

Hisense

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Hisense

AIR TO WATER HEAT PUMP

Hi-Therma Monobloc



reddot winner 2022





reddot winner 2022

Red Dot Award Casing Design

The 2022 Red Dot award-winning outdoor unit is recognised for its exceptional design, featuring a classic grey color and a screwless 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

Compact Size and Easy Transportation

Compact and measuring only 84cm in height, the Hi-Therma Monobloc is perfect for easy placement on residential house walls. Its single fan design allows for effortless transportation in both small vans and large trucks. This unit ensures uninterrupted sunlight through windows and offers convenience and efficiency.



High Efficiency **A+++**^{*1}

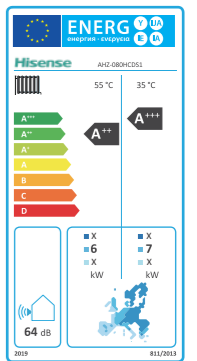
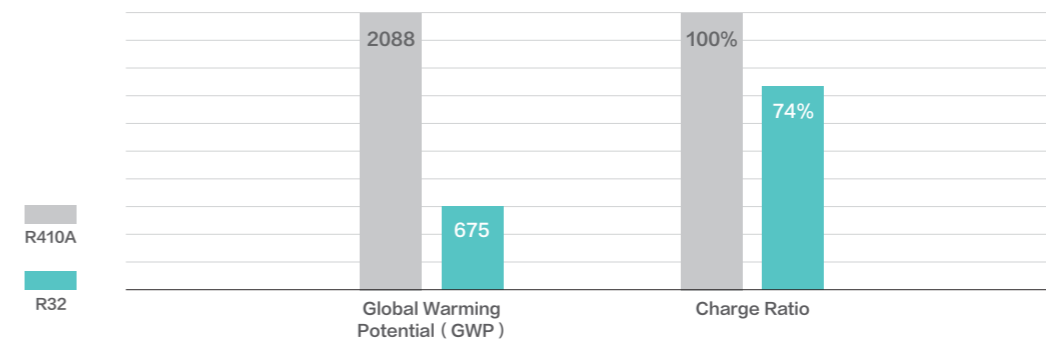
Hi-Therma offers the best and most efficient solution for home heating and hot water supply. It has the top class A+++ energy classification under the low-temperature water condition, and A++ under the mid-temperature water condition, which ensures you make savings on your energy bills, reducing electricity consumption and the impact on the environment.

Eco-Friendly Refrigerant R32

The R32 Refrigerant meets the F-gas regulation standards described in EU regulation 517/2014. The Hisense Hi-Therma heat pump system adopts and fully utilises the R32 Refrigerant, which is a good solution for achieving the new European CO2 emission targets.

Features

- ◆ Zero Ozone Depletion Potential (ODP)
- ◆ Lower Global Warming Potential (GWP)
- ◆ Less charge amount under the same capacity
- ◆ Single component refrigerant, easy to handle and recycle



Notes: 1.*1 SCOP up to 5.00 (Average climate / Low temp. application) : A+++ , SCOP up to 3.42 (Average climate / Mid temp. application) : A++
2. Followed by (EU) No 811/2013, (EU) No 813/2013, (EU) No 814/2013

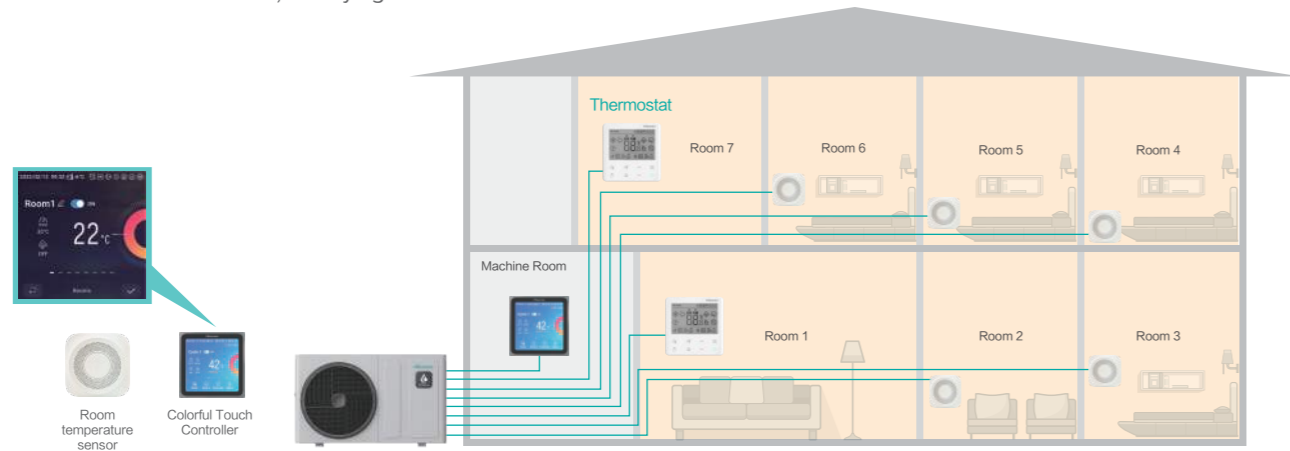
High-Efficiency Water Pump for Convenient and Cost-effective

Hi-Therma Monobloc unit features a built-in water pump with a maximum lift of up to 12.5 meters, eliminating the need for a separate external pump. This provides convenience and saves on installation costs, making it ideal for two-story or larger residential properties.



Up to 7 Rooms with Independent Temperature Control

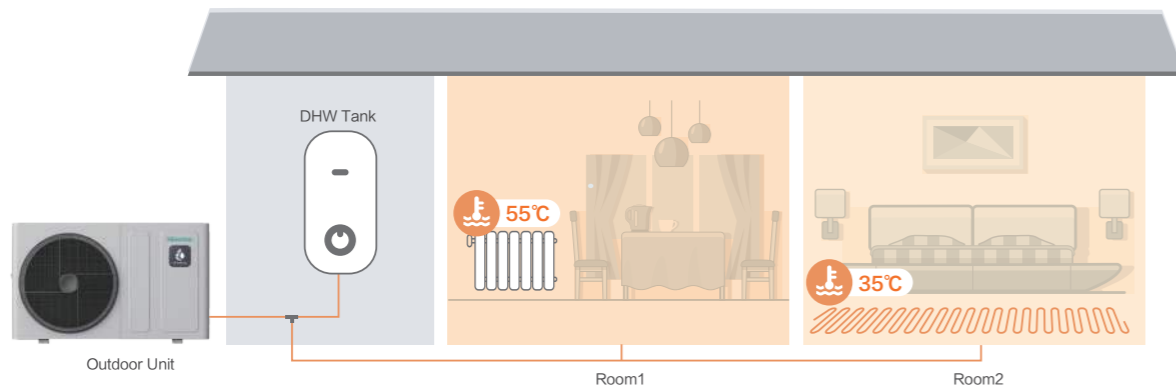
In one Hi-Therma system, the temperature of up to 7 rooms can be independently controlled through installing temperature sensors or room thermostats in the rooms, satisfying the diverse needs of users.



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

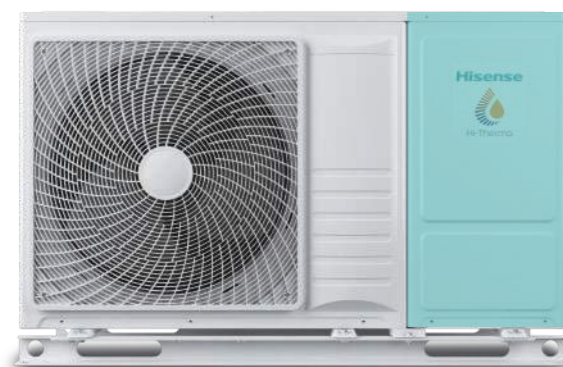
Two Separate Temperature Cycles

Two temperature zones through the separate heating cycles are possible with the mixing valve kit, enabling different water temperatures for underfloor heating and the radiators.

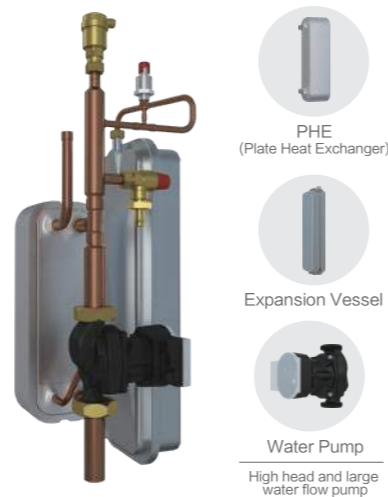


Simplified Installation

Hi-Therma Monobloc unit featuring all-in-one design allows easy installation without additional refrigerant piping work and refrigerant charge. Only the connection of water pipes is required on site, which greatly simplifies the on site installation work.

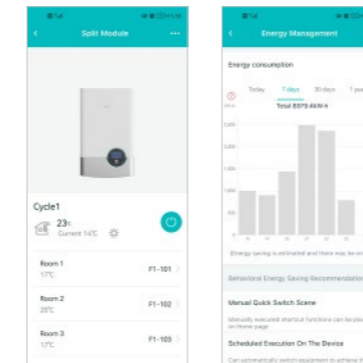


Water side items included in the Monobloc



Smart App Control

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



Colorful Touch Controller*

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



HSXM-FE01

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

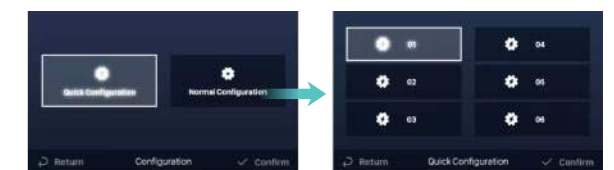
One-click Configuration

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 supports pre-stored maximum of 6 scenarios.

Sliding Interface

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



Hi-Checker

Intelligent service tool, improve your service

Hi-Checker is a plug and play service tool, with which service engineers can access the system and monitor operation status or data, very convenient for system communication and maintenance.

Besides, it features cloud-based management, easy to access operation status remotely.



Small and Portable Body



Remote Access



Black Box Function

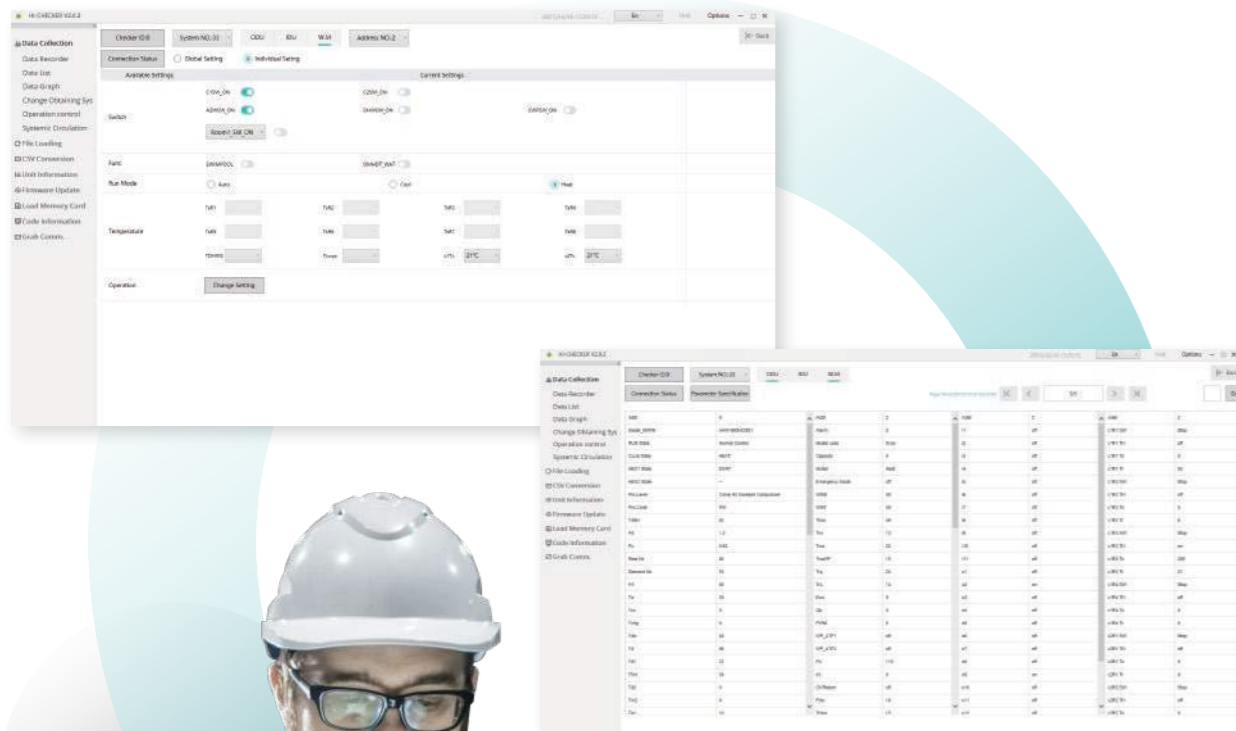


Powerful Chats



OTA Update

Different water cycles in multiple rooms control



Up to 130 parameters of the water system can be displayed intuitively.

Easy to use

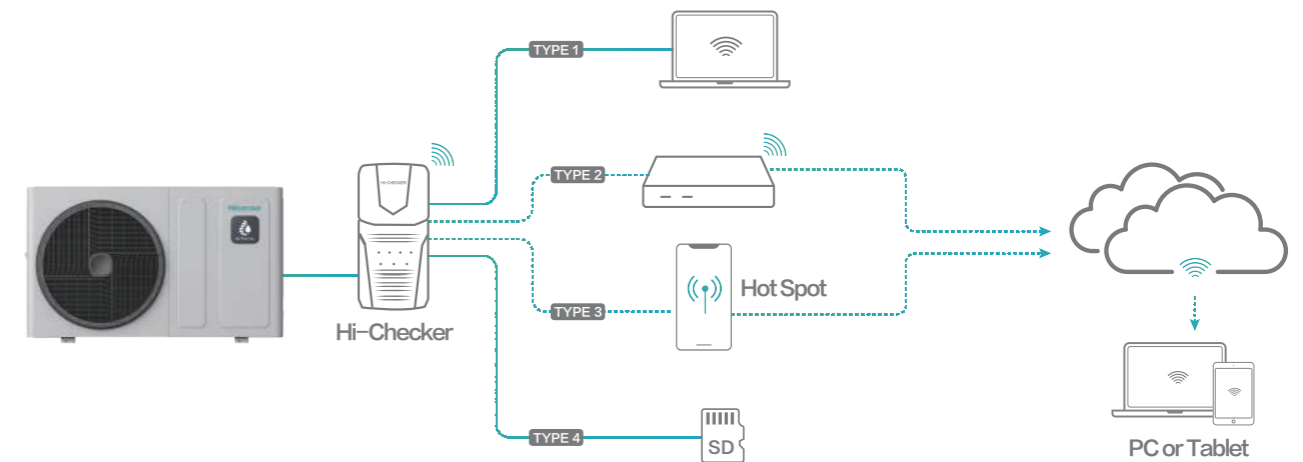
- ◆ Compact size which allows high portability and space saving.
- ◆ Capable to slot in a 32G memory card for data collection and storage. Also the memory card and card reader are standard with Hi-Checker.
- ◆ Multiple choices of power supply types. It can be powered by the standard adapter (DC 5V), computers or power banks.
- ◆ Support OTA update, ensuring the software is always up to date.



Easy to access

4 ways to access the operation data









- ◆ Conventional connection type. The simplest and reliable way by just connecting the Hi-Checker to your computer directly through USB.
- ◆ Internet connection type. Be connected to a stable Wi-Fi signal to achieve operation data and status monitoring anytime and anywhere.
- ◆ Hotspot connection type. Be connected to a temporary hotspot signal from the smartphone, allowing the Hi-Checker to remotely monitor the operation data when there is no stable Wi-Fi signal on site.
- ◆ SD card storage type. Hi-Checker equipped with SD card can be connected to the air conditioning system all the time, so that all the operation data can be stored in the card for later analysis.












Specifications

Model	Size (L × W × H) mm	Net Weight (g)	Power Supply
HCCS-H64H2C2M	138 × 68 × 28	130	5V=500mA

High Efficiency and Excellent Performance

 R32 Eco-friendly refrigerant	 A+++ energy efficiency	 Interlock with 3rd party heat source	 -25°C stable operation	 75°C domestic hot water	 Max 65°C outlet water temperature	 Smart grid interlock and PV enabled	 High-efficiency DC pump
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User Convenience

 Red Dot award design	 Two separate temp. cycles	 Up to 7 rooms with independent temp. control	 Low noise operation	 Night shift mode operation
 Centralised 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
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Easy Installation and Maintenance

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

Series	Max Temp. of Outlet Water	Power Supply	Capacity
R32  Monobloc	60°C	AC1 φ, 220-240V/50Hz	4.4 kW
			8.0 kW
Hi-Therma R32  Monobloc	65°C	AC1 φ, 220-240V/50Hz (AC 3 φ, 380-415V/50Hz)	10.0 kW
			12.0 kW
			14.0 kW
			16.0 kW

Specification



Monobloc (4~8kW)

Model		AHZ-044HCDS1		AHZ-080HCDS1	
Power Supply		220-240V ~50Hz			
Heating Operation*1	OAT (DB/WB) 7/6°C	IWT/OWT 30 / 35°C	Capacity (Min./Nom./Max.) kW	1.85 / 4.40 / 7.00	2.10 / 8.00 / 11.0
			COP (Nom.)	5.10	4.90
	OAT (DB/WB) -7 / -8°C	IWT/OWT 47 / 55°C	Capacity (Nom./Max.) kW	4.40 / 6.00	8.00 / 9.00
			COP (Nom.)	3.00	2.80
		IWT/OWT 30 / 35°C	Capacity (Nom./Max.) kW	4.40 / 5.00	5.80 / 7.30
			COP (Nom.)	3.26	3.14
Cooling Operation*1	OAT (DB/WB) 35/-°C	IWT/OWT 12 / 7°C	Nominal Capacity kW	4.40	6.50
			EER	4.00	3.35
	IWT/OWT 23 / 18°C	Nominal Capacity kW	5.60	7.00	
			EER	5.60	5.10
		SCOP		5.17	5.00
		Seasonal Heating Efficiency (ηs)		204	197
Seasonal Performance*2	Water Outlet 35°C	Energy Rating	A+++	A+++	
		SCOP	3.47	3.50	
	Water Outlet 55°C	Seasonal Heating Efficiency (ηs)	136	137	
		Energy Rating	A++	A++	
		Normal Mode (Heating/Cooling)		47/47	50/47
		Low Noise Mode (Heating/Cooling)		40/40	43/43
Sound Pressure*3	Night Shift Mode (Heating/Cooling)		36/36	39/39	
	Normal Mode (Heating/Cooling)		61/61	64/61	
Sound Power	Condenser Fan Quantity		1	1	
	Air Flow Rate		2700	2700	
Fan	Max. Running Current		A	10.53	
	Recommended Fuse		A	16	
Outer Dimensions	Height × Width × Depth		mm	815 × 1270 × 340	
Packing Dimensions	Height × Width × Depth		mm	890 × 1400 × 440	
Net Weight		kg	88	88	
Gross Weight		kg	104	105	
Refrigerant System	Compressor	Type	Rotary		
	Refrigerant Charge	Type	R32		
		Before Shipment	kg	1.17	
Operation Range	Heating	Outdoor Ambient Temperature	°C (DB)	-25~35	
		Outlet Water Temperature	°C	15~60	
	DHW	Outdoor Ambient Temperature	°C (DB)	-25~40	
		Tank Water Temperature	°C	30~55(75*4)	
	Cooling	Outdoor Ambient Temperature	°C (DB)	5~46	
		Outlet Water Temperature	°C	5~22	
Nominal Water Flow	IWT: 30°C / OWT: 35°C ΔT: 5°C		m³/h	0.77	
	Min. Water Flow Rate		m³/h	0.50	
DC Water Pump	Max. Lift Pressure		m	9	
	Max. Water Flow Rate		m³/h	4.5	
	Speed			Inverter	
	Max. Power Input		W	87	
Water Electric Heater		kW	External (Optional)		
Safety Valve		bar	3		
Shut-off Valve		-	2 pcs Supplied		
Water Installation	Connection Type		-	Screwed Connection	
	Shutdown Valves		in.	G 1" - G 1" (female)	
	Inlet Pipe Diameter		in.	G 1" (female)	
	Outlet Pipe Diameter		in.	G 1" (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 75°C.
 OAT: Outdoor ambient temperature; IWT: Inlet water temperature; OWT: Outlet water temperature

Specification



Monobloc (10~16kW)

Model				100(3.5HP)	120(4.0HP)	140(5.0HP)	160(6.0HP)	100(3.5HP)	120(4.0HP)	140(5.0HP)	160(6.0HP)	
Unit Type				AHZ-100HCDS1	AHZ-120HCDS1	AHZ-140HCDS1	AHZ-160HCDS1	AHZ-100HEDS1	AHZ-120HEDS1	AHZ-140HEDS1	AHZ-160HEDS1	
Power Supply				1N, 220-240V, 50Hz				3N, 380-415V, 50Hz				
OAT (DB/WB)		IWT / OWT	Unint	Parameters								
Nominal Heating Operation*1	7 / 6°C	30 / 35°C	Capacity (Min./Nom./Max.)	kW	3.3/10.0/12.5	3.8/12.0/14.5	4.32/14.0/16.0	4.86/16.0/18.0	3.3/10.0/12.5	3.8/12.0/14.5	4.32/14.0/16.0	4.86/16.0/18.0
			COP (Nom.)	-	5.10	4.95	4.80	4.60	5.10	4.95	4.80	4.60
		Capacity (Nom./Max.)	kW	9.0/11.1	11.2/13.1	13.0/15.0	15.0/17.0	9.0/11.1	11.2/13.1	13.0/15.0	15.0/17.0	
	-7 / -8°C	30 / 35°C	Capacity (Nom./Max.)	kW	9.5/9.5	10.8/10.8	13.5/13.5	14.0/14.0	9.5/9.5	10.8/10.8	13.5/13.5	14.0/14.0
			COP (Nom.)	-	3.10	3.05	2.95	2.85	3.10	3.05	2.95	2.85
		Capacity (Nom./Max.)	kW	8.0/8.0	8.5/8.5	10.0/10.0	11.0/11.0	8.0/8.0	8.5/8.5	10.0/10.0	11.0/11.0	
Nominal Cooling Operation*1	35 / --°C	12 / 7°C	Nominal Capacity	kW	8.5	10	11	13	8.5	10	11	13
			EER	-	3.15	3.00	2.90	2.85	3.15	3.00	2.90	2.85
		Nominal Capacity	kW	9	11	14	15.5	9	11	14	15.5	
	23 / 18°C	EER	-	4.50	4.10	4.20	3.90	4.50	4.10	4.20	3.90	
		SCOP	-	4.9	4.87	4.59	4.47	4.9	4.87	4.59	4.47	
		Seasonal Heating Efficiency (ηs)	%	193	192	181	176	193	192	181	176	
Seasonal Performance*2	Water Outlet 35°C	Energy Rating	-	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	
		SCOP	-	3.62	3.47	3.37	3.35	3.62	3.47	3.37	3.35	
		Seasonal Heating Efficiency (ηs)	%	142	136	132	131	142	136	132	131	
	Water Outlet 55°C	Energy Rating	-	A++	A++	A++	A++	A++	A++	A++	A++	
		SCOP	-	4.50	4.10	4.20	3.90	4.50	4.10	4.20	3.90	
		Seasonal Heating Efficiency (ηs)	%	142	136	132	131	142	136	132	131	
Sound Pressure*3	Normal Mode (Heating/Cooling)		dB(A)	47/47	49/49	51/51	53/53	47/47	49/49	51/51	53/53	
	Low Noise Mode (Heating/Cooling)		dB(A)	44/44	46/46	47/47	49/49	44/44	46/46	47/47	49/49	
	Night shift Mode (Heating/Cooling)		dB(A)	44/44	45/45	45/45	45/45	44/44	45/45	45/45	45/45	
Sound Power	Normal Mode (Heating/Cooling)		dB(A)	62/62	64/64	66/66	67/67	62/62	64/64	66/66	67/67	
Fan	Condenser Fan Quantity		-	1	1	1	1	1	1	1	1	
	Air Flow Rate		m³/h	3900	3900	4200	4200	3900	3900	4200	4200	
Outer Dimensions	Height × Width × Depth		mm	840 × 1376 × 390				840 × 1376 × 390				
Packing Dimensions	Height × Width × Depth		mm	995 × 1460 × 530				995 × 1460 × 530				
Net Weight			kg	108				125				
	Gross Weight		kg	127				144				
Refrigerant System	Compressor		Type	Rotary								
	Refrigeration Oil	Type	-	FW68S								
		Charge	L	0.87	0.87	1.25	1.25	0.87	0.87	1.25	1.25	
	Refrigeration Charge	Type	-	R32								
Before Shipment		kg	1.5	1.5	2.0	2.0	1.5	1.5	2.0	2.0		
Operation Range	Heating	Outdoor Ambient Temperature	°C (DB)	-25~35								
		Outlet Water Temperature	°C	20~65								
	DHW	Outdoor Ambient Temperature	°C (DB)	-25~43								
		Tank water temperature	°C	30~60(75*2)								
	Cooling	Outdoor Ambient Temperature	°C (DB)	5~46								
		Outlet Water Temperature	°C	5~22								
Water Flow Rate	IWT: 30°C / OWT: 35°C ΔT: 5°C		m³/h	1.72	2.06	2.41	2.75	1.72	2.06	2.41	2.75	
DC Water Pump	Max. Lift Pressure		m	12.5								
	Max. Water Flow Rate		m³/h	4								
	Type		-	Inverter								
	Max. Power Input		W	180								
Safety valve			-	Yes (3 bar)								
Shut-off valve			in.	1", DN25								
Water Installation	Connection type		-	Screwed connection								
	Shutdown valves		mm (in.)	G 1" (female) - G 1" (female)								
	Inlet pipe diameter		mm (in.)	G 1" (male)								
	Outlet pipe diameter		mm (in.)	G 1" (male)								

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 75°C.

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

Accessories



Auxiliary electrical heater

Model		DRE-300WG	DRE-600WG	DRE-S600WG	
Power supply	Power	-	220-240V-50Hz	220-240V-50Hz	380-415V 3-50Hz
	Max current	A	14.3	28.7	9.52
	Cable Size	mm²	3 × 2.5	3 × 6.0	5 × 2.5
	CB	A	16	32	16
	ELB	No. of poles/A/mA	2/16/30	2/32/30	3/16/30
Dimensions H × W × D		mm	494 × 317 × 104.5	494 × 317 × 104.5	494 × 317 × 104.5
Weight		Kg	6.9	7.7	8.1
Regulated electrical heater capacity	step 1	kW	1	2	2
	step 2	kW	2	4	4
	step 3	kW	3	6	6
Connections	Water Inlet	-	G1" (male)	G1" (male)	G1" (male)
	Water Outlet	-	G1" (male)	G1" (male)	G1" (male)
Vessel Material		-	304 (Stainless steel)	304 (Stainless steel)	304 (Stainless steel)
Maximum Water Pressure		bar	10	10	10
Air purge valve		-	YES	YES	YES
Auto-reset Safety Thermostat		-	75°C ± 4°C	75°C ± 4°C	75°C ± 4°C
Manual Reset Safety Thermostat		-	85°C ± 5°C	85°C ± 5°C	85°C ± 5°C

Others

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
Indoor ambient temperature sensor	HCT-S01E	Wall mounted room temperature sensor, with communication to heat pump system.	Hi-Therma Series
Wired remote controller	HSXE-VC04	Room thermostat for room temperature control, with communication to heat pump system.	Hi-Therma Series
Second outdoor ambient temperature sensor	HC-T-01M	Detect outdoor ambient temperature with the second sensor	Hi-Therma Series