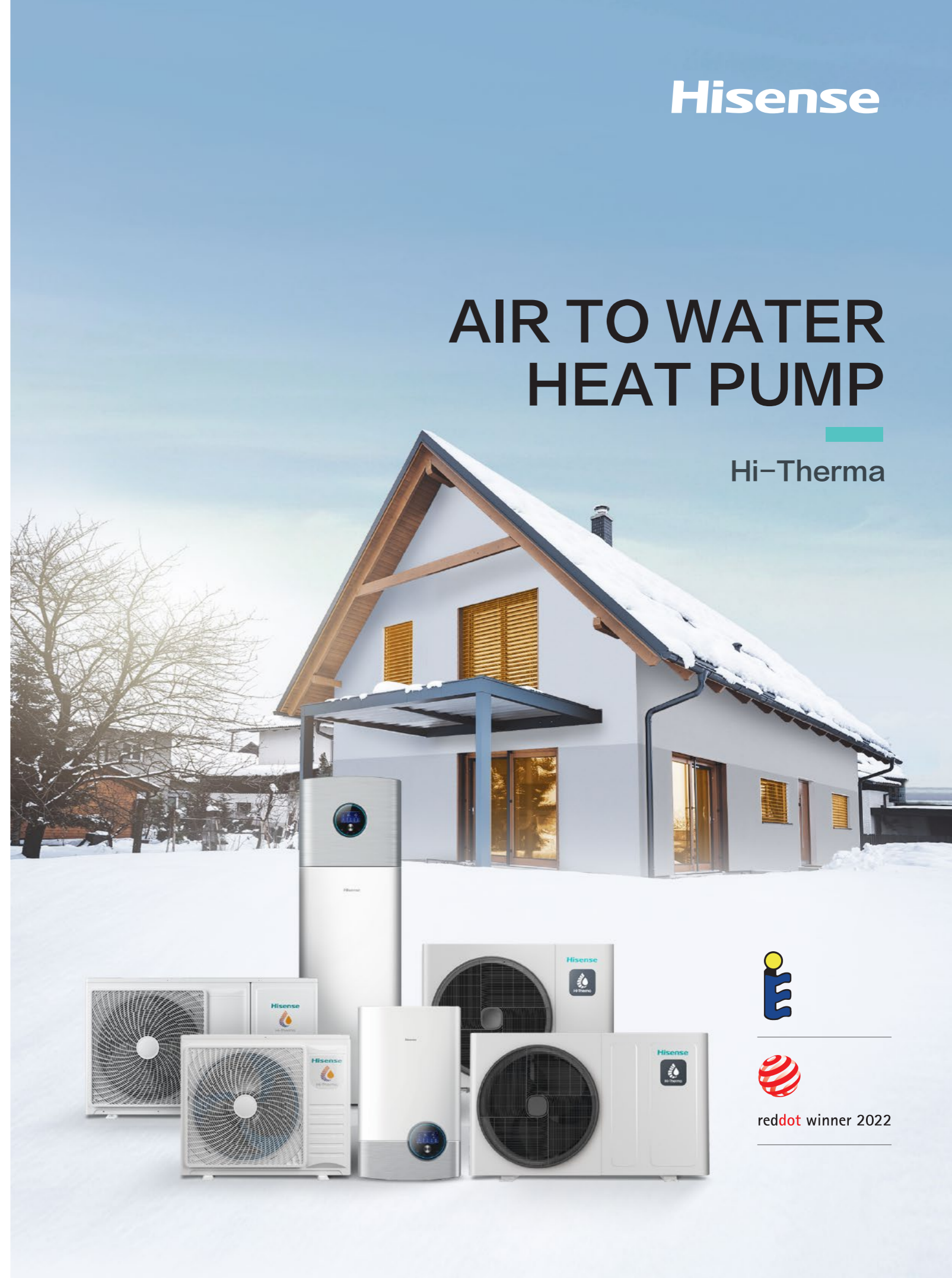


## Accessories

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
Thermal tank	HDHWT-200L30HE HDHWT-300L30HE	DHW Tank	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
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
Auxiliary electric heater	DRE-300WG DRE-600WG DRE-S600WG	Auxiliary electric heating for use in emergency situations when the heat pump malfunctions	Hi-Therma Monobloc

# AIR TO WATER HEAT PUMP

Hi-Therma



# Hisense

Qingdao Hisense HVAC Equipment Co., Ltd.  
Hisense Tower, Qingdao, China

<http://www.hisensehvac.com>
[hhexport@hisense.com](mailto:hhexport@hisense.com)
[Hisense HVAC](#)
[Hisense HVAC](#)
[Hisense HVAC](#)



HCAC-LL-ATWBCR202312

★ Design and specifications are subject to change without notice. Pictures and diagrams are for reference only and are subject to change without notice.  
All rights reserved by Qingdao Hisense HVAC Equipment Co., Ltd.



reddot winner 2022



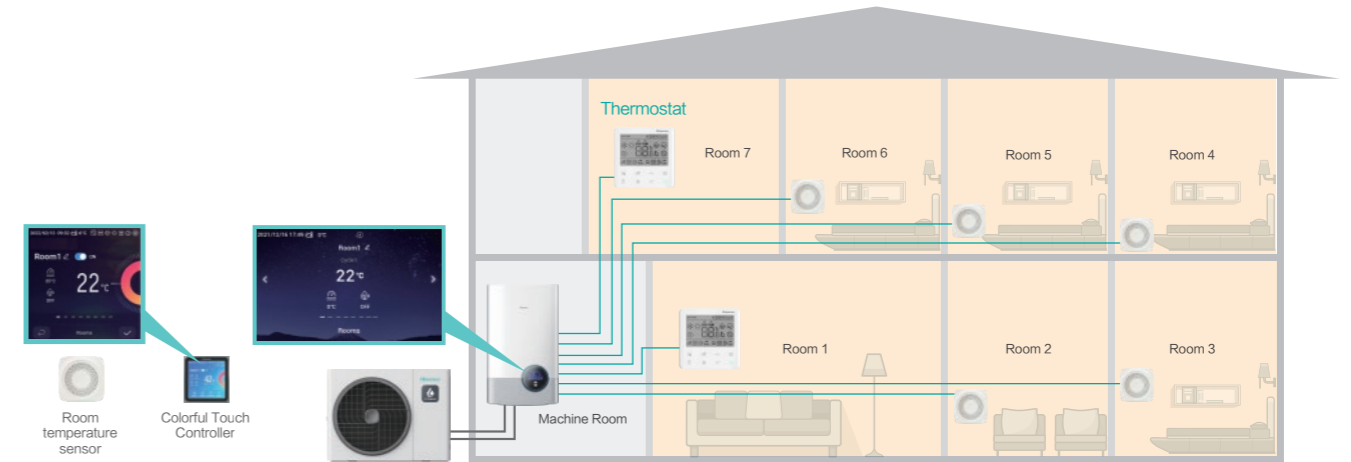
reddot winner 2022

The Hi-Therma 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.



## Up to 7 Rooms with Independent Temperature Control

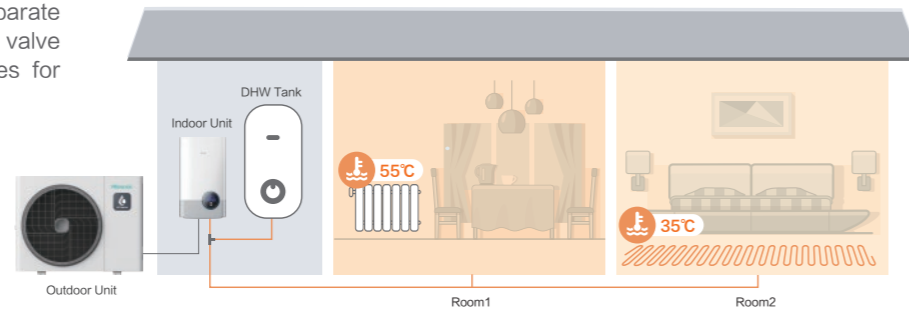
In one Hi-Therma system, the temperature of up to 7 rooms can be independently controlled through installing temperature sensors or room-thermostats in the rooms, satisfying the diverse needs of users.



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 is possible with the mixing valve kit, enabling different water temperatures for underfloor heating and the radiator.



## High Efficiency A+++

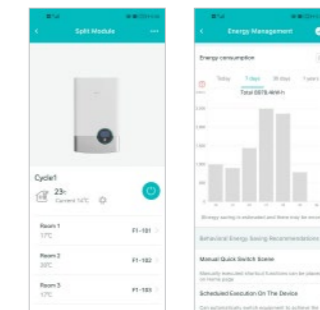
Hi-Therma offers the best and efficient solution for home heating and hot water supply. It has the top class A+++ energy classification under the low-temperature water condition, and A++ under the mid-temperature water condition, which ensures you make savings on your energy bills, reducing electricity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



Energy Label

## Smart App Control

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



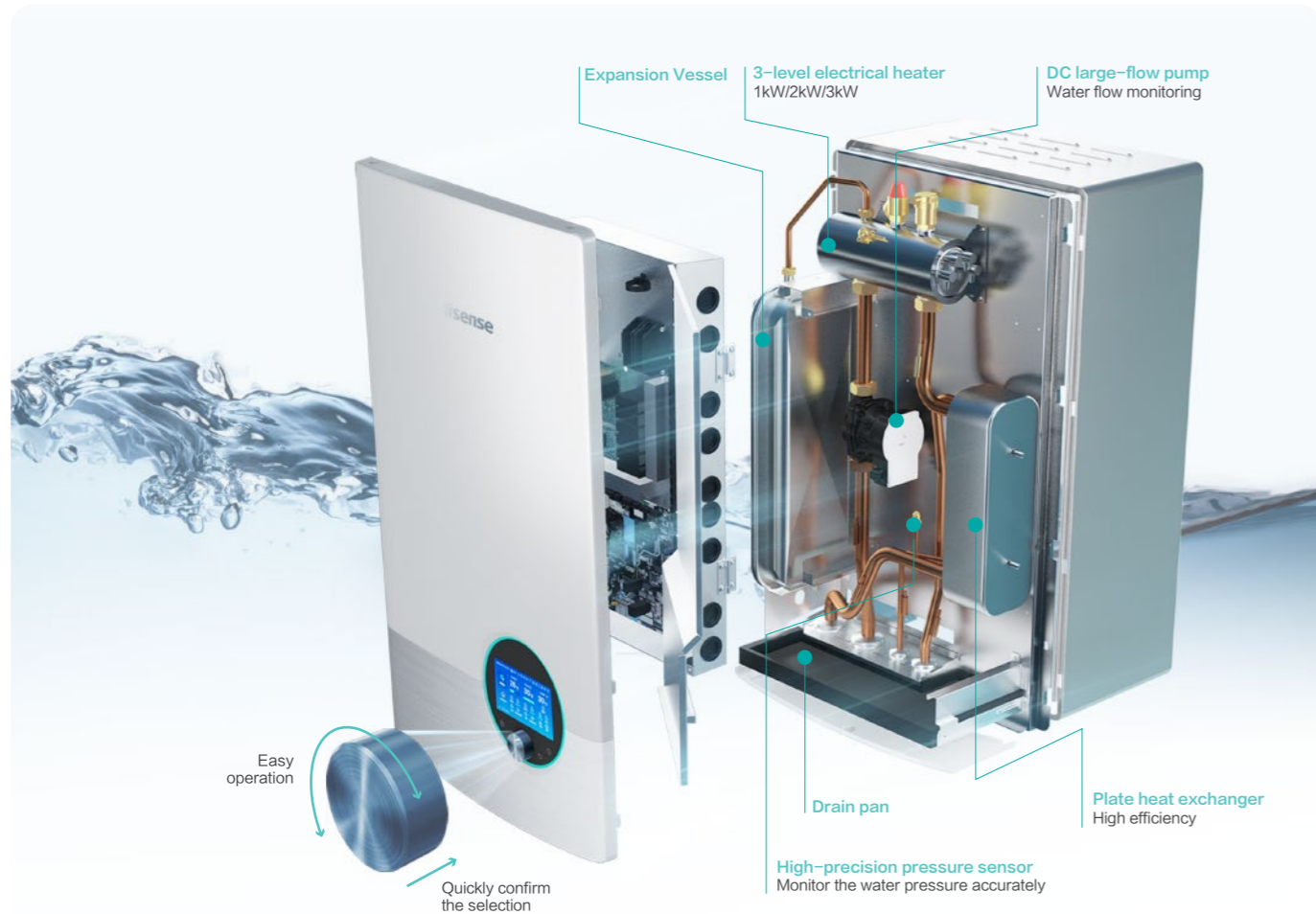
Hi-Mit II Adaptor

## 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.



Up to 20%  
space



### 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: Standard for Monobloc and optional for split



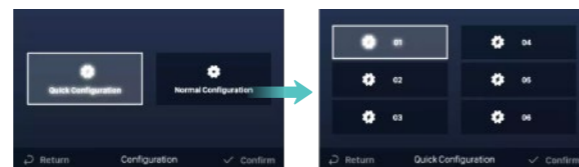
#### HSXM-FE01

- ◆ 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.



### Stylish Controller in Indoor Unit

#### Excellent human-computer interaction experience

The indoor unit has a built-in large colorful screen wired controller, which can be easily operated through the knob and the buttons, and all water cycles and rooms can be configured separately. The main interface can intuitively displays the settings of each water cycles and the current water temperature in real time. The LED light strip around the wire controller can intuitively indicate 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.

## Plate Heat Efficiency and Anti-Freeze

Hi-therma 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.

## Eco-friendly Refrigerant R32

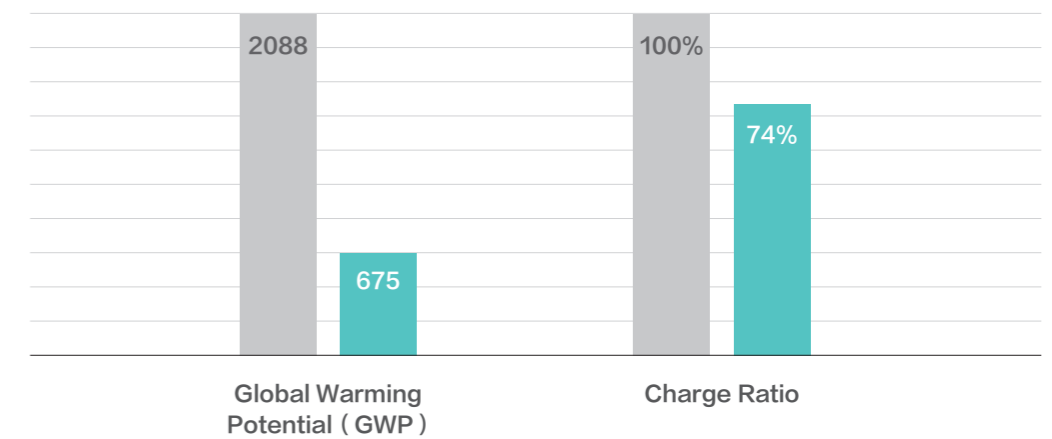
R32 refrigerant contributes to meeting the F-gas regulation targets as described in EU regulation 517/2014. Hisense Hi-Therma heat pump system adopts R32 refrigerant, which is a perfect solution for attaining the new European CO2 emission targets.

### 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

R32

R410A R32



## Save Space

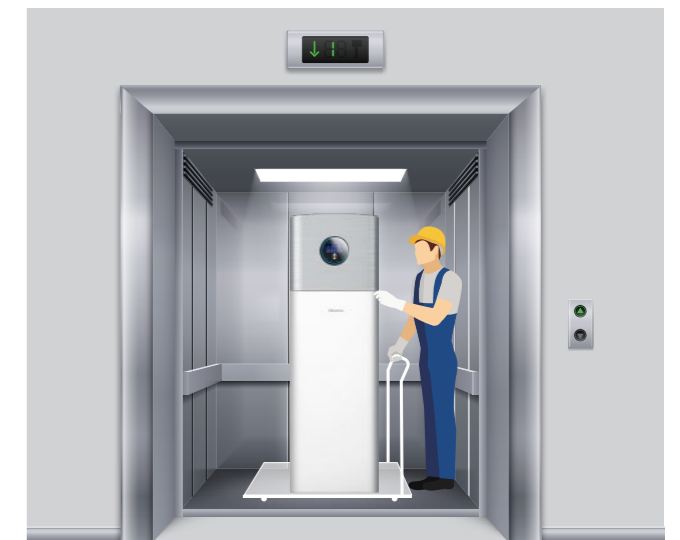
Integration of the water tank and control components together can save you up to 30% space in your home or facility, giving you more opportunities and possibilities to use your space for other things.

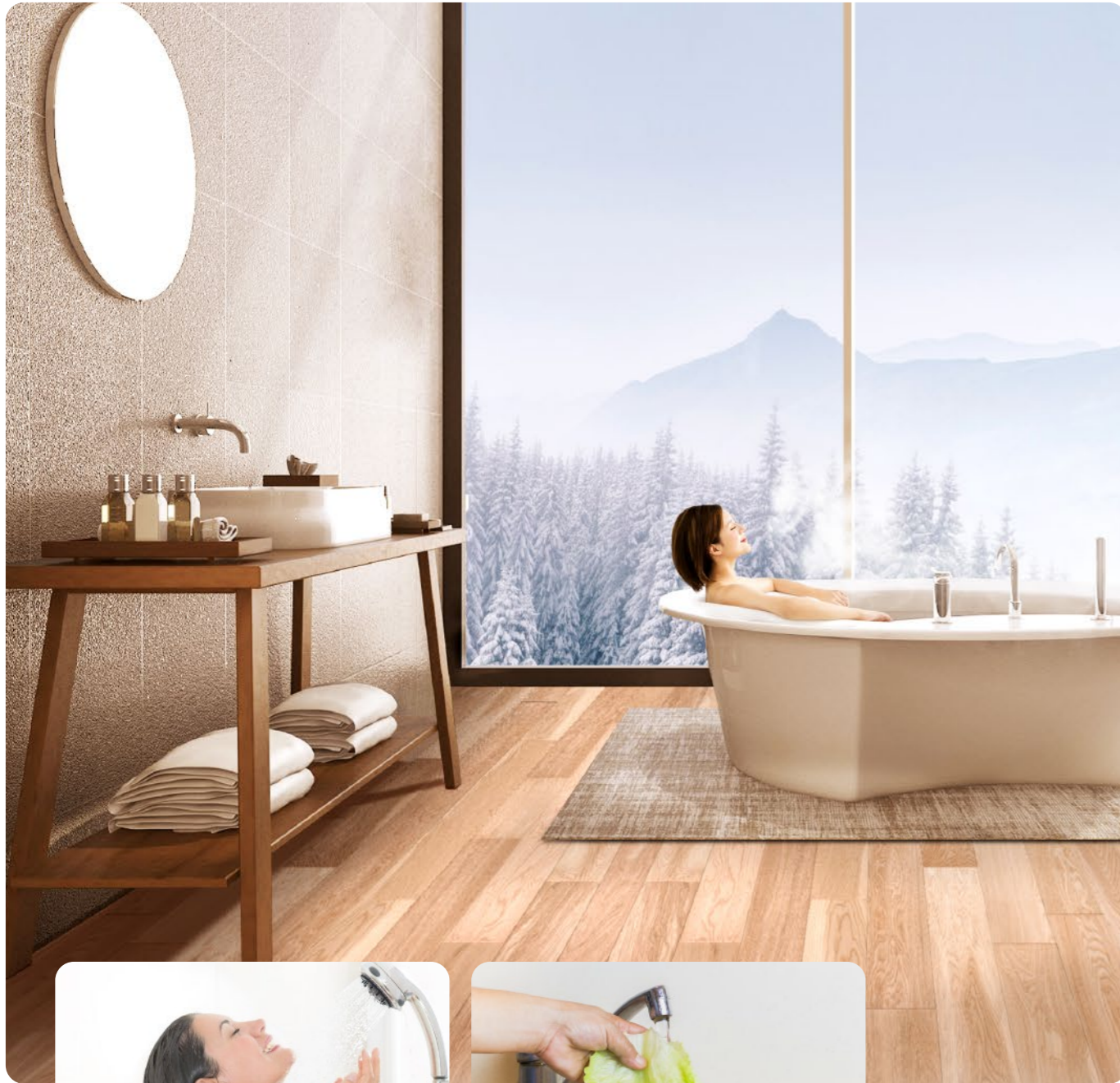


Note: \*Compared to Hi-Therma Split + 230L DHW Tank.

## Easy Transportation

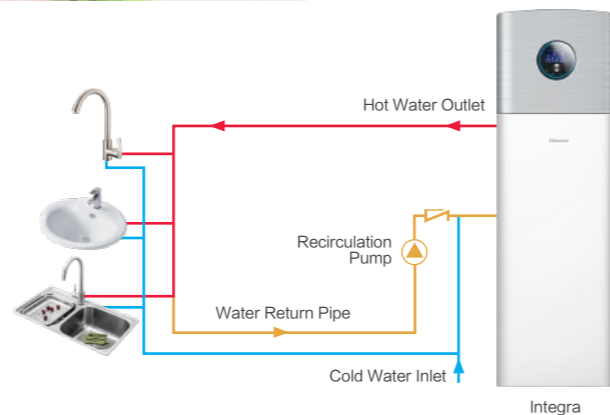
Especially designed with a one-piece-fits-all size, transporting or moving it with any cart or trolley becomes easy and convenient. Place it wherever you like without a hassle.





### Zero 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 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

#### User Convenience

- Reddot award design
- 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

### Product Lineup Overview

Series	Max Temp. of Outlet Water	Power Supply	Capacity
R32 Split	60°C	AC1φ, 220-240V/50Hz	4.4 kW
			6.0 kW
			8.0 kW
R32 Split	65°C	AC1φ, 220-240V/50Hz (AC 3φ, 380-415V/50Hz)	10.0 kW
			12.0 kW
			14.0 kW
			16.0 kW
R32 Monobloc	60°C	AC1φ, 220-240V/50Hz	4.4 kW
			8.0 kW
R32 Monobloc	65°C	AC1φ, 220-240V/50Hz (AC 3φ, 380-415V/50Hz)	10.0 kW
			12.0 kW
			14.0 kW
			16.0 kW
R32 Integra	60°C	AC1φ, 220-240V/50Hz	4.4 kW
			6.0 kW
R32 Integra	65°C	AC1φ, 220-240V/50Hz (AC 3φ, 380-415V/50Hz)	8.0 kW
			10.0 kW
			12.0 kW
R32 Integra	65°C	AC1φ, 220-240V/50Hz (AC 3φ, 380-415V/50Hz)	14.0 kW
			16.0 kW
			16.0 kW

Specification (4~8kW)



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°C	IWT/OWT 30 / 35°C	Capacity (Min./Nom./Max.)	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
	OAT (DB/WB) -7 / -8°C	IWT/OWT 47 / 55°C	Capacity (Nom./Max.)	4.40 / 6.00	6.00 / 7.50	8.00 / 9.00
			COP (Nom.)	3.00	3.05	2.80
Nominal Cooling Operation*1	OAT (DB) 35°C	IWT/OWT 30 / 35°C	Capacity (Nom./Max.)	4.40 / 5.00	5.30 / 5.90	5.80 / 7.30
			COP (Nom.)	3.26	3.16	3.14
	IWT/OWT 47 / 55°C	Capacity (Nom./Max.)	4.00 / 4.20	4.70 / 5.10	5.00 / 6.40	
			COP (Nom.)	1.97	2.04	1.94
Seasonal Performance*2	Water Outlet 35°C	SCOP	5.00	4.93	4.92	
		Seasonal Heating Efficiency (ηs)	197	194	194	
	Water Outlet 55°C	Energy Rating	A+++	A+++	A+++	
		SCOP	3.23	3.33	3.42	
Sound Pressure*3	Water Outlet 18°C	SEER	8.87	8.73	8.54	
		Seasonal Cooling Efficiency (ηs)	352	346	339	
	Water Outlet 7°C	SEER	5.75	5.85	5.73	
		Seasonal Cooling Efficiency (ηs)	227	231	226	
Sound Power	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)	38/38	35/35	39/39
Fan	Normal Mode (Heating/Cooling)	dB(A)	61/61	62/61	64/61	
		Condenser Fan Quantity	1	1	1	
Outer Dimensions	Height × Width × Depth	mm	750 × 900 × 340	807 × 1022 × 445	840 × 1100 × 390	
		mm	48.5/52.5	48.5/52.5	49.0/53.5	
Refrigerant System	Compressor	Type	Rotary	Rotary	Rotary	
		Refrigerant Charge	kg	0.98	0.98	1.05
Operation Range	Heating	Outdoor Ambient Temperature	°C (DB)	-25~35	-25~35	
		Outlet Water Temperature	°C	15~60	20~65	
	DHW	Outdoor Ambient Temperature	°C (DB)	-25~40	-25~43	
		Tank Water Temperature	°C	30~55(75 <sup>4</sup> )	30~60 (75 <sup>4</sup> )	
Cooling	Outdoor Ambient Temperature	°C (DB)	5~46	5~46		
	Outlet Water Temperature	°C	5~22	5~22		
Power Supply	Indoor Unit	AC 1ϕ, 220-240V/50Hz	AHM-044HCDSAA	AHM-060HCDSAA	AHM-080HCDSAA	
		Water Flow Rate	m³/h	1.21	1.53	1.90
Min. Water Flow Rate	Net Lift Pressure	m	6.2	4.7	3.2	
		Max. Lift Pressure	m	7.6	3.5	
DC Water Pump	Max. Water Flow Rate	m³/h	6.2	4.7	3.2	
		Energy Efficiency Class	A	A	A	
	Speed	Inverter	Inverter	Inverter		
		Max. Power Input	W	50	12/3	
Shut-off Valve with Filter	Water Electric Heater (3 Steps)	Material	Brass	Brass		
		Diameter	in.	G1	G1	
	Mesh Filter	Mesh Filter	50	50		
		Type Filter	Self-cleaning (with back flush)	Self-cleaning (with back flush)		
Outer Dimensions(with connections)	Height × Width × Depth	mm	890 × 520 × 320	419 × 1160 × 650	890 × 520 × 320	
		mm	41.5/48.5	41.5/48.5	42.5/49.5	
Refrigerating Installation	Connection Type	Flare Nut Connection	Flare Nut Connection	Flare Nut Connection		
		Gas Pipe	mm(in.)	φ 12.7(1/2)	φ 12.7(1/2)	
	Liquid Pipe	mm(in.)	φ 6.35(1/4)	φ 6.35(1/4)		
		Connection type	Screwed Connection	Screwed Connection		
Water Installation	Shutdown valves	in.	G1" (female)	G1" (female)		
		Inlet pipe diameter	in.	G1" (male)	G1" (male)	
	Outlet pipe diameter	in.	G1" (male)	G1" (male)		
		in.	G1" (male)	G1" (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.  
 \*5: The value is the data when electric heater is working.  
 OAT: Outdoor ambient temperature; IWT: Inlet water temperature; OWT: Outlet water temperature

Specification (10~16kW)



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°C	IWT/OWT 30 / 35°C	Capacity (Nom./Max.)	kW	10.0/12.5	12.0/14.5	14.0/16.0	16.0/18.0
			COP (Nom.)	5.10	4.95	4.80	4.60	
	OAT (DB/WB) -7 / -8°C	IWT/OWT 47 / 55°C	Capacity (Nom./Max.)	kW	9.0/11.0	11.2/13.0	13.0/15.0	15.0/17.0
			COP (Nom.)	3.10	3.05	3.05	2.95	
Nominal Cooling Operation*1	OAT (DB) 35°C	IWT/OWT 30 / 35°C	Capacity (Nom./Max.)	kW	9.5/9.5	10.8/10.8	13.5/13.5	14.0/14.0
			COP (Nom.)	3.10	3.00	2.85	2.80	
	IWT/OWT 47 / 55°C	Capacity (Nom./Max.)	kW	8.0/8.0	8.5/8.5	10.0/10.0	11.0/11.0	
		COP (Nom.)	2.15	2.10	2.05	2.00		
Seasonal Performance*2	Water Outlet 35°C	SCOP	4.83	4.76	4.61	4.49		
		Seasonal Heating Efficiency (ηs)	197.0	187.0	181.0	177.0		
	Water Outlet 55°C	Energy Rating	A+++	A+++	A+++	A+++		
		SCOP	3.58	3.46	3.29	3.28		
Sound Pressure*3	Water Outlet 18°C	SEER	140.0	135.0	129.0	128.0		
		Seasonal Cooling Efficiency (ηs)	227	231	226			
	Water Outlet 7°C	SEER	5.75	5.85	5.73			
		Seasonal Cooling Efficiency (ηs)	227	231	226			
Sound Power	Normal Mode (Heating/Cooling)	dB(A)	48	49	51	53		
		Low Noise Mode (Heating/Cooling)	dB(A)	43	46	46	48	
		Night Shift Mode (Heating/Cooling)	dB(A)	42	42	44	44	
Fan	Normal Mode (Heating/Cooling)	dB(A)	62	64	66	67		
		Condenser Fan Quantity	1	1	1	1		
Outer Dimensions	Height × Width × Depth	mm	840 × 1100 × 390	1000 × 1185 × 530	1000 × 1185 × 530	1000 × 1185 × 530		
		mm	77.0/92.0	77.0/92.0	90.5/105.5	90.5/105.5		
Refrigerant System	Compressor	Type	Rotary	Rotary	Rotary			
		Refrigerant Charge	kg	1.8	1.8	2.7		
	Piping	Gas Pipe	mm(in.)	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)		
Operation Range	Heating	Outdoor Ambient Temperature	°C (DB)	-25~35	-25~35			
		Outlet Water Temperature	°C	20~65	20~65			
	DHW	Outdoor Ambient Temperature	°C (DB)	-25~43	-25~43			
		Tank Water Temperature	°C	30~60 (75 <sup>4</sup> )	30~60 (75 <sup>4</sup> )			
Cooling	Outdoor Ambient Temperature	°C (DB)	5~46	5~46				
	Outlet Water Temperature	°C	5~22	5~22				
Power Supply	Indoor Unit	AC 1ϕ, 220-240V/50Hz	AHM-100HCDSAA	AHM-120HCDSAA	AHM-140HCDSAA	AHM-160HCDSAA		
		Water Flow Rate	m³/h	1.72	2.06	2.41	2.75	
DC Water Pump	Min. Water Flow Rate	m³/h	0.8	0.9	1.1	1.2		
		Max. Lift Pressure	m	12	5.6			
	Speed	Max. Water Flow Rate	m³/h	6.2	4.7	3.2		
		Energy Efficiency Class	A	A	A			
Shut-off Valve with Filter	Water Electric Heater (3 Steps)	Material	Brass	Brass				
		Diameter	in.	G1	G1			
	Mesh Filter	Mesh Filter	50	50				
		Type Filter	Self-cleaning (with back flush)	Self-cleaning (with back flush)				
Outer Dimensions(with connections)	Height × Width × Depth	mm	890 × 520 × 320	419 × 1160 × 650	890 × 520 × 320			
		mm	41.5/48.5	41.5/48.5	42.5/49.5			
Refrigerating Installation	Connection Type	Flare Nut Connection	Flare Nut Connection	Flare Nut Connection				
		Gas Pipe	mm(in.)	φ 12.7(1/2)	φ 12.7(1/2)			
	Liquid Pipe	mm(in.)	φ 6.35(1/4)	φ 6.35(1/4)				
		Connection type	Screwed Connection	Screwed Connection				
Water Installation	Shutdown valves	in.	G1" (female)	G1" (female)				
		Inlet pipe diameter	in.	G1" (male)	G1" (male)			
	Outlet pipe diameter	in.	G1" (male)	G1" (male)				
		in.	G1" (male)	G1" (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.  
 \*5: The value is the data when electric heater is working.  
 OAT: Outdoor ambient temperature; IWT: Inlet water temperature; OWT: Outlet water temperature

Specification (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.)	1.85 / 4.40 / 7.00	2.10 / 8.00 / 11.0
			COP (Nom.)	5.10	4.90
		IWT/OWT 47 / 55°C	Capacity (Nom./Max.)	4.40 / 6.00	8.00 / 9.00
	OAT (DB/WB) -7 / -8°C		COP (Nom.)	3.00	2.80
		IWT/OWT 30 / 35°C	Capacity (Nom./Max.)	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	4.40	6.50
			EER	4.00	3.35
		IWT/OWT 23 / 18°C	Nominal Capacity	5.60	7.00
		EER	5.60	5.10	
	Seasonal Performance*2	Water Outlet 35°C	SCOP	5.17	5.00
			Seasonal Heating Efficiency (ηs)	204	197
Energy Rating			A+++	A+++	
Water Outlet 55°C		SCOP	3.47	3.50	
		Seasonal Heating Efficiency (ηs)	136	137	
		Energy Rating	A++	A++	
Sound Pressure*3	Normal Mode (Heating/Cooling)		dB(A)	47/47	50/47
	Low Noise Mode (Heating/Cooling)		dB(A)	40/40	43/43
	Night Shift Mode (Heating/Cooling)		dB(A)	36/36	39/39
Sound Power	Normal Mode (Heating/Cooling)		dB(A)	61/61	64/61
Fan	Condenser Fan Quantity		—	1	1
	Air Flow Rate		m³/h	2700	2700
Max. Running Current			A	10.53	17.53
Recommended Fuse			A	16	20
Outer Dimensions	Height × Width × Depth		mm	815 × 1270 × 340	815 × 1270 × 340
Packing Dimensions	Height × Width × Depth		mm	890 × 1400 × 440	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	1.21
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	1.38
	Min. Water Flow Rate		m³/h	0.50	0.60
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 a 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 (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-100HCDS1	AHZ-120HCDS1	AHZ-140HCDS1	AHZ-160HCDS1		
Power Supply				1N, 220-240V, 50Hz				3N, 380-415V, 50Hz					
Nominal Heating Operation*1	7 / 6°C	30 / 35°C	Capacity (Min./Nom./Max.)	Unint	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	
		47 / 55°C	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	
			COP (Nom.)	—	3.10	3.05	3.05	2.95	3.10	3.05	3.05	2.95	
		-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	3.00	2.85	2.80	3.10	3.00	2.85	2.80	
	47 / 55°C	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		
		COP (Nom.)	—	2.20	2.15	2.10	2.00	2.20	2.15	2.10	2.00		
	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
			23 / 18°C	Nominal Capacity	kW	9	11	14	15.5	9	11	14	15.5
				EER	—	4.50	4.10	4.20	3.90	4.50	4.10	4.20	3.90
Seasonal Performance*2	Water Outlet 35°C	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		
		Energy Rating	—	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++		
	Water Outlet 55°C	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		
		Energy Rating	—	A++	A++	A++	A++	A++	A++	A++	A++		
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		123		110.5		125			
Gross Weight			kg	127		142		129		144			
Refrigerant System	Compressor	Type	—	Rotary									
	Refrigeration Oil	Type	—	FW68S	FW68S	FW68S	FW68S	FW68S	FW68S	FW68S	FW68S	FW68S	
		Charge	L	0.87	0.87	1.25	1.25	0.87	0.87	1.25	1.25		
	Refrigerant 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 a 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

# Integra

## Specification (4~8kW)

### System Performance



HP		2.0HP		2.5HP		3.0HP		
Outdoor Unit Type		AHW-044HCDS1		AHW-060HCDS1		AHW-080HCDS1		
Power Supply		220-240V ~50Hz		220-240V ~50Hz		220-240V ~50Hz		
Nominal Heating Operation*1	OAT (DB/WB)	IWT / OWT	Parameters		Parameters		Parameters	
			Capacity (Min./Nom./Max.)	COP (Nom.)	Capacity (Min./Nom./Max.)	COP (Nom.)	Capacity (Min./Nom./Max.)	COP (Nom.)
7 / 6°C	30 / 35°C	30 / 35°C	Capacity (Min./Nom./Max.)	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°C	47 / 55°C	Capacity (Nom./Max.)	4.40 / 6.00	6.00 / 7.50	8.00 / 9.00		
			COP (Nom.)	3.00	3.05	2.80		
-7 / -8°C	30 / 35°C	30 / 35°C	Capacity (Nom./Max.)	4.40 / 5.00	5.30 / 5.90	5.80 / 7.30		
			COP (Nom.)	3.26	3.16	3.14		
	47 / 55°C	47 / 55°C	Capacity (Nom./Max.)	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 / -- °C	12 / 7°C	Nominal Capacity	4.40	5.00	6.00		
			EER	3.90	3.70	3.60		
	23 / 18°C	23 / 18°C	Nominal Capacity	5.60	6.00	7.00		
			EER	5.60	5.60	5.10		
Seasonal Performance*2	Water Outlet 35°C	35°C	SCOP	5.00	4.93	4.92		
			Seasonal Heating Efficiency (ηs)	197	194	194		
	Water Outlet 55°C	55°C	SCOP	3.23	3.33	3.42		
			Seasonal Heating Efficiency (ηs)	126	130	134		
Water heating energy efficiency (ηwh)			135	135	135			
Water heating energy class			A+	A+	A+			
Sound Pressure*3	Normal Mode (Heating/Cooling)		47/47	48/47	50/47			
	Low Noise Mode (Heating/Cooling)		39/39	42/42	43/43			
	night shift Mode (Heating/Cooling)		35/35	38/38	39/39			
Sound Power	Normal Mode (Heating/Cooling)		61/61	62/61	64/61			
	Condenser Fan Quantity		1	1	1			
Fan	Air Flow Rate		2700	2700	2700			
	Height × Width × Depth		750 × 900 × 340	807 × 1022 × 445				
Outer Dimensions	Height × Width × Depth		750 × 900 × 340	807 × 1022 × 445				
	Packing Dimensions		807 × 1022 × 445					
Net Weight	Net Weight		48.5	48.5	49			
	Gross Weight		52.5	52.5	53.5			
Refrigerant System	Compressor	Type	Rotary					
		Quantity	1					
	Refrigeration Charge	Type	R32					
		Before Shipment	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	4	4		
	Maximum chargeless piping length			8	8	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	-25~35			
	Outlet water temperature		℃	15~60	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)	-25~40℃	-25~43			
	Tank water temperature		℃	30~55(75)*4	30~60(75)*4			

Indoor Unit Model		AHS-044HCDSAA-23	AHS-060HCDSAA-23	AHS-080HCDSAA-23
Power supply		220-240V ~50Hz		
Nominal water flow	IWT: 30°C / OWT: 35°C ΔT: 5°C	0.76	1.03	1.38
DC Water Pump	Max. Lift Pressure	m	9	9
	Max. Water Flow Rate	m³/h	4.5	4.5
	Type		Inverter	Inverter
	Max. Power Input	W	95	95
Water Electric Heater for heating(3 Steps)		1/2/3		
Shut-off valve with filter	Material	Brass		
	Diameter	1		
	Mesh	50		
Outer Dimensions		Self-cleaning (with back flush)		
Packing Dimensions	Height × Width × Depth	1885 × 590 × 625		
	Height × Width × Depth	2070 × 700 × 710		
Net Weight	Net Weight	124.5	124.5	125.0
	Gross Weight	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")
	Gas pipe (Piping diameter)	mm (in.)	φ12.70 (1/2")	φ15.88 (5/8")
Space heating pipes connection	Connection type	Screwed Connection		
	Shut-off valves	G 1" - G 1"(female)		
	Inlet pipe diameter	mm (in.)	G 1"(female)	G 1"(female)
	Outlet pipe diameter	mm (in.)	G 1"(female)	G 1"(female)
DHW pipes connection	Connection type	Screwed Connection		
	Inlet pipe diameter	mm (in.)	G 3/4"(female)	G 3/4"(female)
	Outlet pipe diameter	mm (in.)	G 3/4"(female)	G 3/4"(female)
DHW tank rated volume		230L		
Noise level (sound pressure)*1	Noise level (sound pressure)	26	26	26
	Noise level (sound power)	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 a 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

# AIR TO WATER HEAT PUMP

# Specification (10~16kW)

### System Performance



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-100HCDS1		AHW-120HCDS1		AHW-140HCDS1		AHW-160HCDS1		
Power Supply		220-240V ~50Hz		220-240V ~50Hz		220-240V ~50Hz		220-240V ~50Hz		380-415V 3N ~50Hz		380-415V 3N ~50Hz		380-415V 3N ~50Hz		380-415V 3N ~50Hz		
Nominal Heating Operation*1	OAT (DB/WB)	IWT / OWT	Parameters		Parameters		Parameters		Parameters		Parameters		Parameters		Parameters		Parameters	
			Capacity (Min./Nom./Max.)	COP (Nom.)	Capacity (Min./Nom./Max.)	COP (Nom.)	Capacity (Min./Nom./Max.)	COP (Nom.)	Capacity (Min./Nom./Max.)	COP (Nom.)	Capacity (Min./Nom./Max.)	COP (Nom.)	Capacity (Min./Nom./Max.)	COP (Nom.)	Capacity (Min./Nom./Max.)	COP (Nom.)	Capacity (Min./Nom./Max.)	COP (Nom.)
7 / 6°C	30 / 35°C	30 / 35°C	Capacity (Min./Nom./Max.)	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°C	47 / 55°C	Capacity (Nom./Max.)	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	3.1	3.05	3.05	2.95							
-7 / -8°C	30 / 35°C	30 / 35°C	Capacity (Nom./Max.)	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	3.1	3.00	2.85	2.80							
	47 / 55°C	47 / 55°C	Capacity (Nom./Max.)	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 / -- °C	12 / 7°C	Nominal Capacity	8.5	10	11	13	8.5	10	11	13							
			EER	3	2.85	2.85	2.7	3.00	2.85	2.85	2.70							
	23 / 18°C	23 / 18°C	Nominal Capacity	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°C	35°C	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							
	Water Outlet 55°C	55°C	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							
Water heating energy efficiency (ηwh)			126.00	126.00	124.00	124.00	126.00	126.00	124.00	124.00								
Water heating energy class			A+	A+	A+	A+	A+	A+	A+									
Sound Pressure*3	Normal Mode		48	49	51	53	48	49	51	53								
	Low Noise Mode (Heating)		43	46	46	48	43	46	46	48								
	Night Shift Mode (Heating)		42	42	44	44	42	42	44	44								
Sound Power	Normal Mode		62	64	66	67	62	64	66	67								
	Condenser Fan Quantity		1	1	1	1	1	1	1	1								
Fan	Air Flow Rate		3900	3900	4200	4200	3900	3900	4200	4200								
	Height × Width × Depth		840 × 1100 × 390	1000 × 1185 × 530			840 × 1100 × 390	1000 × 1185 × 530										
Outer Dimensions	Height × Width × Depth		840 × 1100 × 390	1000 × 1185 × 530			840 × 1100 × 390	1000 × 1185 × 530										
	Packing Dimensions		1000 × 1185 × 530				1000 × 1185 × 530											
Net Weight	Net Weight		77.0	77.0	90.5	90.5	78.0	78.0	92.5	92.5								
	Gross Weight		92.0	92.0	105.5	105.5	93.0	93.0	107.0	107.0								
Refrigerant System	Compressor	Type	Rotary															
		Quantity	1															
	Refrigeration Charge	Type	R32															
		Before Shipment	1.8	1.8	2.7	1.8	1.8	2.7										
	Gas Pipe	mm	φ15.88	φ15.88	φ15.88	φ15.88	φ15.88											
		in.	5/8	5/8	5/8	5/8	5/8											
	Liquid Pipe	mm	φ9.53	φ9.53	φ9.53	φ9.53	φ9.53											
		in.	3/8	3/8	3/8	3/8	3/8											
	Minimum piping length			4	4	4												
	Maximum chargeless piping length			15	15	15												
Maximum piping length			50	50	50													
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	-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-100HCDSAA-23	AHS-120HCDSAA-23	AHS-140HCDSAA-23	AHS-160HCDSAA-23	AHS-100HCDSAA-23	AHS-120HCDSAA-23	AHS-140HCDSAA-23	AHS-160HCDSAA-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°C / OWT: 35°C ΔT: 5°C	1.72	2.06	2.41	2.75	1.72	2.06	2.41	2.7