00	3 x 6.00 or 5 x 4.00		
Indoor/outdoor connection (shielded)*	mm²	2 x 0.75	2 x 0.75		2 x 0.75	2 x 0.75		

(V) Single-phase version.

\* 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.

<sup>(1)</sup> Sound levels (pressure) are measured in an anechoic chamber at 1.50 m from the floor level and 1 m from, unit's front surface.

## Controls (see the tab VRF TWIN controls)

### Individual controls



PC-ARFP1E (full wired)



PC-ARH1E (simple wired)



PC-AWR (Infrared)



PSC-A32MN (touch)



PSC-A64GT (touch)



Aircloud Pro



CSNET Lite (web)



CSNET Screenless (web)



CSNET Manager 2T10 (web and touch)  
CSNET Manager 2T15 (web and touch)

## Communication protocol



MODBUS



BACNET



KNX



LONWORKS

## Compatible accessories



Condensation drainage kit  
DDB-26 (models 4 / 5 / 6 Hp)  
DDB-12L (model 3 Hp)



Remote sensor  
THM-R2AE



PCC-1A  
connectors