CENTRAL DUCTED HEAT PUMP

Heating -13°F~86°F
Cooling 50°F~129°F

SEER2 21.0
HSPF2 11.0

Intelligent
Defrost

Lower Nosie
57dB(A)

Multiple
Protections

PRODUCT INTRODUCTION

The Timing is Right for Heat Pump Integration

Wide Temperature Operation

Heating temperature range: -13~86°F;
Cooling temperature range: 50~129°F;
SEER up to 21.0;
COP of heating up to 2.4@5°F;

Rigorous Testing and Certification

Samyou independently developed variable frequency ducted units that have passed rigorous **ETL** and **AHRI** testing, demonstrating excellent performance and providing customers with one of the better choices.

24K(2-TON)/36K(3-TON)

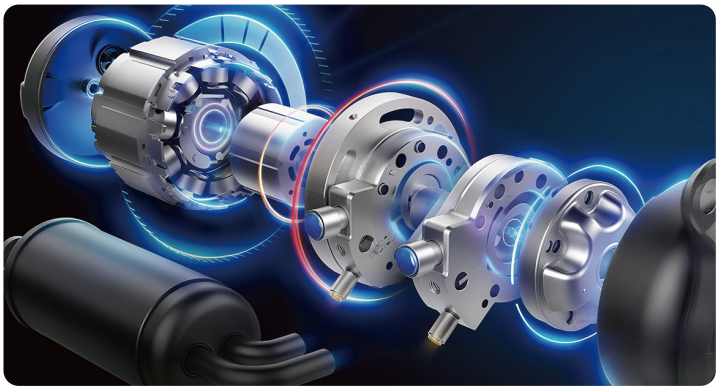
24K(2-TON)/36K(3-TON)

48K(4-TON)/60K(5-TON)

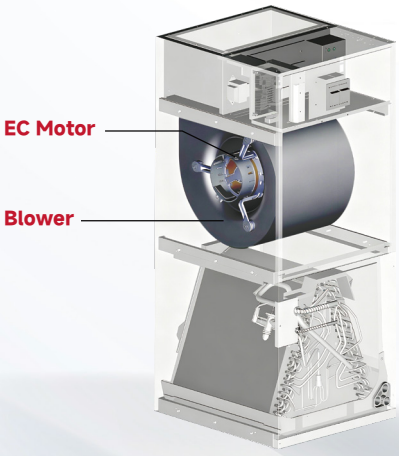
48K(4-TON)/60K(5-TON)

PRODUCT BENEFITS

DC Inverter Compressor Combined With Intelligent VFD Technology



All models adopt latest DC inverter compressor and SAMYOU self-developed VFD technology, ensuring the compressors are working more reliable, at higher efficiency, more longer service life, less vibration, less abrasion and lower noise level. The compressor speed can be adjusted accordingly as cooling/heating capacity needs, which saves much energy.



High Static Pressure Design

High Static Pressure Design (1.0 in,wg) allows longer ductwork.

The indoor unit utilizes a high-efficiency EC motor and centrifugal blower for high-speed operation. It provides higher external static pressure (0.8 in.wg), enabling longer duct connections or servicing more rooms.

It offers better comfort and energy efficiency with the two-stages auto airflow.

More Convenient And Userfriendly Installation For Various Scenarios

Side discharge type condensing unit with less footprint, no worry about the installation space and mounting ways.

The indoor unit supports 115Vac-1ph-60Hz or 208/230Vac-1Ph-60Hz power supply (Onsite selection and wiring);

Extended corrugated tubing makes piping connections easier, with no installation challenges.(Optional)

Compatiable With Hybrid Power Solution (Optional)

The product can use Samyou's proprietary PVGO solar management system, enabling the unit to be direct-driven by solar power. This can significantly reduce energy consumption, achieving energy savings and emission reduction, as well as saving on electricity costs.

The product features an innovative design that supports hybrid power supply technology 220Vac & 370Vdc (200~420Vdc)

The auxiliary power supply can achieve 370Vdc through the optional PVGo product and PV Panels, significantly reducing electricity costs for users.

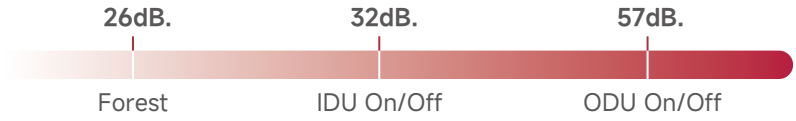
Lower Noise Level

Brushless DC Motor

Significantly reduces working noise

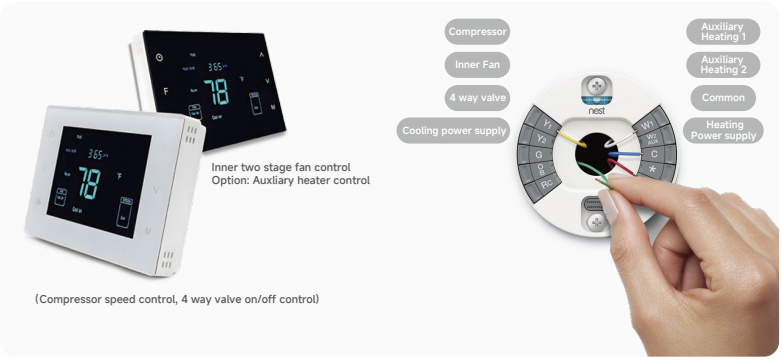
By adopting DC inverter technology, DC motor fan and optimized blades, and noise reduction treatment on compressors, enable the unit has lower noise level, 57dB(A).
Adjust the fan speed based on working conditions to ensure more stable unit operation.

***Note: the noise level measured based on 24K outdoor unit@3 feet.**



Universal Control

Compatible with the third parties 24V universal controller or thermostat in the market.

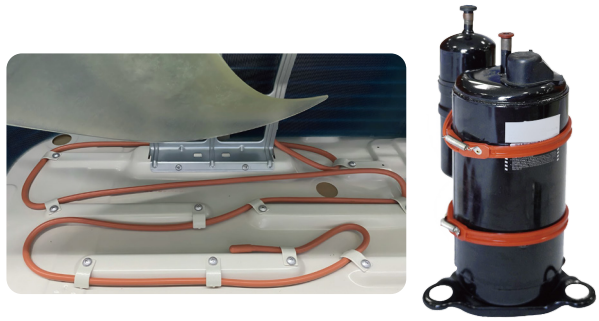


Thermostat Internal Signal Connection(for reference)

Samyou's Outdoor unit is compatible with AHRI certified third parties indoor unit.
***Note: Before matching the controller, please ensure that the signal connectors are correct.**

Reliable Operation

Dual Electric Heating Belts Assembled for Reliable Heating Operation



Crankcase Heater & Chassis Heater

The outdoor unit is equipped with dual electric heating belts to protect the compressor from liquid shock during start-up and to improve defrost efficiency in cold weather.

LOW-GWP Refrigerant And Safer Applications

The product adopts the more environmentally friendly refrigerant R32 with a lower GWP value (GWP=675, <700), meeting the global demand for the evolution of eco-friendly refrigerants.
This transition is based on the provisions of the Montreal Protocol and its Kigali Amendment, which mandate the phased reduction of high-GWP refrigerants, as well as compliance with environmental regulations worldwide that require low-GWP refrigerants.

The product features high safety operation characteristics. It can provides multiple protection features to ensure normal operation.

Efficiency					
Operating Mode		24K	36K	48K	60K
Cooling	SEER2	21.0	20.2	20.0	19.2
	EER2	12.0	11.5	11.7	11.0
Heating	HSPF2	11.0	10.2	11.0	10.6
	COP	13.99	13.17	13.99	13.65

Performance

Heating Performance	24K	36K	48K	60K
Outdoor Unit Model	VUH24-VA6BA(O)	VUH36-VA6BA(O)	VUH48-VA6BA(O)	VUH60-VA6BA(O)
Indoor Unit Model	VUH24-VA6BA(I)	VUH36-VA6BA(I)	VUH48-VA6BA(I)	VUH60-VA6BA(I)
@47°F Min/Max Heating (Btu/h)	25,000	35,000	50,000	56,000
Min/Max. Heating Capacity (Btu/h)	7600-26800	11000-37000	14000-52000	15000-60000
Heating Rated Capacity (17° F) (Btu/h)	24000	26900	46000	47500
Capacity Ratio (17/47° F)	96.0%	78.7%	92.0%	86.4%
Heating Rated Capacity (5° F) (Btu/h)	22600	26000	43500	45500
Capacity Ratio (5/47° F)	90.4%	76.0%	87.0%	82.7%
COP2 at 5° F (W/W)	2.1	2.1	2.1	2.2

***Note:** Rated Heating Conditions: Indoor: 70°F DB/60°F WB, Outdoor: 47°F DB/43°F WB;
Rated Heating Conditions: Indoor: 70°F DB/60°F WB, Outdoor: 17°F DB/15°F WB; Heating Conditions, Compressor Indoor operating at Max. Frequency: 70°F DB/60°F WB, Outdoor: 5°F DB/5°F WB.

Cooling Performance	24K	36K	48K	60K
Outdoor Unit Model	VUH24-VA6BA(O)	VUH36-VA6BA(O)	VUH48-VA6BA(O)	VUH60-VA6BA(O)
Indoor Unit Model	VUH24-VA6BA(I)	VUH36-VA6BA(I)	VUH48-VA6BA(I)	VUH60-VA6BA(I)
Rated Cooling Capacity (Btu/h)	24,000	34,200	48,000	54,000
Min/Max Cooling Capacity (Btu/h)	7,500~26,000	10,600~36,400	13,500~50,000	15,000~56,000
Standard Operating Range (°F)	50~129°F			

***Note:** Rated Cooling Conditions: Indoor: 80°F DB/67°F WB and Outdoor: 95°F DB/75°F WB;

Specification

Specification Item (IDU)	24K	36K	48K	60K
Indoor Unit Model	VUH24-VA6BA(I)	VUH36-VA6BA(I)	VUH48-VA6BA(I)	VUH60-VA6BA(I)
Air Flow (CFM)	820	1,150	1,580	2,000
Noise Level (dB(A))	34-42	38-48	41-53	46-57
Dimension (mm)	503 × 562 × 1162		563 × 622 × 1352	
Dimension (inch)	19.8 × 22.13 × 45.75		22.17 × 24.49 × 53.23	
Package Dimension (mm)	620 × 682 × 1308		676 × 742 × 1512	
Package Dimension (inch)	24.4 × 26.85 × 51.5		26.62 × 29.22 × 59.53	
Net Weight (kg/lbs)	64 / 141		80 / 176	
Gross Weight (kg/lbs)	74 / 163		90 / 198	

Specification Item	24K	36K	48K	60K
Outdoor Unit Model	VUH24-VA6BA(O)	VUH36-VA6BA(O)	VUH48-VA6BA(O)	VUH60-VA6BA(O)
Compressor Type	Inverter Rotary			
Refrigerant	R32			
Factory Charge (oz/kg)	91.7 / 2.6		123.5 / 3.5	
Refrigerant Oil	RB68GX or equivalent			
Air Flow (Max) (CFM)	2,650		2,790	
Noise Level (dB(A))	57		59	
Dimension (mm)	990 × 426 × 790		1024 × 396 × 1002	
Dimension (inch)	38.98 × 16.77 × 31.1		40.31 × 15.59 × 39.45	
Package Dimension (mm)	1057 × 482 × 855		1101 × 448 × 1148	
Package Dimension (inch)	41.61 × 18.98 × 33.66		43.35 × 17.64 × 45.2	
Net Weight (kg/lbs)	60 / 132		95 / 209	
Gross Weight (kg/lbs)	65 / 143		105 / 231	

Optional Parts

S.N	Optional	Optional Parts	Description
1	Air filter	Merv 7 air filter	Filter dust and impurities
2	Electric heater	5kW	Air handler: 24/36/48/60K
		7.5kW	Air handler: 24/36/48/60K
		10kW	Air handler: 24/36/48/60K
		15kW	Air handler: 36/48/60K
3	Thermostat	24Vac universal thermostat	

Electrical Data

Electrical(IDU)	24K	36K	48K	60K
Indoor Unit Model	VUH24-VA6BA(I)	VUH36-VA6BA(I)	VUH48-VA6BA(I)	VUH60-VA6BA(I)
Power Supply (Vac/Ph/Hz)	115/208/230, 1Ph, 60Hz			
Unit MCA (A)	6.1/3.9/3.6	8.6/5.4/5.1	11.6/7.4/6.9	11.6/7.4/6.9
Weak Current Connection Wiring (AWG)	AWG18			
MOCP @115V (A)	6	10	25	25
MOCP @230V (A)	6	6	15	15
Breaker Size @115V (A)	6	10	20	20
Breaker Size @230V (A)	6	6	10	10
Fan Motor FLA (A)	4.4/2.6/2.4	6.4/3.8/3.6	11.6/7.4/6.9	11.6/7.4/6.9
Fan Motor Output (W)	224	373	560	560

***Note:** MCA: Min. circuit amps, A; MOCP: Max. Over-current protection amps, A; RLA: Rated load amps, A; FLA: Full load amps.

Electrical(ODU)	24K	36K	48K	60K
Outdoor Unit Model	VUH24-VA6BA(O)	VUH36-VA6BA(O)	VUH48-VA6BA(O)	VUH60-VA6BA(O)
Power Supply (Vac/Ph/Hz)	208/230V, 1Ph, 60Hz			
Unit MCA (A)	12	19	26	28
Weak Current Connection Wiring (AWG)	AWG18			
Unit MOCP (A)	20	35	44	50
Suggest Breaker Size (A)	20	25	40	50
Compressor RLA (A)	8.74	15.44	18.76	20.46
Fan Motor FLA (A)	1.8			
Fan Motor Output (W)	120			
Rated Power Input @ Cooling (W)	1,950	3,100	4,300	4,800
Power Input Range @ Cooling (W)	350~2,200	440~3,350	580~4,680	720~5,150
Rated Power Input @ Heating (W)	1,900	2,700	3,460	3,800
Power Input Range @ Heating (W)	320~2,140	430~3,000	550~3,750	800~4,100

***Note:** MCA: Min. circuit amps, A; MOCP: Max. Over-current protection amps, A; RLA: Rated load amps, A; FLA: Full load amps.

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