Hisense

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ISO14001 ISO9001 ISO45001 HCAC-LL-ATWIG202312

Hisense

AIR TO WATER HEAT PUMP

Hi-Therma Integra

Simplified Installation and More Space-Saving

The All-in-One design of the integrated indoor unit and water tank inside Integra makes on-site installation simple, easy, and quick for everyone.

Save Space

Integration of the water tank and control components together can save you up to 30% space in your home or facility, giving you more opportunities and possibilities to use your space for other things.

Unit: mm

Easy Transportation

Especially designed with a one-piece-fits-all size, transporting or moving it with any cart or trolley becomes easy and convenient. Place it wherever you like without a hassle.

Note: *Compared to Hi-Therma Split + 230L DHW Tank.

User-Friendly Design

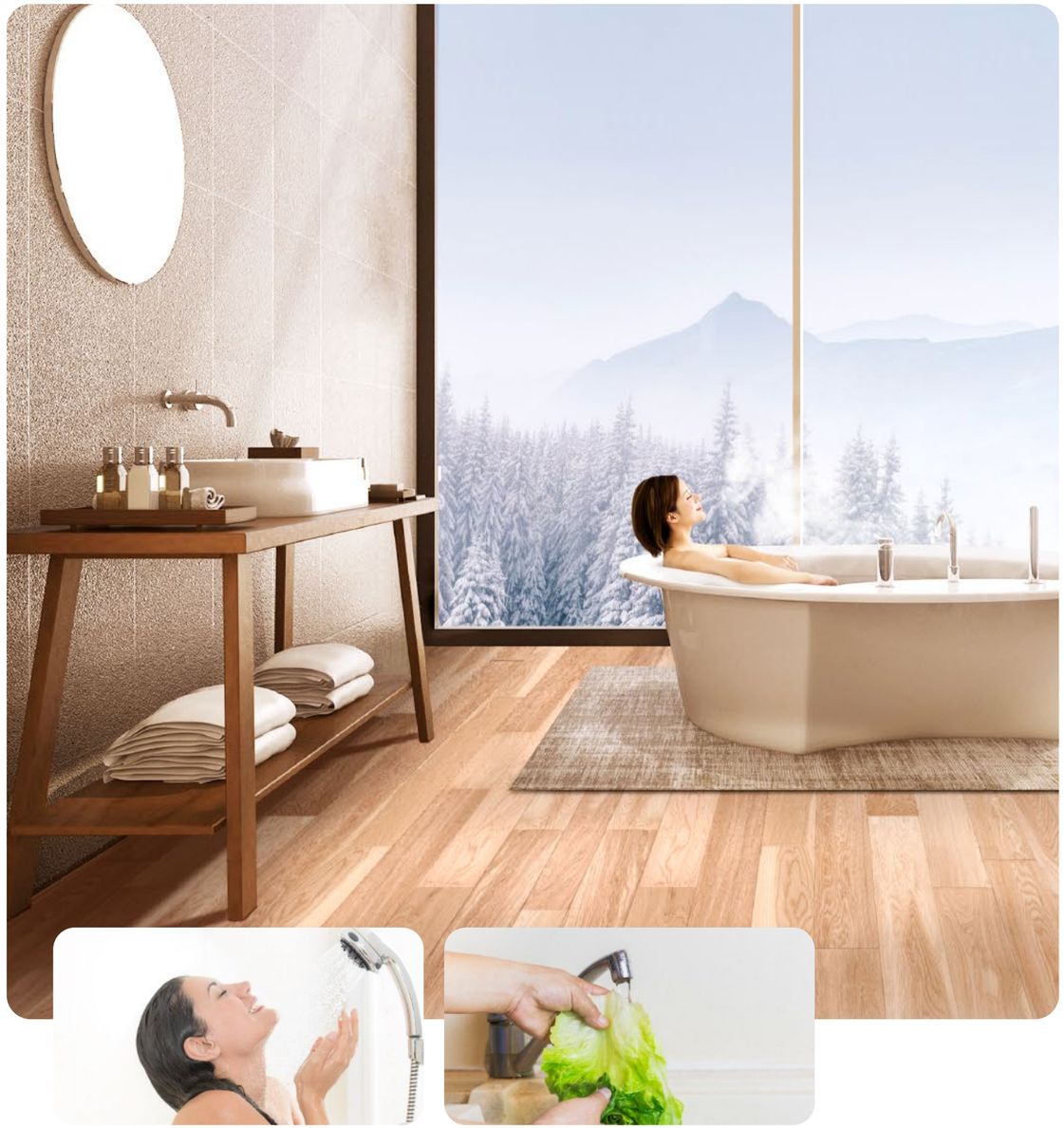
A rounded corner design reduces risk of damange from bumping and collision, and also ensures safety for daily use.

Intuitive Human-Computer Interaction Experience

The controller is simple to use and navigate with the intuitive light strip showing you the real-time status of your system.

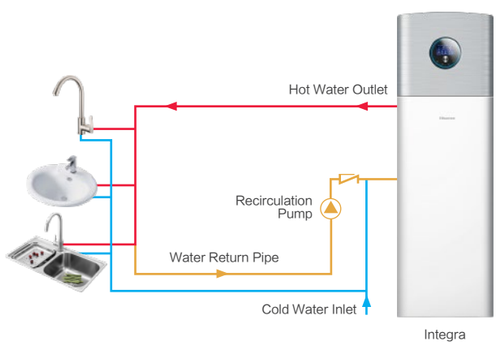
reddot winner 2022

Awarded the 2022 Reddot Award Winner, the lines of succession and innovation have been carefully crafted and are sleeker than any piece of hardware ever designed.



No Cold Water

With a circulating pump equipped in pipeline, Integra can cycle cold water into the heater, creating a constant flow of heat within the pipeline, for continuous hot water. No buffer time required. Your entire house or facility will always have set-temperature hot water for instant use.



High Efficiency A+++ *1 A+ *2

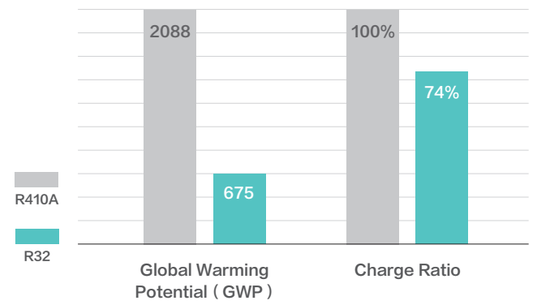
R-32

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 utilizes the R32 Refrigerant, which is a good solution for achieving the new European CO_2 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



Energy Consumption Display

Energy consumption can be displayed intuitively on the controller for precise energy management.

Eco Setting

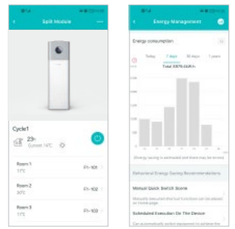
The system setting supports one-click activation of Eco Mode for maximum energy saving.

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 DHW Efficiency η=135%, profile XL: A+
2. Followed by (EU) No 811/2013, (EU) No 813/2013, (EU) No 814/2013

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

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 customers.

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

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.

HSXM-FE01

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

*Note: Optional for Hi-Therma Integra.

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 supports pre-stored maximum of 6 scenarios.

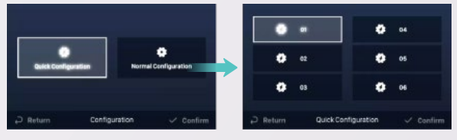


Plate Heat Efficiency and Anti-Freeze

Integra is equipped with advanced major components including a high-efficiency plate heat exchanger, DC large-flow pump, 3-level electric heater, and large volume water tank, ensuring the in-house installation is easy and free of water freezing issues.

Premium Stainless Steel Water Tank

Featuring a DUPLEX 2205 material that delivers high-quality water with minimal maintenance costs, the water tank also comes standard with electric heating and sterilization functions that can be controlled separately.
For areas with poor water quality, the optional electronic anode provides an extra layer of protection for enhancing corrosion resistance and extending the tank's lifespan.

Engineering Tools

Hi-Therma Designer is a specialized program for choosing Hisense ATW heat pump products, enabling an accurate and quick model selection for projects. It's an online tool for quick and easy access, and fully compatible with computer, tablet and smartphone. Users can open and edit the project at any time and from anywhere.

- User-friendly operation
- CO_2 emission calculation
- Selection comparison
- Energy consumption calculation
- Noise level assessment
- Customization of accessories

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

reddot winner 2022

High-Efficiency Water Pump
for Convenient and Cost-effective

Hi-Therma Integra 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.

Specification (4~8kW)

System Performance

011-1W0579
011-1W0580

HP					2.0HP	2.5HP	3.0HP
Outdoor Unit Type				–	AHW-044HCDS1	AHW-060HCDS1	AHW-080HCDS1
Power Supply				–	220-240V ~ 50Hz		
Nominal Heating Operation*1	OAT (DB/WB)	IWT / OWT	–	Unit	Parameters		
	7 / 6℃	30 / 35℃	Capacity (Min./Nom./Max)	kW	1.85 / 4.40 /7.00	1.95 / 6.00 /8.90	2.10/ 8.00 / 11.0
			COP (Nom.)	–	5.10	5.00	4.90
		47 / 55℃	Capacity (Nom./Max.)	kW	4.40 / 6.00	6.00 / 7.50	8.00 / 9.00
			COP (Nom.)	–	3.00	3.05	2.80
	-7 / -8℃	30 / 35℃	Capacity (Nom./Max.)	kW	4.40 / 5.00	5.30 / 5.90	5.80 /7.30
			COP (Nom.)	–	3.26	3.16	3.14
		47 / 55℃	Capacity (Nom./Max.)	kW	4.00 / 4.20	4.70 / 5.10	5.00 / 6.40
			COP (Nom.)	–	1.97	2.04	1.94
Nominal Cooling Operation*1	35 / -- ℃	12 / 7℃	Nominal Capacity	kW	4.40	5.00	6.00
			EER	–	3.90	3.70	3.60
		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 heating energy efficiency (ηwh)				%	135	135	135
Water heating energy class				–	A+	A+	A+
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
Outer Dimensions	Height × Width × Depth			mm	750 × 900 × 340		
Packing Dimensions	Height × Width × Depth			mm	807 × 1022 × 445		
Net Weight				kg	48.5	48.5	49
Gross Weight				kg	52.5	52.5	53.5
Refrigerant System	Compressor	Type		–	Rotary		
		Quantity		–	1	1	1
	Refrigeration Charge	Type		–	R32		
		Before Shipment		kg	0.98	0.98	1.05
	Gas Pipe			mm	Φ12.7	Φ12.7	Φ15.88
				in.	1/2	1/2	5/8
	Liquid Pipe			mm	Φ6.35	Φ6.35	Φ6.35
				in.	1/4	1/4	1/4
	Minimum piping length				4		
	Maximum chargeless piping length				8		
	Maximum piping length				40	40	45
	Height difference between ODU and IDU	ODU is Higher			30	30	30
		IDU is Higher			20	20	20
Working range (Heating)	Outdoor ambient temperature			℃(DB)	-25~35		
	Outlet water temperature			℃	15~60		
Working range (Cooling)	Outdoor ambient temperature			℃(DB)	5~46		
	Outlet water temperature			℃	5~22		
Working range (DHW)	Outdoor ambient temperature			℃(DB)	-25~40℃		
	Tank water temperature			℃	30~55(75)*4		

Indoor Unit Model				AHS-044HCDSAA-23	AHS-060HCDSAA-23	AHS-080HCDSAA-23
Power supply				220-240V ~ 50Hz		
Nominal water flow	IWT: 30℃ / OWT: 35℃ ΔT: 5℃		m^3/h	0.76	1.03	1.38
DC Water Pump	Max. Lift Pressure		m	9		
	Max. Water Flow Rate		m^3/h	4.5		
	Type		–	Inverter		
	Max. Power Input		W	95		
Water Electric Heater for heating(3 Steps)			kW	1/2/3		
Shut-off valve with filter	Material		–	Brass		
	Diameter		in.	1		
	Mesh		–	50		
	Type		–	Self-cleaning (with back flush)		
Outer Dimensions	Height × Width × Depth		mm	1885 × 590 × 625		
Packing Dimensions	Height × Width × Depth		mm	2070 × 700 × 710		
Net Weight			kg	124.5	124.5	125.0
Gross Weight			kg	145.0	145.0	145.5
Refrigerating Installation	Connection type		–	Flare nut connection		
	Liquid pipe (Piping diameter)		mm (in.)	Φ6.35 (1/4")	Φ6.35 (1/4")	Φ6.35 (1/4")
	Gas pipe (Piping diameter)		mm (in.)	Φ12.70 (1/2")	Φ12.70 (1/2")	Φ15.88 (5/8")
Space heating pipes connection	Connection type		–	Screwed Connection		
	Shut-off valves		mm (in.)	G 1"- G 1"(female)		
	Inlet pipe diameter		mm (in.)	G 1"(female)		
	Outlet pipe diameter		mm (in.)	G 1"(female)		
DHW pipes connection	Connection type		–	Screwed Connection		
	Inlet pipe diameter		mm (in.)	G 3/4"(female)		
	Outlet pipe diameter		mm (in.)	G 3/4"(female)		
DHW tank rated volume			L	230L		
Noise level (sound pressure)*1			dB(A)	26	26	26
Noise level (sound power)			dB(A)	42	42	42

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

Specification (10~16kW)

System Performance

011-1W0663
011-1W0664

HP					100(3.5 HP)	120(4.0 HP)	140(5.0 HP)	160(6.0 HP)	100(3.5 HP)	120(4.0 HP)	140(5.0 HP)	160(6.0 HP)
Outdoor Unit Type				–	AHW-100HCDS1	AHW-120HCDS1	AHW-140HCDS1	AHW-160HCDS1	AHW-100HEDS1	AHW-120HEDS1	AHW-140HEDS1	AHW-160HEDS1
Power Supply				–	220-240V ~ 50Hz				380-415V 3N ~ 50Hz			
Nominal Heating Operation*1	OAT (DB/WB)	IWT / OWT	–	Unit	Parameters							
	7 / 6℃	30 / 35℃	Capacity (Min./Nom./Max)	kW	3.25/10.00/12.50	3.77/12.00/14.50	4.32/14.00/16.00	4.86/16.00/18.00	3.25/10.00/12.50	3.77/12.00/14.50	4.32/14.00/16.00	4.86/16.00/18.00
			COP (Nom.)	–	5.10	4.95	4.80	4.60	5.10	4.95	4.80	4.60
		47 / 55℃	Capacity (Nom./Max.)	kW	9.00 / 11.00	11.20 / 13.00	13.00 / 15.00	15.00 / 17.00	9.00 / 11.00	11.20 / 13.00	13.00 / 15.00	15.00 / 17.00
			COP (Nom.)	–	3.1	3.05	3.05	2.95	3.10	3.05	3.05	2.95
	-7 / -8℃	30 / 35℃	Capacity (Nom./Max.)	kW	9.50 / 9.50	10.80 / 10.80	13.50 / 13.50	14.00 / 14.00	9.50 / 9.50	10.80 / 10.80	13.50 / 13.50	14.00 / 14.00
			COP (Nom.)	–	3.1	3	2.85	2.8	3.10	3.00	2.85	2.80
		47 / 55℃	Capacity (Nom./Max.)	kW	8.00 / 8.00	8.50 / 8.50	10.00 / 10.00	11.00 / 11.00	8.00 / 8.00	8.50 / 8.50	10.00 / 10.00	11.00 / 11.00
			COP (Nom.)	–	2.15	2.1	2.05	2	2.15	2.10	2.05	2.00
Nominal Cooling Operation*1	35 / --- ℃	12 / 7℃	Nominal Capacity	kW	8.5	10	11	13	8.5	10.0	11.0	13.0
			EER	–	3	2.85	2.85	2.7	3.00	2.85	2.85	2.70
		23 / 18℃	Nominal Capacity	kW	9	11	14	15.5	9.0	11.0	14.0	15.5
			EER	–	4.5	4.1	4.2	3.9	4.50	4.10	4.20	3.90
Seasonal Performance*2	Water Outlet 35℃	SCOP		–	4.83	4.76	4.61	4.49	4.83	4.76	4.61	4.49
		Seasonal Heating Efficiency (ηs)		%	190.0	187.0	181.0	177.0	190.0	187.0	181.0	177.0
		Energy Rating		–	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
	Water Outlet 55℃	SCOP		–	3.58	3.46	3.29	3.28	3.58	3.46	3.29	3.28
		Seasonal Heating Efficiency (ηs)		%	140.0	135.0	128.0	128.0	140.0	135.0	129.0	128.0
		Energy Rating		–	A++	A++	A++	A++	A++	A++	A++	A++
Water heating energy efficiency (ηwh)				%	126.00	126.00	124.00	124.00	124.00	124.00	117.00	117.00
Water heating energy class				–	A+	A+	A+	A+	A+	A+	A	A
Sound Pressure*3	Normal Mode			dB(A)	48	49	51	53	48	49	51	53
	Low Noise Mode (Heating)			dB(A)	43	46	46	48	43	46	46	48
	Night Shift Mode (Heating)			dB(A)	42	42	44	44	42	42	44	44
Sound Power	Normal Mode			dB(A)	62	64	66	67	62	64	66	67
Fan	Condenser Fan Quantity			–	1	1	1	1	1	1	1	1
	Air Flow Rate			m^3/h	3900	3900	4200	4200	3900	3900	4200	4200
Outer Dimensions	Height × Width × Depth			mm	840 × 1100 × 390				840 × 1100 × 390			
Packing Dimensions	Height × Width × Depth			mm	1000 × 1185 × 530				1000 × 1185 × 530			
Net Weight				kg	77.0	77.0	90.5	90.5	78.0	78.0	92.5	92.5
Gross Weight				kg	92.0	92.0	105.5	105.5	93.0	93.0	107.0	107.0
Refrigerant System	Compressor	Type		–	Rotary				Rotary			
		Quantity		–	1	1	1	1	1	1	1	1
	Refrigeration Charge	Type		–	R32				R32			
		Before Shipment		kg	1.8	1.8	2.7	2.7	1.8	1.8	2.7	2.7
	Gas Pipe			mm	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88
				in.	5/8	5/8	5/8	5/8	5/8	5/8	5/8	5/8
	Liquid Pipe			mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
				in.	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8
	Minimum piping length				4				4			
	Maximum chargeless piping length				15				15			
	Maximum piping length				50				50			
	Height difference between ODU and IDU		ODU is Higher		30				30			
			IDU is Higher		20				20			
Working range (Heating)	Outdoor ambient temperature			℃(DB)	-25~35				-25~35			
	Outlet water temperature			℃	20~65				20~65			
Working range (Cooling)	Outdoor ambient temperature			℃(DB)	5~46				5~46			
	Outlet water temperature			℃	5~22				5~22			
Working range (DHW)	Outdoor ambient temperature			℃(DB)	-25~43				-25~43			
	Tank water temperature			℃	30~60(75)*4				30~60(75)*4			

Model			100(3.5 HP)	120(4.0 HP)	140(5.0 HP)	160(6.0 HP)	100(3.5 HP)	120(4.0 HP)	140(5.0 HP)	160(6.0 HP)
Indoor Unit Type			AHS-100 HCDSAA-23	AHS-120 HCDSAA-23	AHS-140 HCDSAA-23	AHS-160 HCDSAA-23	AHS-100 HEDSAA-23	AHS-120 HEDSAA-23	AHS-140 HEDSAA-23	AHS-160 HEDSAA-23
Main Power Supply			220-240V~50Hz				220-240V~50Hz			
AEH Power Supply			220-240V~50Hz				380-415V 3N~50Hz			
Nominal water flow	IWT: 30℃ / OWT: 35℃ ΔT: 5℃	m^3/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				12.5			
	Max. Water Flow Rate	m^3/h	4.0				4.0			
	Type	–	Inverter				Inverter			
	Max. Power Input	W	180				180			
Water Electric Heater for heating(3 Steps)		kW	2/4/6				2/4/6			
Shut-off valve with filter	Material	–	Brass				Brass			
	Diameter	in.	1				1			
	Mesh	–	50				50			
	Type	–	Self-cleaning (with back flush)				Self-cleaning (with back flush)			
Outer Dimensions	Height × Width × Depth	mm	1885 × 595 × 625				1885 × 595 × 625			
Packing Dimensions	Height × Width × Depth	mm	2070 × 700 × 710				2070 × 700 × 710			
Net Weight		kg	126.0		128.0		126.0		128.0	
Gross Weight		kg	147.5		149.0		147.5		149.0	
Refrigerating Installation	Connection type	–	Flare nut connection							
	Liquid pipe (Piping diameter)	mm (in.)	126.0	Φ9.53 (3/8")			Φ6.35 (1/4")			
	Gas pipe (Piping diameter)	mm (in.)	147.5	Φ15.88 (5/8")			Φ15.88 (5/8")			
Space heating pipes connection	Connection type	–	Screwed connection							
	Shut-off valves	mm (in.)	G 1"(female) - G 1"(female)							
	Inlet pipe diameter	mm (in.)	G 1"(female)							
	Outlet pipe diameter	mm (in.)	G 1"(female)							
DHW pipes connection	Connection type	–	Screwed connection							
	Inlet pipe diameter	mm (in.)	G 3/4"(female)							
	Outlet pipe diameter	mm (in.)	G 3/4"(female)							
DHW tank rated volume		L	230							
Noise level (sound pressure)*1		dB(A)	26	26	26	26	26	26	26	26
Noise level (sound power)		dB(A)	42	42	42	42	42	42	42	42

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

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.	Hi-Therma Integra
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)