VMTEC

AIR TO WATER HEAT PUMP

Hi-Therma Split Series





The Hi-Therma Split Series offers a stylish heating and cooling solution that was awarded the 2022 Reddot Award for its minimalist yet sophisticated design. It has clean lines and a classic white and gray color scheme that complements any home decor style, achieving the perfect fusion of form and function.

NEW

- Reddot award design
- Max 65℃ outlet water temperature
- 100% heating capacity A-7℃/W35℃
- One-click configuration
- Compatible with colorful touch controller

High Efficiency and Excellent Performance

- R32 Eco-friendly refrigerant
- A+++ energy efficiency
- Interlock with 3rd party heat source
- -25℃ stable operation
- 75℃ domestic hot water
- Smart grid interlock and PV enabled
- High-efficiency DC pump

User Convenience

- Two separate temp. cycles
- Up to 7 rooms with independent temp. control
- Low noise operation
- Night shift mode operation
- Centralized control and individual control
- Screed drying
- Swimming pool heating
- Visual display of energy consumption

High Intelligence

- Smart App control
- Intuitive interface of controllers
- Smart hint

Easy Installation and Maintenance

- Hi-Checker
- Water pressure and water flow monitoring
- Long piping design

Reddot Award Casing Design

The new 2022 Reddot award-winning outdoor unit is recognized for its exceptional design, featuring a classic gray color and a screw-less front panel that maintains its appearance over time, while also preventing unsightly rust stains caused by long-term exposure to various weather conditions. The compact machine size also adapts to a wide variety of space layouts.

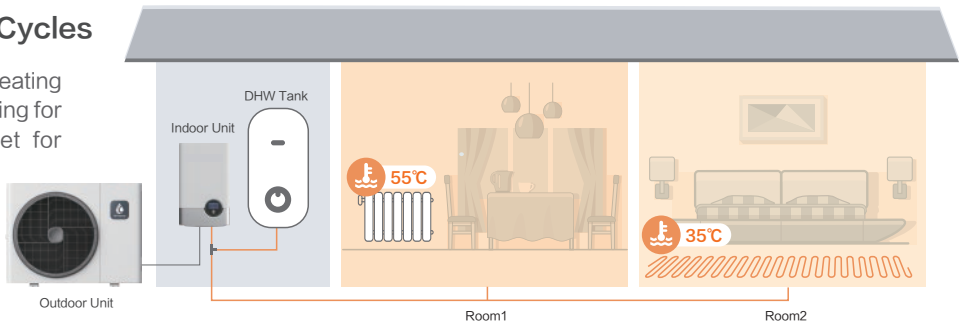


Unit: mm

User Convenience

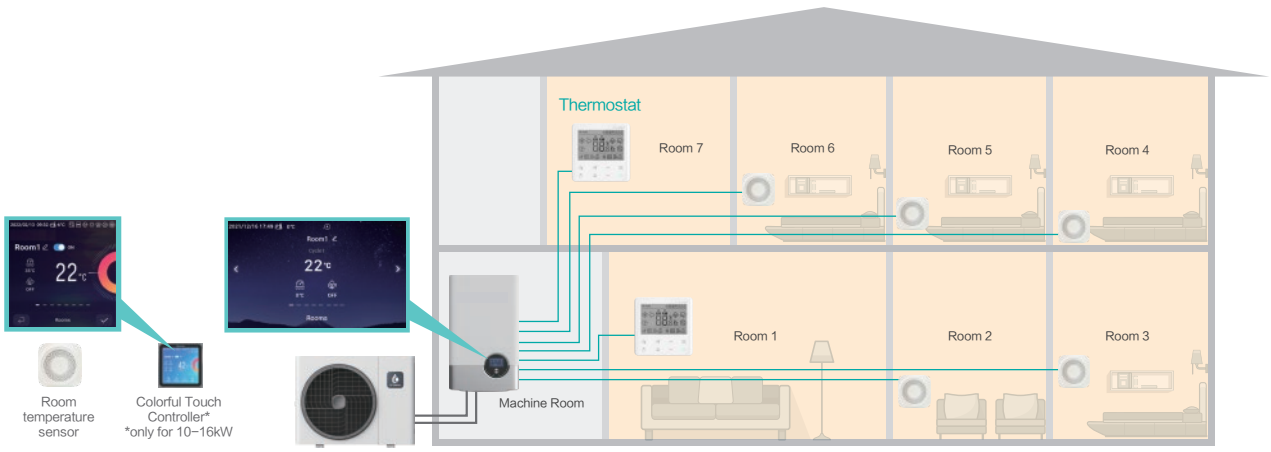
Two Separate Temperature Cycles

The mixing valve kit enables separate heating cycles and two temperature zones, allowing for different water temperatures to be set for underfloor heating and the radiator.



Up to 7 Rooms with Independent Temperature Control

In one Hi-Therma system, the temperature of up to 7 rooms can be independently controlled through installing temperature sensors or room-thermostats in the rooms, satisfying the diverse needs of users.

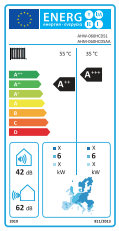


*Note: In one Hi-Therma system, up to 2 room thermostats and max. 6 wall mounted temp. sensors can be connected.

High Efficiency and Excellent Performance

High Efficiency A+++

Hi-Therma offers an efficient solution for home heating and hot water supply with top-class A+++ energy classification under low-temperature water condition and A++ under mid-temperature water condition. This ensures savings on energy bills, reduces electricity consumption, and minimizes the impact on the environment.



Energy Label

Reliable and Consistent Warmth

Experience consistent and stable warmth with Hi-Therma split units, compensating for aging pipeline and radiator heat loss with a maximum outlet water temperature of 65℃. Even at low outdoor temperatures, the units maintain a 100% heating capacity*[1], guaranteeing an exceptional heating performance.*[2]

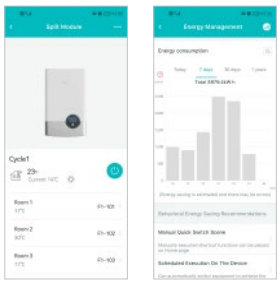
Note: *1.100% heating capacity A-7℃/W35℃ *2. Only for 10-16 kW



High Intelligence and Smart Control

Smart App Control

Through the smart app, users can easily control the Hi-Therma system to control room temperature anytime, anywhere.





Hi-Mit II Adaptor



Colorful Touch Controller *

Access and customize your device's important settings with ease through the colorful touch controller, enabling precise temperature and mode adjustments with just a few taps.

*Note: Only for 10-16kW units



HSXM-FE01

- Sleek and elegant design
- Compact, measures only 90 × 90mm
- Intuitive touch-button control

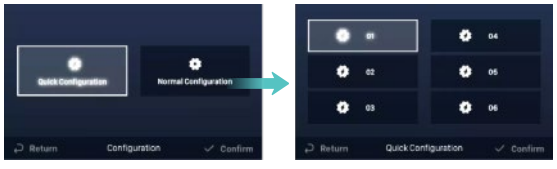
Sliding Interface

Quick switching between different interfaces can be easily achieved by sliding the screen left and right.

One-click Configuration

Configure your device with ease using the new "One-click Configuration" feature that allows for quick setup in just 3 simple steps, with the ability to preset up to 6 scenarios for ultimate convenience and simplicity.

*Note: Only for 10-16kW units and only supports pre-stored maximum of 6 scenarios.



Stylish Controller in Indoor Unit

Excellent human-computer interaction experience

The indoor unit of Hi-Therma features a built-in large, colorful screen wired controller that is easy to operate using the knob and buttons. All water cycles and rooms can be configured separately, and the main interface displays the real-time settings of each water cycle and the current water temperature. The LED light strip around the wired controller intuitively indicates the current operating mode.



Energy consumption display

Energy data can be viewed easily, including annual energy data, monthly energy data, daily energy data, which will help users to do effective energy management.

Light strip

The intuitive light strip shows you in real time the status of your system.

Blue: cooling mode or defrost mode.
Yellow: heating mode.
Orange: domestic hot water mode.
Red: malfunction



Quick access

Quick access to frequent settings, including six items – lock, DHW boost, holiday, quiet mode, auto heat, night-shift mode. All these functions can be activated according to users' need.

Fluency of knob operation

All the operations can be accessed through the knob smoothly.

High-resolution colorful screen

The HD colorful screen delivers stunning and clear visual reference, enabling excellent user experience.

Proper interface zones

There are four functional zones, Cycle 1, Cycle 2, DHW, SWP. Each zone has intuitive parameter display, easy to check and set.

Hi-Therma (4~8kW)



Series					Split		
HP					2.0	2.5	3.0
Model		Outdoor Unit			AHW-044HCDS1	AHW-060HCDS1	AHW-080HCDS1
Power Supply					AC 1Φ，220~240V/50Hz		
Nominal Heating Operation*1	OAT (DB/WB) 7/6℃	IWT/OWT 30 / 35℃	Capacity	kW	4.40	6.00	8.00
			COP (Nom./Max.)	–	5.10/5.00	5.00/4.64	4.90/4.31
		IWT/OWT 47 / 55℃	Capacity	kW	6.00	7.50	9.00
			COP	–	2.90	2.96	2.75
	OAT (DB/WB) 2/1℃	IWT/OWT 30 / 35℃	Capacity	kW	6.10	7.20	8.50
			COP	–	3.93	3.34	3.38
		IWT/OWT 47 / 55℃	Capacity	kW	5.20	6.60	7.20
			COP	–	2.27	2.32	2.15
	OAT (DB/WB) −7 / −8℃	IWT/OWT 30 / 35℃	Capacity	kW	5.00	5.90	7.30
			COP	–	2.51	2.38	2.56
		IWT/OWT 47 / 55℃	Capacity	kW	4.20	5.10	6.40
			COP	–	1.83	1.81	1.82
Nominal Cooling Operation*1	OAT (DB) 35℃	IWT/OWT 12 / 7℃	Nominal Capacity	kW	4.40	5.00	6.00
			EER	–	3.90	3.70	3.60
		IWT/OWT 23 / 18℃	Nominal Capacity	kW	5.60	6.00	7.00
			EER	–	5.60	5.60	5.10
Seasonal Performance*2	Water Outlet 35℃	SCOP		–	5.00	4.93	4.92
		Seasonal Heating Efficiency (ηs)		%	197	194	194
		Energy Rating		–	A+++	A+++	A+++
	Water Outlet 55℃	SCOP		–	3.23	3.33	3.42
		Seasonal Heating Efficiency (ηs)		%	126	130	134
		Energy Rating		–	A++	A++	A++
	Water Outlet 18℃	SEER		–	8.87	8.73	8.54
		Seasonal Cooling Efficiency (ηs)		%	352	346	339
	Water Outlet 7℃	SEER		–	5.75	5.85	5.73
		Seasonal Cooling Efficiency (ηs)		%	227	231	226
Sound Pressure*3	Normal Mode (Heating/Cooling)			dB(A)	47/47	48/47	50/47
	Low Noise Mode (Heating/Cooling)			dB(A)	39/39	42/42	43/43
	Night Shift Mode (Heating/Cooling)			dB(A)	35/35	38/38	39/39
Sound Power	Normal Mode (Heating/Cooling)			dB(A)	61/61	62/61	64/61
Fan	Condenser Fan Quantity			—	1	1	1
	Air Flow Rate			m^3/h	2700	2700	2700
Recommended Fuse				A	16	16	20
Outer Dimensions	Height × Width × Depth			mm	750 × 900 × 340		
Packing Dimensions	Height × Width × Depth			mm	807 × 1022 × 445		
Weight(Net/Gross)				kg	49.5/53.5	49.5/53.5	50.5/54.5
Refrigerant System	Compressor	Type		—	Rotary		
	Refrigerant Charge	Type		—	R32		
		Before Shipment		kg	1.23	1.23	1.26
	Piping	Gas Pipe		mm(in.)	Φ12.7(1/2)	Φ12.7(1/2)	Φ12.7(1/2)
		Liquid Pipe		mm(in.)	Φ6.35(1/4)	Φ6.35(1/4)	Φ6.35(1/4)
	Min. Piping Length			m	5		
	Max. Chargeless Piping Length			m	15		
	Max. Piping Length			m	40	40	45 (50*4)
	Height Difference between ODU and IDU	ODU is Higher		m	30	30	30
		IDU is Higher		m	20	20	20
Operation Range	Heating	Outdoor Ambient Temperature		℃ (DB)	−25~35		
		Outlet Water Temperature		℃	15~60		
	DHW	Outdoor Ambient Temperature		℃ (DB)	−25~40		
		Tank Water Temperature		℃	15~55(75*5)		
	Cooling	Outdoor Ambient Temperature		℃ (DB)	5~46		
		Outlet Water Temperature		℃	5~22		
Indoor Unit					AHM-044HCDSAA	AHM-060HCDSAA	AHM-080HCDSAA
Power Supply	—				AC 1Φ, 220~240V/50Hz		
Water Flow Rate	IWT: 30℃ / OWT: 35℃ ΔT: 5℃			m^3/h	1.21	1.53	1.90
	IWT: 47℃ / OWT: 55℃ ΔT: 8℃			m^3/h	0.65	0.81	0.97
Min. Water Flow Rate				m^3/h	0.50	0.60	0.60
DC Water Pump	Net Lift Pressure			m	6.2	4.7	3.2
	Max. Lift Pressure			m	7.6		
	Max. Water Flow Rate			m^3/h	3.5		
	Energy Efficiency Class			–	A		
	Speed			–	Inverter		
	Max. Power Input			W	50		
Water Electric Heater (3 Steps)				kW	1/2/3		
Shut-off Valve with Filter	Material			–	Brass		
	Diameter			in.	1"		
	Mesh Filter			–	30		
	Type Filter			–	Self-cleaning (with back flush)		
Safety Valve				bar	3		
Shut-off Valve				–	2 pcs Supplied		
Sound Pressure				dB(A)	28	28	28
Sound Power				dB(A)	42	42	42
Recommended Fuse				A	20(40*6)		
Outer Dimensions(with connections)	Height × Width × Depth			mm	890 × 520 × 320		
Packing Dimensions	Height × Width × Depth			mm	419 × 1160 × 650		
Weight(Net/Gross)				kg	43.5/48.5	43.5/48.5	44.5/49.5
Refrigerating Installation	Connection Type			–	Flare Nut Connection		
	Gas Pipe			mm(in.)	Φ15.88(5/8)	Φ15.88(5/8)	Φ15.88(5/8)
	Liquid Pipe			mm(in.)	Φ9.53(3/8)	Φ9.53(3/8)	Φ9.53(3/8)
Water Installation	Connection type			–	Screwed Connection		
	Shutdown valves			in.	G1"- G1"(male)		
	Inlet pipe diameter			in.	G1"(female)		
	Outlet pipe diameter			in.	G1"(female)		

NOTES:

*1: Heating/Cooling nominal performances at full load conditions according to EN 14511. Pipe length 7.5 m; height difference ODU/IDU 0 m; heating performance are integrated (included defrost cycles).

*2: According to EN14825. Climate Zone AVERAGE. Energy efficiency scale from A +++ to D.

*3:The above noise values are measured in the anechoic chamber without reflected echo, therefore the impact of the reflected echo must be taken into consideration at the scene.

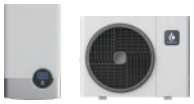
*4:The ambient temperature of the outdoor unit shall be ⩾10℃, and the refrigerant charge of the unit shall be less than the maximum refrigerant charge allowed by the unit.

*5:When there is an DHW electric heater mounted in the DHW tank, the setting temperature can reach 75℃.

*6: The value is the data when electric heater is working.

OAT: Outdoor ambient temperature; IWT: Inlet water temperature; OWT: Outlet water temperature

Hi-Therma (10~16kW) Preview



Series					Split			
Outdoor Unit	Power Supply	AC 1Φ, 220~240V/50Hz,		—	AHW-100HCDS1	AHW-120HCDS1	AHW-140HCDS1	AHW-160HCDS1
		AC 3Φ, 380~415V/50Hz		—	AHW-100HEDS1	AHW-120HEDS1	AHW-140HEDS1	AHW-160HEDS1
Nominal Heating Operation*1	OAT (DB/WB) 7/6℃	IWT/OWT 30 / 35℃	Capacity	kW	10	12	14	16
			COP	–	5.10	4.95	4.80	4.60
		IWT/OWT 47 / 55℃	Capacity	kW	10.0	12.0	14.0	15.5
			COP	–	3.10	3.05	3.05	2.95
	OAT (DB/WB) −7 / −8℃	IWT/OWT 30 / 35℃	Capacity	kW	9.50	11.50	13.50	14.00
			COP	–	3.10	3.00	2.85	2.80
		IWT/OWT 47 / 55℃	Capacity	kW	8.0	8.5	10.0	11.0
			COP	–	2.15	2.10	2.05	2.00
Nominal Cooling Operation*1	OAT (DB) 35℃	IWT/OWT 12 / 7℃	Nominal Capacity	kW	8.5	10.0	11.0	13.0
			EER	–	3.00	2.85	2.85	2.70
		IWT/OWT 23 / 18℃	Nominal Capacity	kW	9.0	11.0	14.0	15.5
			EER	–	4.5	4.1	4.2	3.9
Seasonal Performance*2	Water Outlet 35℃	SCOP		–	4.8	4.7	4.6	4.5
		Seasonal Heating Efficiency (ηs)		%	188	185	180	177
		Energy Rating		–	A+++	A+++	A+++	A+++
	Water Outlet 55℃	SCOP		–	3.4	3.35	3.3	3.3
		Seasonal Heating Efficiency (ηs)		%	133	130	128	127
		Energy Rating		–	A++	A++	A++	A++
Sound Pressure*3	Normal Mode			dB(A)	52	52	51	54
	Low Noise Mode			dB(A)	39	45	46	47
	Night Shift Mode			dB(A)	35	40	42	43
Sound Power	Normal Mode			dB(A)	64	65	64	67
Fan	Condenser Fan Quantity			—	1	1	1	1
	Air Flow Rate			m^3/h	5200	5200	4700	4700
Outer Dimensions	Height × Width × Depth			mm	840 × 1100 × 390			
Packing Dimensions	Height × Width × Depth			mm	1000 × 1185 × 532			
Weight(Net/Gross)				kg	73.5/88.0	73.5/88.0	91.5/105.5	91.5/105.5
Refrigerant System	Compressor	Type		—	Rotary			
	Refrigerant Charge	Type		—	R32			
		Before Shipment		kg	1.8	1.8	2.6	2.6
	Piping	Gas Pipe		mm(in.)	15.88 (5/8)	15.88 (5/8)	15.88 (5/8)	15.88 (5/8)
		Liquid Pipe		mm(in.)	9.53 (3/8)	9.53 (3/8)	9.53 (3/8)	9.53 (3/8)
	Min. Piping Length			m	5			
	Max. Chargeless Piping Length			m	15			
	Max. Piping Length			m	50			
	Height Difference between ODU and IDU	ODU is Higher		m	30	30	30	30
		IDU is Higher		m	20	20	20	20
Operation Range	Heating	Outdoor Ambient Temperature		℃ (DB)	−25~35			
		Outlet Water Temperature		℃	20~65			
	DHW	Outdoor Ambient Temperature		℃ (DB)	−25~43			
		Tank Water Temperature		℃	15~60(75*4)			
	Cooling	Outdoor Ambient Temperature		℃ (DB)	5~46			
		Outlet Water Temperature		℃	5~22			
Indoor Unit	Power Supply	AC 1Φ, 220~240V/50Hz,		—	AHM-100HCDSAA	AHM-120HCDSAA	AHM-140HCDSAA	AHM-160HCDSAA
		AC 3Φ, 380~415V/50Hz		—	AHM-100HEDSAA	AHM-120HEDSAA	AHM-140HEDSAA	AHM-160HEDSAA
Water Flow Rate	IWT: 30℃ / OWT: 35℃ ΔT: 5℃			m^3/h	1.72	2.06	2.40	2.76
	IWT: 47℃ / OWT: 55℃ ΔT: 8℃			m^3/h	1.07	1.29	1.50	1.71
Min. Water Flow Rate				m^3/h	0.8	0.9	1.1	1.2
DC Water Pump	Max. Lift Pressure			m	12			
	Max. Water Flow Rate			m^3/h	5.6			
	Speed			–	Inverter			
	Max. Power Input			W	180			
Water Electric Heater (3 Steps)				kW	2/4/6			
Shut-off Valve with Filter	Diameter			in.	G1"			
	Mesh Filter			–	50			
Safety Valve				bar	3			
Shut-off Valve				–	2 pcs Supplied			
Sound Pressure				dB(A)	36	36	36	36
Sound Power				dB(A)	42	42	42	42
Outer Dimensions(with connections)	Height × Width × Depth			mm	890 × 520 × 320			
Packing Dimensions	Height × Width × Depth			mm	419 × 1160 × 650			
Weight(Net/Gross)				kg	47/52	47/52	49/54	49/54
Refrigerating Installation	Connection Type			–	Flare Nut			
	Gas Pipe			mm(in.)	15.88 (5/8)	15.88 (5/8)	15.88 (5/8)	15.88 (5/8)
	Liquid Pipe			mm(in.)	9.53 (3/8)	9.53 (3/8)	9.53 (3/8)	9.53 (3/8)
Water Installation	Connection type			–	Screwed Connection			
	Shutdown valves			in.	G1"– G1"(male)			
	Inlet pipe diameter			in.	G1"(female)			
	Outlet pipe diameter			in.	G1"(female)			

NOTES:

*1: Heating/Cooling nominal performances at full load conditions according to EN 14511. Pipe length 7.5 m; height difference ODU/IDU 0 m; heating performance are integrated (included defrost cycles).

*2: According to EN14825. Climate Zone AVERAGE. Energy efficiency scale from A +++ to D.

*3:The above noise values are measured in the anechoic chamber without reflected echo, therefore the impact of the reflected echo must be taken into consideration at the scene.

*4: When there is an DHW electric heater mounted in the DHW tank, the setting temperature can reach to 75℃.

OAT: Outdoor ambient temperature; IWT: Inlet water temperature; OWT: Outlet water temperature.

Accessories



DHW Tank Preview

Model			HDHWT-200L30HE	HDHWT-300L30HE
Casing	Colour		Neutral white	
	Material		Epoxy coated steel / Epoxy-coated mild steel	
Tank	Empty weight	kg	40	50
	Net water volume	L	185	260
	Material	–	DUPLEX 2205	
	Maximum water temperature	℃	75	
	Energy efficiency class		B	
	Storage volume	L	200	300
Heat exchanger	Tube material		Stainless steel (SUS316L)	
	Face area	m^2	2.0	2.1
	Internal coil volume	L	7.0	7.2
	Operating pressure	bar	3	
Booster heater	Capacity	kW	3	
Power supply	Phase/Frequency/Voltage	Hz/V	1N, 220~240V, 50Hz	
Protection method			Safety thermostat embed	

Note: The above parameters are preview version for reference only. Final parameters may be adjusted before the official launch.

Other Accessories

Accessories	Model	Function	Compatibility
Water temperature sensor	HTS-E1000A1	Water temperature sensor for pipeline, tank and hydraulic components.	Hi-Therma series
3-way valve	HESE-3W25A	Valve to divert different water flow for different operation.	Hi-Therma series
Hi-Mit II adapter	HCCS-H64H2C1M#01	Hi-Mit II smart APP solution.	Hi-Therma series
Wall mounted room temperature sensor	HCT-S01E	Wall mounted room temperature sensor, with communication to heat pump system.	Hi-Therma series
Room thermostat	HSXE-VC04	Room thermostat for room temperature control, with communication to heat pump system.	Hi-Therma series
Outdoor ambient temperature sensor	HC-T-01M	Detect outdoor ambient temperature with the second sensor.	Hi-Therma series
Electronic anode	HOPT-EAT01	Protect the inner tank of the water heater, enhance its corrosion resistance, and prolong its service life.	DHW tank
Colorful touch controller	HSXM-FE01	Touch controller for room temperature control and mode adjustment with communication to heat pump system.	Hi-Therma Integra & Split (only for 10~16kW)