Hisense

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

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ISO14001 ISO9001 ISO81001

HCAC-CA-ATW202401



Hisense

# AIR TO WATER HEAT PUMP

Hi-Therma


Reimagine your solution

# GLOBAL HISENSE SINCE 1969

Hisense has started a long-term sports marketing strategy to increase brand awareness worldwide. After the successful sponsorship of **UEFA EURO 2016 & 2020** and **FIFA WORLD CUP 2018 & 2022**, Hisense has made clear its focus on football. Hisense also is the official partner of **UEFA EURO 2024.**

2014

Official Sponsor of the
Australian Open

2015

Team Supplier to
Red Bull Racing

2016

Official Partner of
UEFA EURO 2016

2020

Official Partner of
UEFA EURO 2020

2022

Official Sponsor of
2022 FIFA World Cup

2024

Official Partner of
UEFA EURO 2024

266,000 m²
Manufacturing Area

40+
Production Line

6,000,000 units/year
Production Capacity

16,700 m²/70+
Laboratory

# Hisense HVAC MANUFACTURING BASE

Qingdao Hisense HVAC Equipment Co. Ltd. is a leading manufacturer of heating, ventilation, air conditioning and other HVAC equipments, integrated with the product development, manufacturing, sales and after-sales service as a whole.

Hisense HVAC always regards product technology research and development as the most important value. With strong technological innovation capabilities, Hisense HVAC has participated in the formulation and revision of 112 national standards, industry standards and association standards, and boasts 2020 authorized patents in the field of CAC and heat pump products. With the great support of all shareholders and customers, Hisense HVAC is expected to become the leading brand in the industry.

Note: The above data is as of Dec. 31th, 2023.

# Air to Water
## Heat Pump System

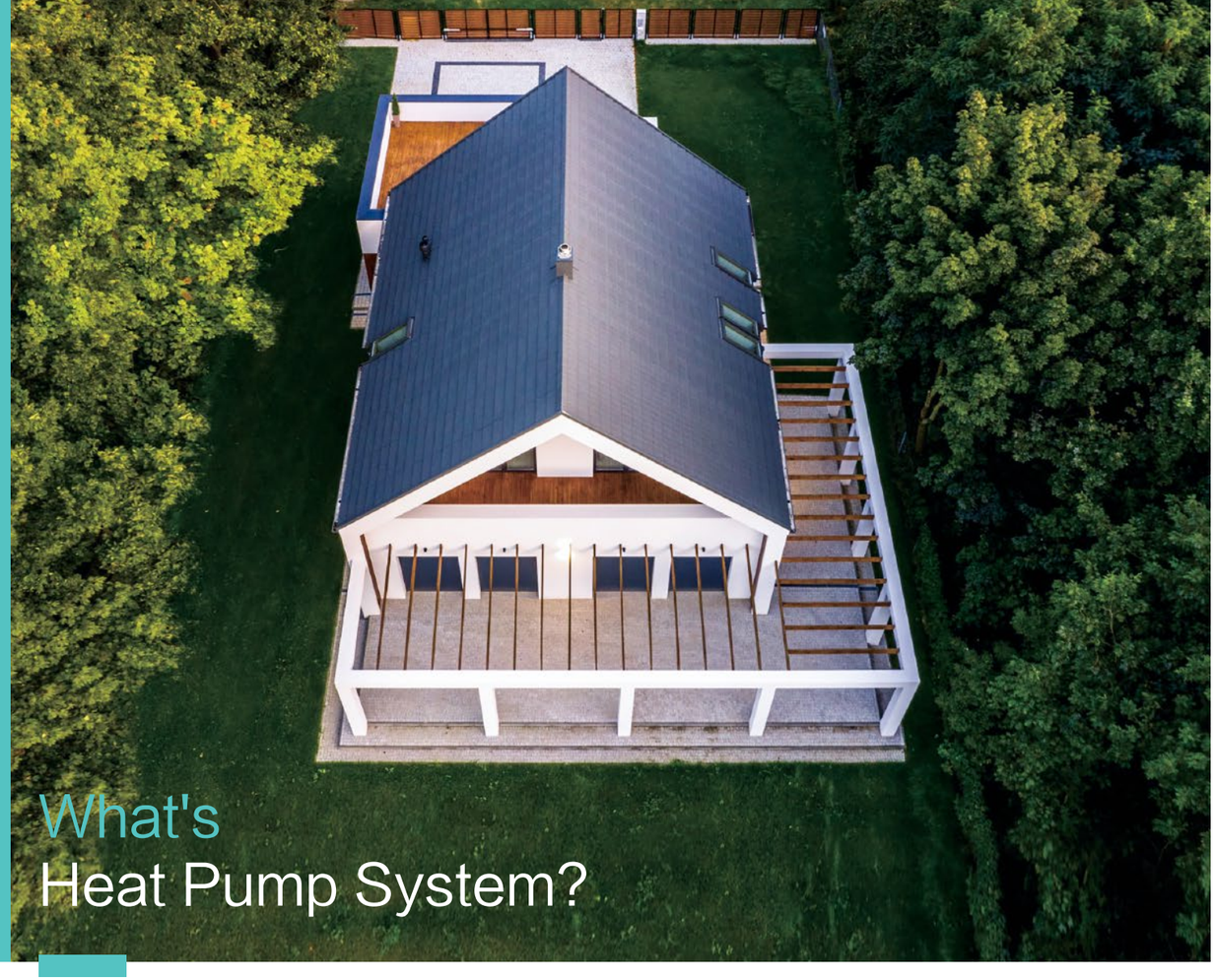
ATW heat pump system is a ground breaking low energy system for cooling, heating and domestic hot water production, which delivers outstanding performance, even at extreme outdoor temperatures.

**Absolute comfort with efficient and eco-friendly operation**

# CONTENTS

# Heat Pump System Profile

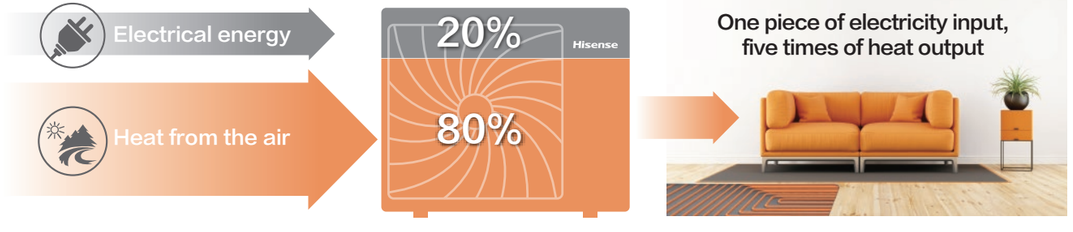
ATW heat pump system is a new generation of heating solutions that use a renewable, free energy source (the air) to heat or cool the home and to produce hot water.



# What's Heat Pump System?

The heat pump system is a device that transforms energy from the air, the soil and the water to useful heat. Compared with the conventional electrical heater and fossil fuel heater, the system is more energy-efficient, eco-friendly.

Thanks to the heat pump technology, the air to water heat pump system can be driven by a small amount of electric energy, extract renewable heat from the outside air, and then supply a large amount of heat to your home. The heat output is greater than the electricity input, thus the system is extremely high efficiency.





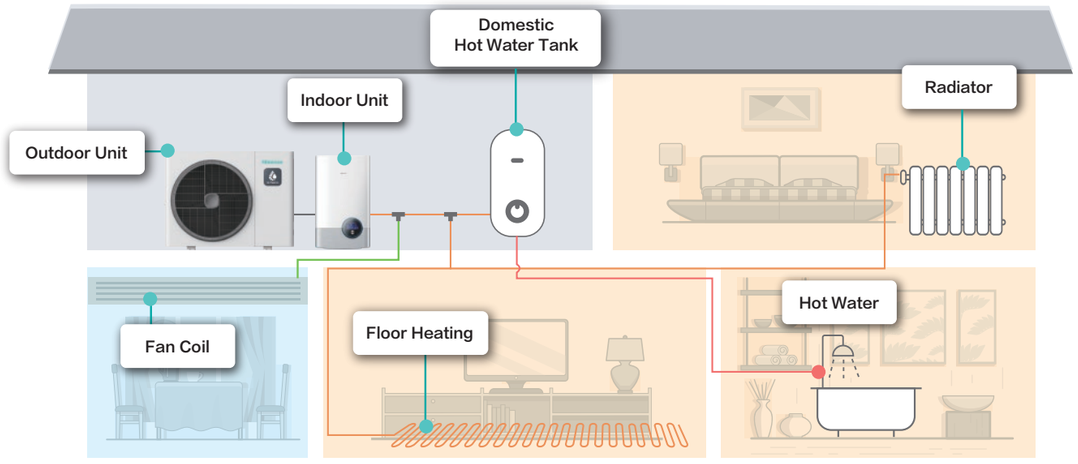



Prior to this, traditional heating systems mainly used fuels such as gas, oil, and coal but these fuels easily cause environmental pollution, emit large amounts of carbon dioxide into the air, and cause global climate changes. The air source heat pump system effectively reduces environmental pollution while maintaining high energy efficiency.


**Conventional Boiler**

**Air to Water Heat Pump**

## How do Air to Water Heat Pumps Work?



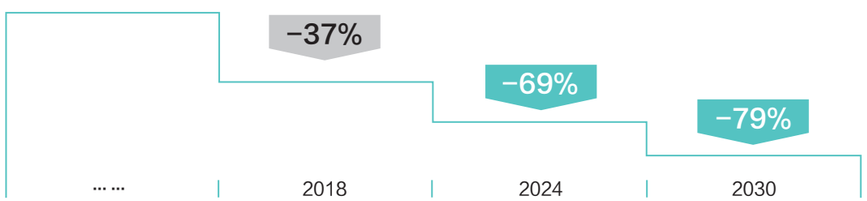
# Regulations and Certifications

## F-Gas Regulation

European regulation F-GAS (517/2014) came into force on 1st January 2015, in order to reduce greenhouse gas emissions. It aims to reduce the environmental impact of F-gases through the reduction of the amount of HFC (hydrofluorocarbon) refrigerant used in cooling and heating systems.

The regulation 517/2014 prescribes a phase-down of HFCs, where the quantities of HFCs that are placed on the market are gradually reduced through the allocation of quotas by the European Commission. The phase-down targets are expressed in $CO_2$ equivalents (= kg x GWP- Global Warming Potential) and aim to reduce HFC consumption by 79% in 2030.

**Consumption of HFC compared to $CO_2$ equivalent tonnes**




## KEYMARK Certifcate

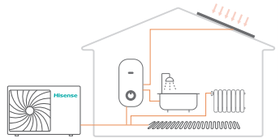
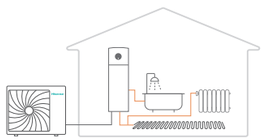
The Heat Pump KEYMARK is a voluntary, independent European certification mark (ISO type 5 certification) for all heat pumps, combination heat pumps and hot water heaters (as covered by Ecodesign, EU Regulation 811/2013 and 813/2013).

It is based on independent, third party testing and demonstrates compliance with product requirements as set in the Heat Pump KEYMARK scheme rules and with efficiency requirements as set by Ecodesign.

The Heat Pump KEYMARK scheme is owned by the European Committee for standardization (CEN). The certificates are granted by independent Certification Bodies to products fulfilling all requirements of the scheme.

Check all our certified heat pumps on: www.heatpumpkeymark.com

# Product Lineup Overview

| Series | Hi-Therma | | |
|---|---|---|---|
| Type | Split | Monobloc | Integra |
| Diagram |  |  |  |
| Refrigerant Type | R32 | R32 | R32 |
| Line-up | 1 phase<br>4.4/6.0/8.0/10.0/12.0/14.0/16.0kW | 1 phase<br>4.4/8.0/10.0/12.0/14.0/16.0kW | 1 phase<br>4.4/6.0/8.0/10.0/12.0/14.0/16.0kW |
| | 3 phase<br>10.0/12.0/14.0/16.0kW | 3 phase<br>10.0/12.0/14.0/16.0kW | 3 phase<br>10.0/12.0/14.0/16.0kW |
| Application | | | |
| Energy Label Space Heating 35℃ | A+++ | A+++ | A+++ |
| Energy Label Space Heating 55℃ | A++ | A++ | A++ |
| Benefit | • A+++ energy efficiency<br>• Stable heating under −25℃<br>• 65℃* leaving water<br>• Two separate temp. cycles<br>• Smart APP control<br>• Visual display of energy consumption<br>• Centralized control for different water cycles and individual control for rooms<br>• Suitable for different complex application scenarios | • A+++ energy efficiency<br>• Stable heating under −25℃<br>• 65℃* leaving water<br>• Two separate temp. cycles<br>• Smart APP control<br>• Visual display of energy consumption<br>• Centralized control for different water cycles and individual control for rooms<br>• Suitable for different complex application scenarios<br>• Easy installation without refrigerant operation | • A+++ energy efficiency<br>• Stable heating under −25℃<br>• 65℃* leaving water<br>• Two separate temp. cycles<br>• Smart APP control<br>• Visual display of energy consumption<br>• Centralized control for different water cycles and individual control for rooms<br>• Suitable for different complex application scenarios |

*NOTE：65℃ for 10-16kW units and 60℃ for 4-8kW units.

R-32 AIR TO WATER HEAT PUMP

# Hi-Therma Series

# Features Overview


## High Efficiency and Excellent Performance

### R32 Eco-friendly refrigerant

Adopting refrigerant R32 show a drastic reduction in the value of Global Warming Potential (GWP).

### A+++ energy efficiency

Energy efficiency class up to A+++ in a scale from A+++ to D, with better efficiency & value for low temperature applications.

### Interlock with 3rd party heat source

Can be interlocked with the solar thermal system and the boiler.

### −25℃ stable operation

Achieve stable operation even under extremely low temperature −25℃.

### 65℃ leaving water

Up to 65℃ leaving water can be produced by the indoor unit

### 75℃ domestic hot water

Max. 75℃ hot water can be generated in the water tank, achieving sterilization.

### Smart grid interlock and PV enabled

The system's potential can be maximised by connecting to Smart Grid or PV.

### High-efficiency DC pump

It is featured with water flow monitoring, achieving variable water flow control.

## User Convenience

### Two separate temp. cycles

Achieve different water temp. for the floor heating and radiators.

### Up to 7 rooms with independent temp. control

Max. 7 rooms independent control with our room thermostat and wall mounted temp. sensor.

### Low noise operation

This function can be activated through the controller conveniently.

### Night shift mode operation

Night shift mode can be set freely.

### Centralized control and individual control

Centralized control for different water cycles and individual control for max. 7 rooms.

### Screed drying

An automatic program for drying out the screed during the construction of a house.

### Swimming pool heating

Available for the swimming pool and with the lowest priority of the system.

### Visual display of energy consumption

Energy consumption can be accessed through the controllers.

## High Intelligence

### Smart App control

Remotely control the system anytime and anywhere.

### Intuitive interface of controllers

Easy to understand and convenient to control.

### Smart hint

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

## Easy Installation and Maintenance

### Hi-Checker

Intelligent service tool and easy to maintenance remotely.

### Long piping design

Long piping length enables flexible design and easy installation.

### No refrigerant piping

No need to install refrigerant pipes on site.

### Water pressure and water flow monitoring

The water pressure and water flow can be monitored and displayed in real-time, convenient for commission.

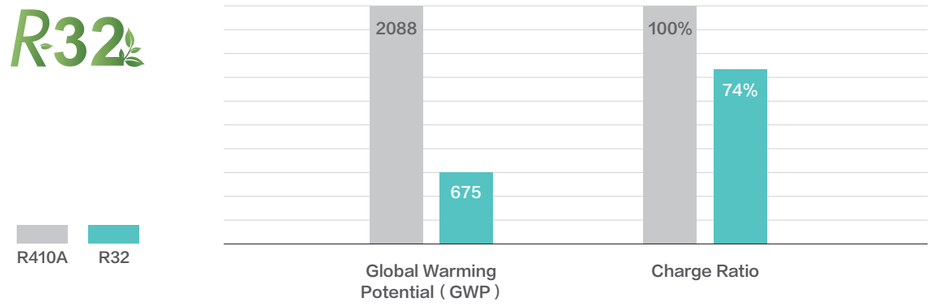
# High Efficiency and Excellent Performance

## 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 $CO_2$ 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




## High Efficiency A+++

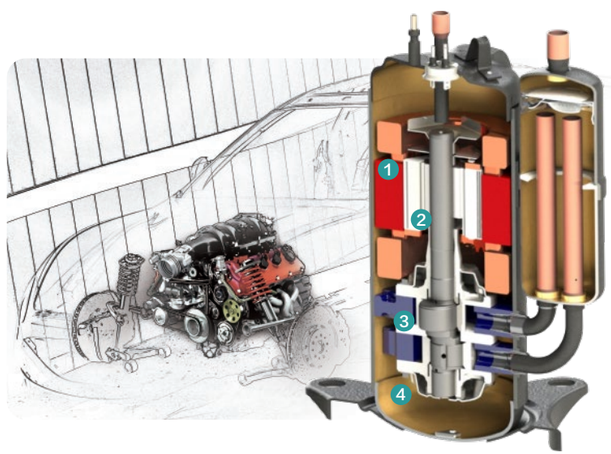
Hi-Therma offers the best and efficient solution for home heating and hot water supply. It has the top class A+++ energy classification under the low-temperature water condition, and A++ under the mid-temperature water condition, which ensures you make savings on your energy bills, reducing electricity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


Energy Label

*Take AHW-060HCDS1, AHM-060HCDSAA as an example.

## High-efficiency DC Inverter Compressor

A high-efficiency DC inverter twin rotary compressor is adopted. It features unique dual-pressure chamber design and symmetrical location, which can effectively reduce the vibration and noise and improve the compressor performance, especially the performance under low-frequency operation.
Moreover, the twin rotary compressor has a small lubricating oil injection volume with stable oil return, and comes with a gas-liquid separator, which makes the system more reliable.




**1 High-efficiency motor**
Optimize the motor design to improve compressor performance.

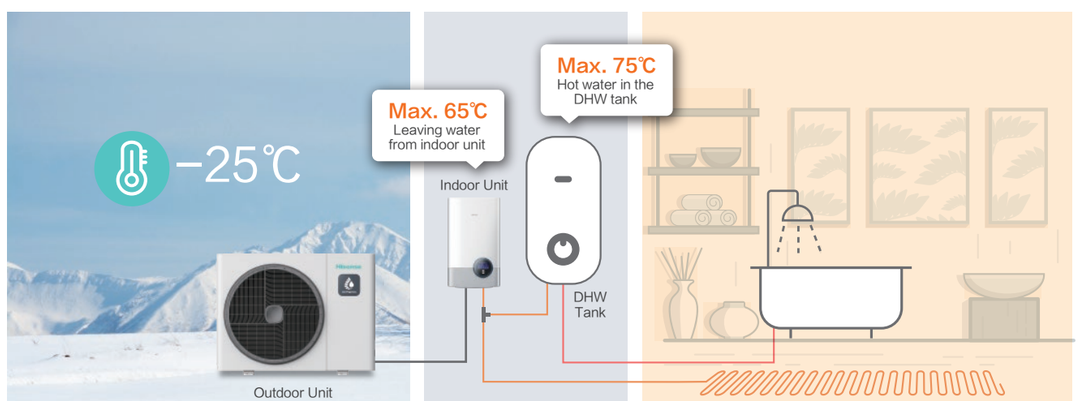
**2 Optimized rotor design**
Lower the center of gravity of the compressor to reduce the noise and vibration.

**3 Flat mechanism design**
Improve the volumetric efficiency and the total performance.

**4 Screw interactive fastening**
Improve fastening effect and reduce deformation of the core.

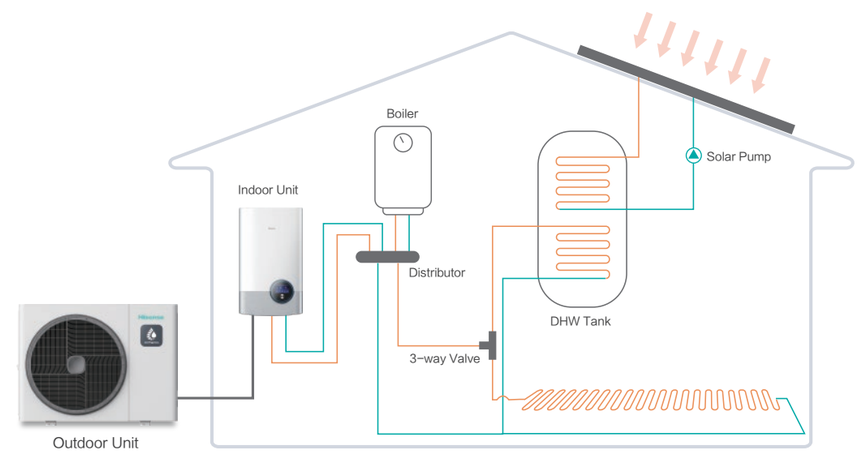
## Wide Operation Range

Stable operation is guaranteed, even with outdoor temperatures as low as −25℃, effectively satisfying the heating demand in extremely cold areas. It can generate up to 65℃ leaving water from the indoor unit. Besides, the operation range of DHW is extended to 40℃, and the water inside the water tank can achieve max. 75℃ with electric heater, enabling effective sterilization.



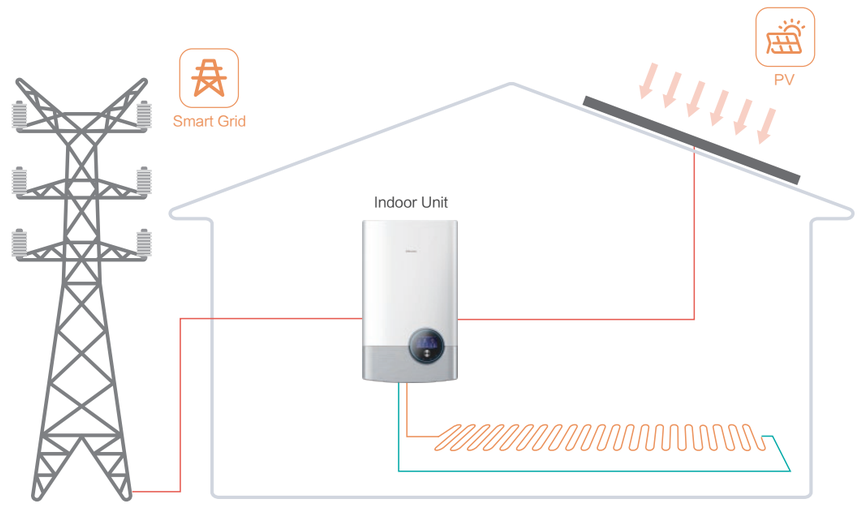

## Interlock with 3rd Party Heat Source

Hi-Therma system can interlock with the 3rd party heat source, like the solar thermal or the boiler which can work as an auxiliary heat source. Thanks to the interlock design, both the user experience and energy efficiency can be optimized.

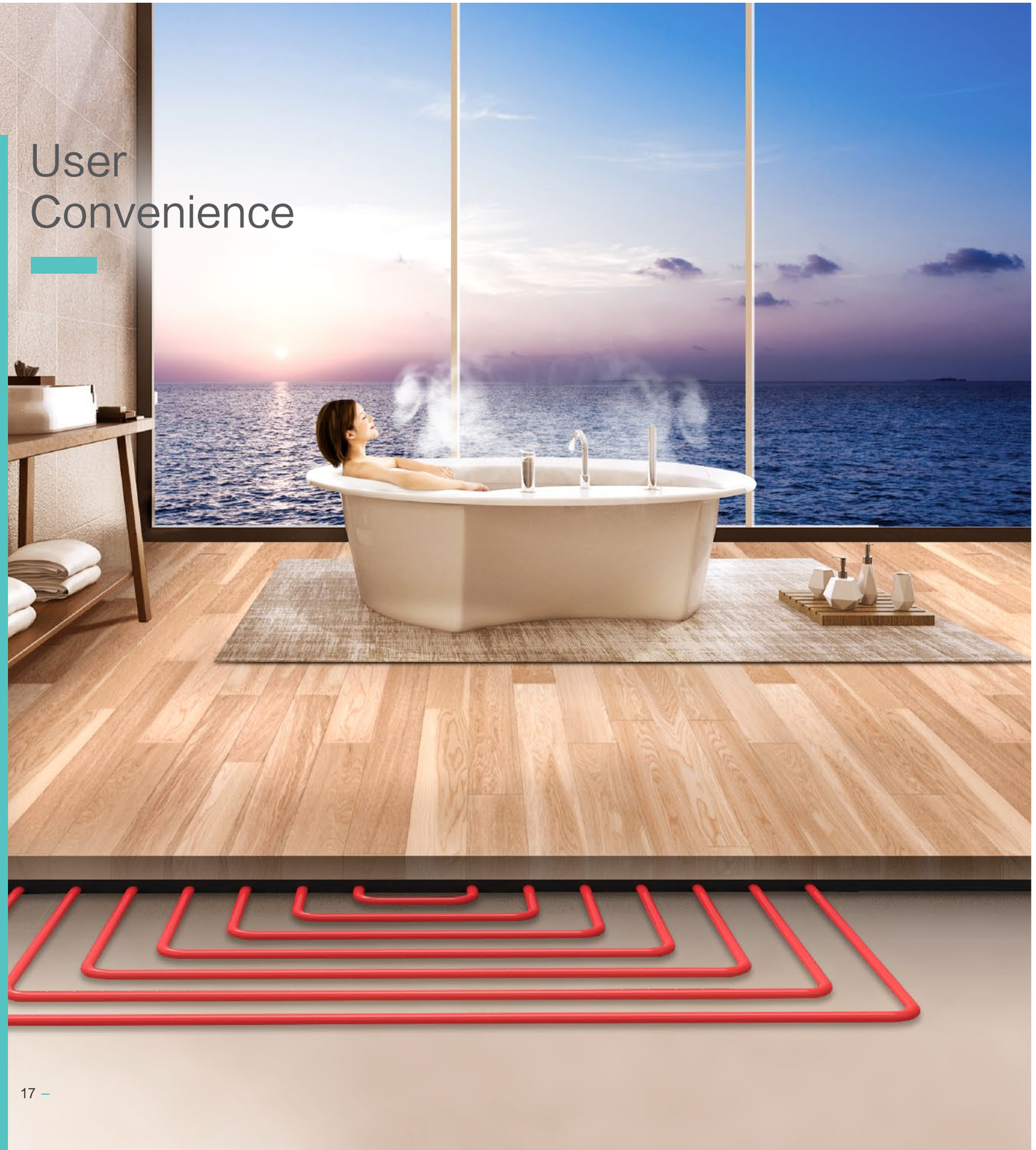



## Smart Grid Interlock and PV Enabled

Hi-Therma system can be integrated into the smart grid, to achieve a low-cost operation required to meet carbon reduction targets. Also, the system can be integrated to the Photovoltaic(PV), saving energy through renewable sources.
The system's potential can be maximised by connecting to Smart Grid or Photovoltaic(PV).

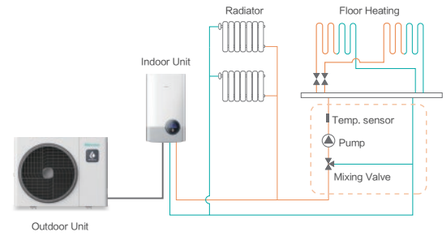


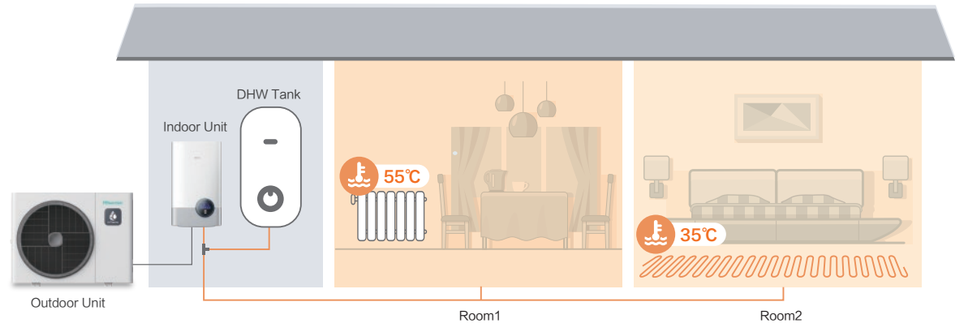
# User Convenience



## 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.




## Low Noise Operation

### Low Noise Mode

The air to water heat pump system can work in low-noise operation mode for optimal user comfort, which can be achieved just by one touch in the controller or through the setting of input/output. Max.8 dB(A) can be reduced during this mode.

### Night Shift Mode

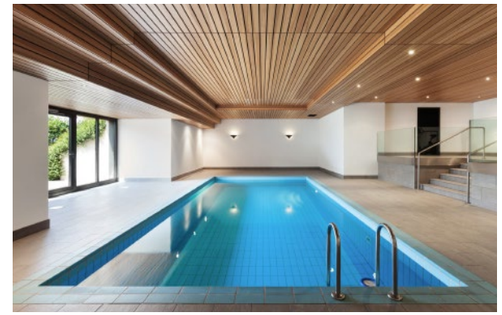
Under the night shift mode, the operation period can be set according to users' demand freely. The sound pressure level can be reduced to 35dB(A)*.
All these settings can be achieved in the controller or through the setting of input/output.

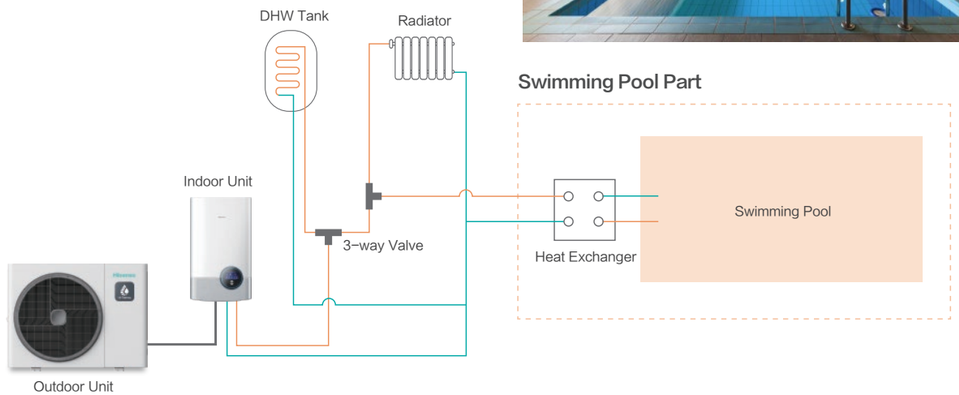
*Take the unit AHW-044HCDS1 as an example.




## Swimming Pool Heating

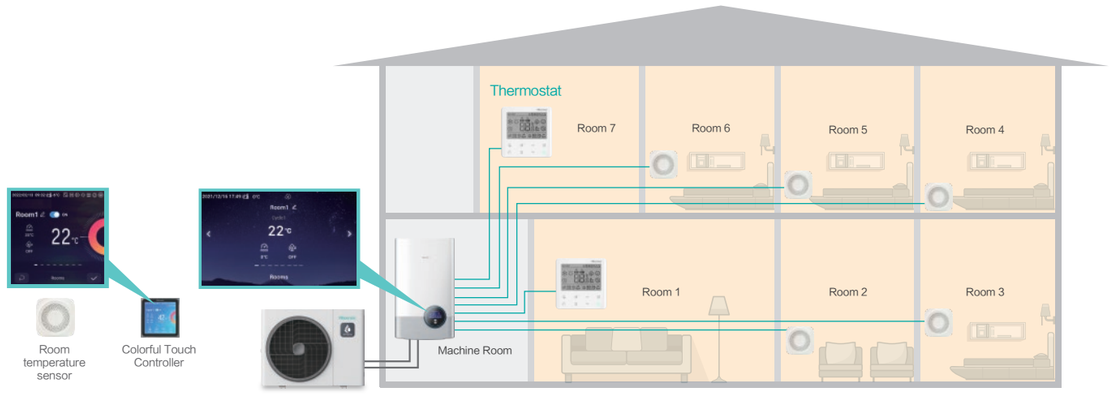
Hi-Therma heat pump system can also achieve heating swimming pools. When the swimming pool operation is activated, the hot water will go into the swimming pool heat exchanger, allowing to heat the swimming pool water temperature to a comfortable water temperature between 24 and 33℃.






## Up to 7 Rooms with Independent Temperature Control

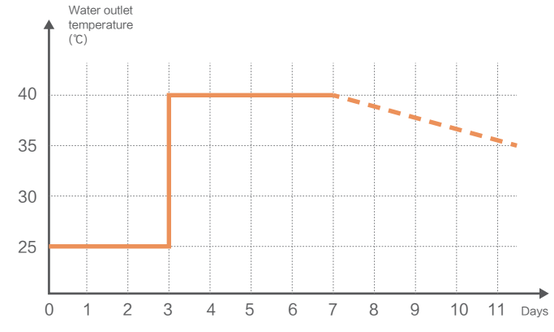
In one Hi-Therma system, the temperature of up to 7 rooms can be independently controlled through installing temperature sensors or room-thermostats in the rooms, satisfying the diverse needs of users.

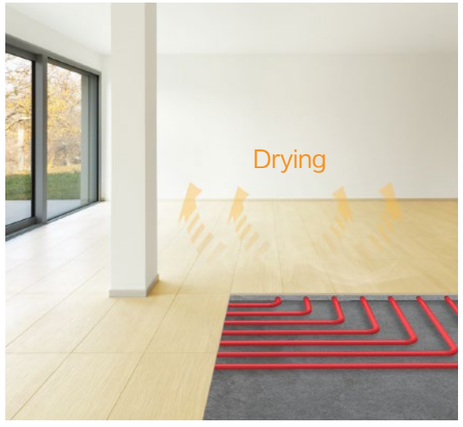



Note: In one Hi-Therma system, up to 2 room thermostats and max. 6 wall mounted temp. sensors can be connected.

## Screed Drying Function

Hi-Therma air to water heat pump unit has an automatic program for drying out the screed during the construction of a house with the floor heating underfloor. The screed drying process lasts for 7 days. In the first three days, the system operates with the outlet water temperature of 25 ℃, and in the next four days, the system operates with the presetting maximum outlet water temperature.




# High Intelligence

All along, Hisense has demonstrated our core quintessence to the world: Advanced technology, innovative ideas and the pursuit of excellent user experience. Hisense's brand genes——Genuine, Gentle Generous, have always interpreted all our products and promote us to create a better brand experience.
Relying on the Beauty, Symmetry, Unity design style, Hisense integrates elements of individuality and balance in various places such as product shape, outline and trademark. Changes and upgrades can be seen everywhere, whether it is the position of buttons, the layout of display screen or the composition of components.

- Innovative streamlined appearance, exquisite, beautiful, and high integration.
- High-contrast high-definition color interface, bringing more intuitive and rich visual experience.
- Multiple control functions, bringing excellent human-computer interaction experience.


## Premium design combines refinement and simplicity

We believe aesthetics should be combined with performance, from pattern to radian coordination, to embody the aesthetic meaning of " Square and Circle " in product design, and to deduce the balance of product appearance and the consistency of pleasure.

reddot winner 2022

## Energy consumption management

The energy consumption can be display intuitively in the controllers for precise energy management.

## Powerful three-level management system

All the heat sources, water cycles and individual rooms can be controlled through one controller.

# 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.

### 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.



reddot winner 2022

Hi–Therma series indoor unit has achieved the prestigious reddot award.




## General Features

- Installation Wizard with easy setting for all site configuration
- Support 10 languages(EN, DE, FR, ES, PT, IT, NL, PL, TR, RO)
- Direct visualization of energy consumption and running capacity
- Centralized control for different water cycles and individual control for rooms
- Alarm code and advanced parameter display, convenient for maintenance
- Weekly Timer and Holiday mode support.
- ECO/ Quiet/ Night shift mode fit for different user needs.

## Installation Wizard–Quick to configure

When commissioning for the first time, the installation wizard will appear, and the users can make a smooth step–by–step configuration.


1 step　　2 step　　Completed

# 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


### Sliding Interface

By sliding the screen left and right, quick switching between different interfaces can be realized.

**HSXM-FE01**

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

## General Features

- Installation Wizard with easy setting for all site configuration
- Support 10 languages(EN, DE, FR, ES, PT, IT, NL, PL, TR, RO)
- Direct visualization of energy consumption and running capacity
- Centralized control for different water cycles and individual control for rooms
- Alarm code and advanced parameter display, convenient for maintenance
- Weekly Timer and Holiday Mode support.
- ECO/ Quiet/ Night shift mode fit for different user needs.
- Suitable for a variety of installation methods, either exposed or concealed
- Physical button at the bottom for easy on/off and reset


### Sliding Adjusting

The temperature can be adjusted smoothly and quickly by sliding the semicircle, especially for large temperature ranges adjustment.

There is a physical button at the bottom, easy on/off and reset, and don't affect the aesthetics due to its hidden design.

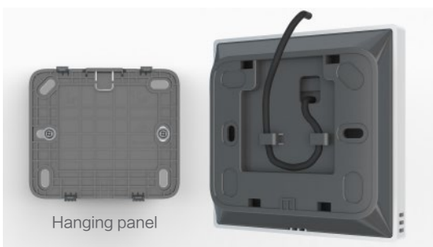

Physical Button


### Themes Setting

There are three themes in total, Day, Night and Auto, which can apply to different scenarios at different time, delivering a comfortable and balanced interface display.

### Easy Installation

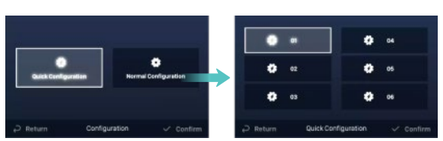
During the excelsior product design, we give full consideration to the convenience of installation. Thanks to the hanging panel, it's very convenient to install and disassemble. Besides, there is a built-in slot, flexible for wires routing.




### 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 supparts pre-stored maodrum df 6 scanarios.



## Room Thermostat

It can not only set the rooms' temperature, but also accurately link with indoor unit, to feedback the room's load change in real time, ensuring comfortable indoor temperature and high-efficiency operation.


HSXE-VC04

- Sleek and elegant design
- Compact, measures only 86 × 86mm
- Intuitive touch-button control

### General Features

- Compact body and stylish appearance
- Convenient room temp. & DHW setting
- Flat backboard, easy-to-install
- ECO/DHW boost/Timer(0.5-24h)


### One-button Switch to DHW Setting

Users can switch to the domestic hot water mode setting with one touch to realize the control of the water system, which is very convenient, no need to do the setting in other controllers.

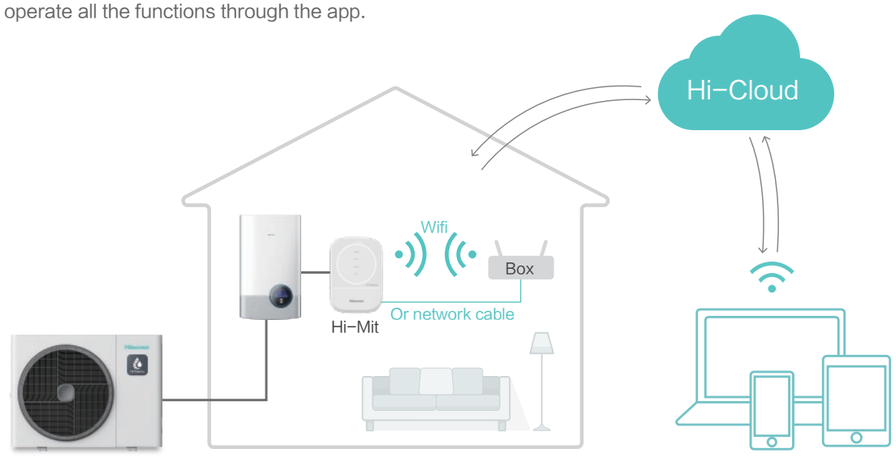



## Smart APP Control

Hisense Smart APP control is for those who live their life on the go and who want to manage their heating system at anytime and anywhere.

### How it works

After connecting the Hi-Mit adapter to the internet by wireless or wired LAN, the users can control the Hi-Therma system just using a phone anytime and anywhere, achieving operate all the functions through the app.



- Stylish appearance
- Compact body
- Supporting OTA update

## Simple and convenient operation

- On/Off
- The temp. setting of rooms, domestic hot water and water cycles
- Energy management
- 14 languages available
- Online repair report
- Multiple scenes setting

Available on the App Store

Download today Google Play

## Specifications

| Model | Power Supply | Max. Current | Power Input | Dimension | Net Weight |
|---|---|---|---|---|---|
| HCCS-H64H2C1M#01 | DC 12V | 1A | 2.4W | 91×117×31mm | 0.14kg |

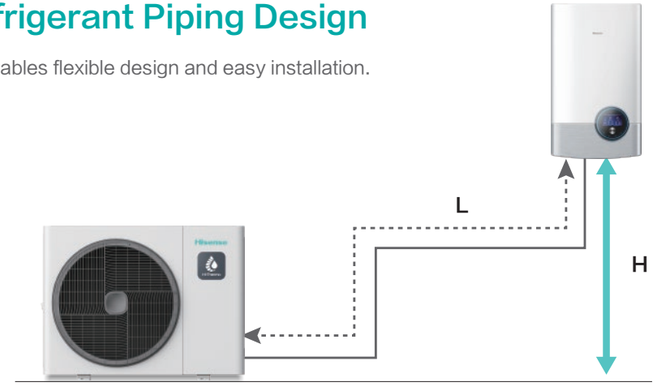
## Energy management

Hi-Mit provides intelligent energy management, which supporting daily, weekly and monthly electricity data viewing, and energy saving mode setting accordingly. It greatly facilitates the energy management.

# Easy Installation and Maintenance

## Flexible Refrigerant Piping Design

Long piping length enables flexible design and easy installation.




Max. piping length L: 45(50*1)m  Max. height difference H：20/30*2m

*1 Only for 10~16kW.
*2 When the outdoor unit is higher than the indoor unit, the max. height difference is 30m, otherwise is 20m.

## Convenient Maintenance for the Indoor Unit

The position of the components in indoor unit has been fully optimized, and the electrical box can be rotated 88°, which facilitates the maintenance of the parts behind the electrical box, and greatly simplifies the maintenance. Besides, there is a hook on the outer sheet metal of the electrical box, and the controller can be conveniently hung during on-site maintenance.

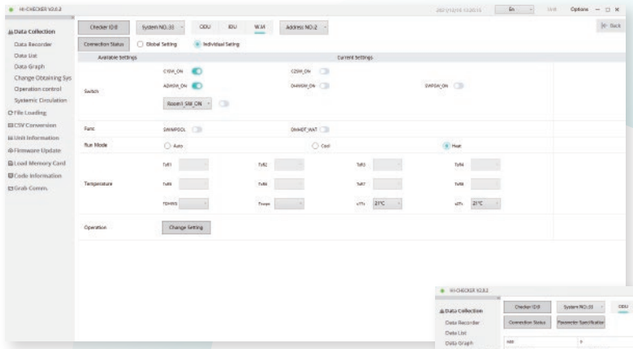

# Hi-Checker

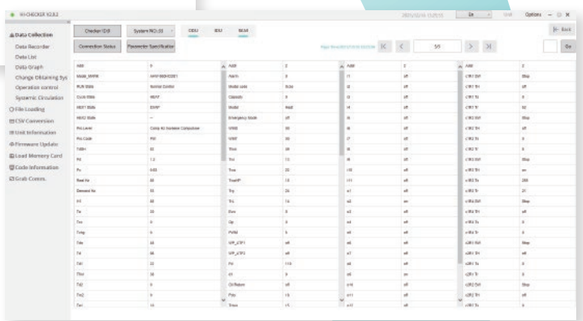
### Intelligent service tool, improve your service

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.

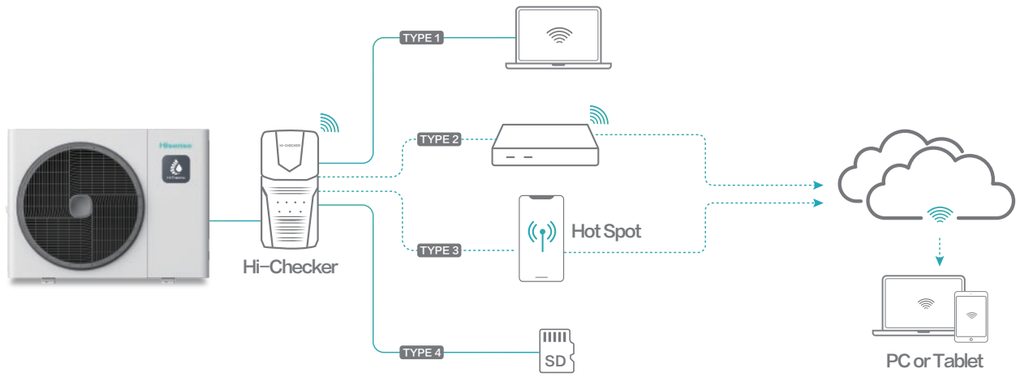
### Easy to use

- 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 Suppy |
|---|---|---|---|
| HCCS-H64H2C2M | 138 × 68 × 28 | 130 | 5V ⎓ 500mA |

# Split

Hi-Therma Split unit is an air to water heat pump system that indoor unit and outdoor unit are separated. The indoor unit including plate heat exchanger, expansion tank,water pump ect. is located in the room, which can aviod water freezing problems.

### High Efficiency and Excellent Performance


### User Convenience


### High Intelligence

### Easy Installation and Maintenance


Outdoor Unit Indoor Unit

reddot winner 2022

Indoor Unit

## Indoor Unit

Stylish appearance

Compact design

Integrated panel

Intuitive control interface

Easy to hang to the wall

# Specification (4~8kW)




041-K021

| 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 (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 |
| | | IWT/OWT 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 |
| | OAT (DB/WB) −7 / −8℃ | IWT/OWT 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 |
| | | IWT/OWT 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 | 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 | 16 |
| Outer Dimensions | Height × Width × Depth | | | mm | 750 × 900 × 340 | | |
| Packing Dimensions | Height × Width × Depth | | | mm | 807 × 1022 × 445 | | |
| Weight(Net/Gross ) | | | | kg | 48.5/52.5 | 48.5/52.5 | 49.0/53.5 |
| Refrigerant System | Compressor | Type | | — | Rotary | | |
| | Refrigerant Charge | Type | | — | R32 | | |
| | | Before Shipment | | kg | 0.98 | 0.98 | 1.05 |
| | Piping | Gas Pipe | | mm(in.) | Φ12.7(1/2) | Φ12.7(1/2) | Φ15.88(5/8) |
| | | Liquid Pipe | | mm | Φ6.35(1/4) | Φ6.35(1/4) | Φ6.35(1/4) |
| | Min. Piping Length | | | m | 4 | | |
| | Max. Chargeless Piping Length | | | m | 8 | | |
| | Max. Piping Length | | | m | 40 | 40 | 45 |
| | 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 | | ℃ | 30~55(75*4) | | |
| | 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. | G1 | | |
| | Mesh Filter | | | – | 50 | | |
| | 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*5) | | |
| Outer Dimensions(with connections) | Height × Width × Depth | | | mm | 890 × 520 × 320 | | |
| Packing Dimensions | Height × Width × Depth | | | mm | 419 × 1160 × 650 | | |
| Weight(Net/Gross ) | | | | kg | 41.5/48.5 | 41.5/48.5 | 42.5/49.5 |
| Refrigerating Installation | Connection Type | | | – | Flare Nut Connection | | |
| | Gas Pipe | | | mm(in.) | Φ12.7(1/2) | Φ12.7(1/2) | Φ15.88(5/8) |
| | Liquid Pipe | | | mm(in.) | Φ6.35(1/4) | Φ6.35(1/4) | Φ6.35(1/4) |
| Water Installation | Connection type | | | – | Screwed Connection | | |
| | Shutdown valves | | | in. | G1"~ G1"(female) | | |
| | Inlet pipe diameter | | | in. | G1"(male) | | |
| | Outlet pipe diameter | | | in. | 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℃.
*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)




011-1W0633
011-1W0634

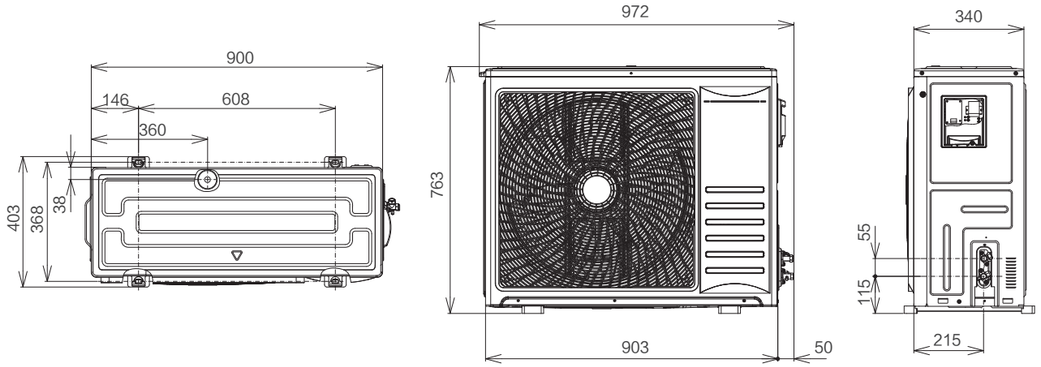
| Outdoor Unit | Power Supply | AC 1Φ, 220~240V/50Hz | | — | AHW-100HCDS1 | AHW-120HCDS1 | AHW-140HCDS1 | AHW-160HCDS1 |
|---|---|---|---|---|---|---|---|---|
| | | AC 3Φ, 380~415V/50Hz | | — | AHW-100HEDS1 | AHW-120HEDS1 | AHW-140HEDS1 | AHW-160HEDS1 |
| Nominal Heating Operation*1 | OAT (DB/WB) 7/6℃ | IWT/OWT 30 / 35℃ | Capacity (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 |
| | | IWT/OWT 47 / 55℃ | 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 |
| | OAT (DB/WB) −7 / −8℃ | IWT/OWT 30 / 35℃ | 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℃ | 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 |
| Nominal Cooling Operation*1 | OAT (DB) 35℃ | IWT/OWT 12 / 7℃ | Capacity (Nom.) | kW | 8.5 | 10.0 | 11.0 | 13.0 |
| | | | EER (Nom.) | – | 3.00 | 2.85 | 2.85 | 2.70 |
| | | IWT/OWT 23 / 18℃ | Capacity (Nom.) | kW | 9.0 | 11.0 | 14.0 | 15.5 |
| | | | EER (Nom.) | – | 4.50 | 4.10 | 4.20 | 3.90 |
| Seasonal Performance*2 | Water Outlet 35℃ | SCOP | | – | 4.83 | 4.76 | 4.61 | 4.49 |
| | | Seasonal Heating Efficiency (ηs) | | % | 190.0 | 187.0 | 181.0 | 177.0 |
| | | Energy Rating | | – | A+++ | A+++ | A+++ | A+++ |
| | Water Outlet 55℃ | SCOP | | – | 3.58 | 3.46 | 3.29 | 3.28 |
| | | Seasonal Heating Efficiency (ηs) | | % | 140.0 | 135.0 | 129.0 | 128.0 |
| | | Energy Rating | | – | A++ | A++ | A++ | A++ |
| Sound Pressure*3 | Normal Mode | | | dB(A) | 48 | 49 | 51 | 53 |
| | Low Noise Mode | | | dB(A) | 43 | 46 | 46 | 48 |
| | Night Shift Mode | | | dB(A) | 42 | 42 | 44 | 44 |
| Sound Power | Normal Mode | | | dB(A) | 62 | 64 | 66 | 67 |
| Fan | Condenser Fan Quantity | | | — | 1 | 1 | 1 | 1 |
| | Air Flow Rate | | | $m^3/h$ | 3900 | 3900 | 4200 | 4200 |
| Outer Dimensions | Height × Width × Depth | | | mm | 840 × 1100 × 390 | | | |
| Packing Dimensions | Height × Width × Depth | | | mm | 1000 × 1185 × 530 | | | |
| Weight(Net/Gross ) | | | | kg | 77.0 /92.0 | 77.0 /92.0 | 90.5 /105.5 | 90.5 /105.5 |
| Refrigerant System | Compressor | Type | | — | Rotary | | | |
| | Refrigerant Charge | Type | | — | R32 | | | |
| | | Before Shipment | | kg | 1.8 | 1.8 | 2.7 | 2.7 |
| | 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 | 4 | | | |
| | 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 | | ℃ | 30~60 ( 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 | 2.41 | 2.75 |
| 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 | | | |
| | Type | | | – | 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) | 29 | 29 | 29 | 29 |
| Sound Power | | | | dB(A) | 44 | 44 | 44 | 44 |
| Outer Dimensions(with connections) | Height × Width × Depth | | | mm | 890 × 520 × 320 | | | |
| Packing Dimensions | Height × Width × Depth | | | mm | 420 × 1160 × 650 | | | |
| Weight(Net/Gross ) | | | | kg | 47/53.5 | 47/53.5 | 49.5/56.5 | 49.5/56.5 |
| 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"(femal) | | | |
| | Inlet pipe diameter | | | in. | G1"(male) | | | |
| | Outlet pipe diameter | | | in. | 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℃.
OAT: Outdoor ambient temperature; IWT: Inlet water temperature; OWT: Outlet water temperature

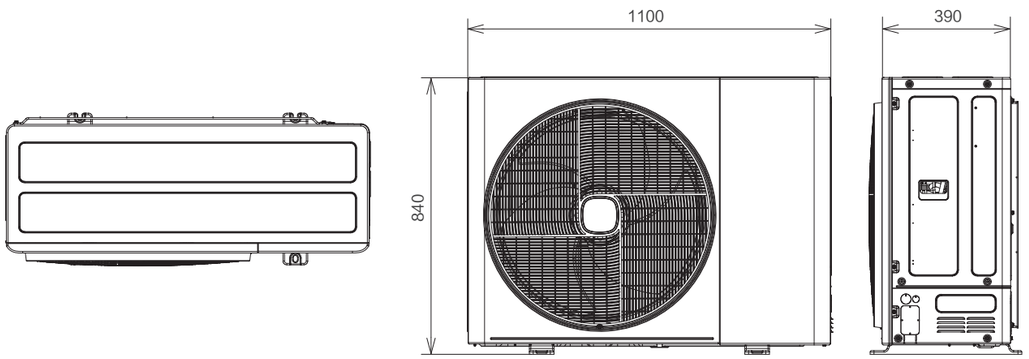
# Dimensions

Unit: mm

4~8kW



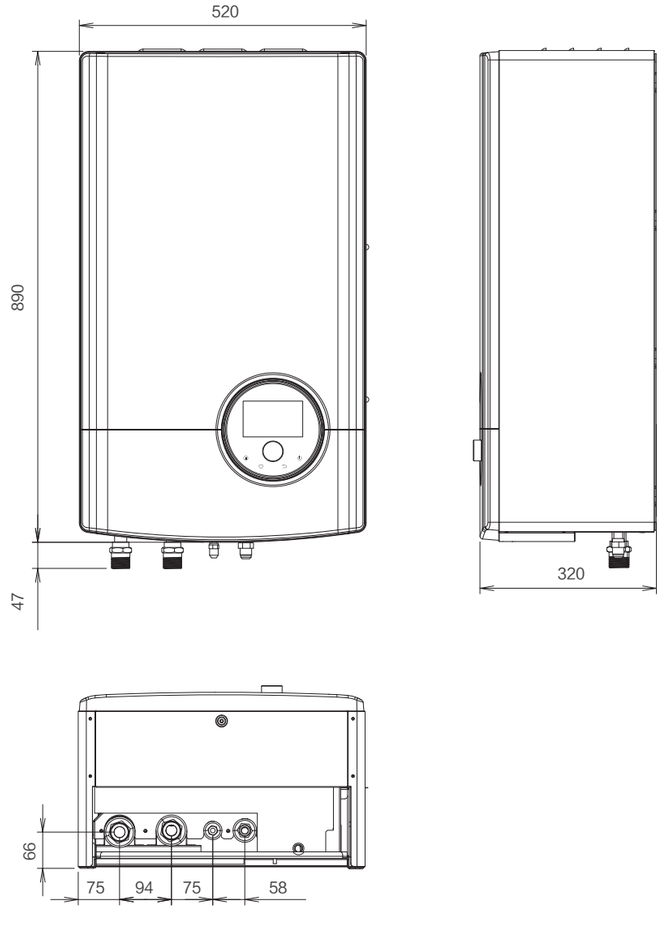

10~16kW






Dimensions

Unit: mm



# Monobloc

Hi–Therma Monobloc unit is an air to water heat pump system that indoor unit and outdoor unit are combined as one module, which ensures all functions are achieved with a single outdoor unit.Therefore, there is no need for refrigerant piping work since Monobloc unit located outside is connected only to water piping. Further, hydronic components such as plate heat exchanger, expansion tank and water pump are included in the package.

## High Efficiency and Excellent Performance

## User Convenience

## High Intelligence

## Easy Installation and Maintenance

## Water side items included in the Monobloc

PHE
(Plate Heat Exchanger)

Expansion
Vessel

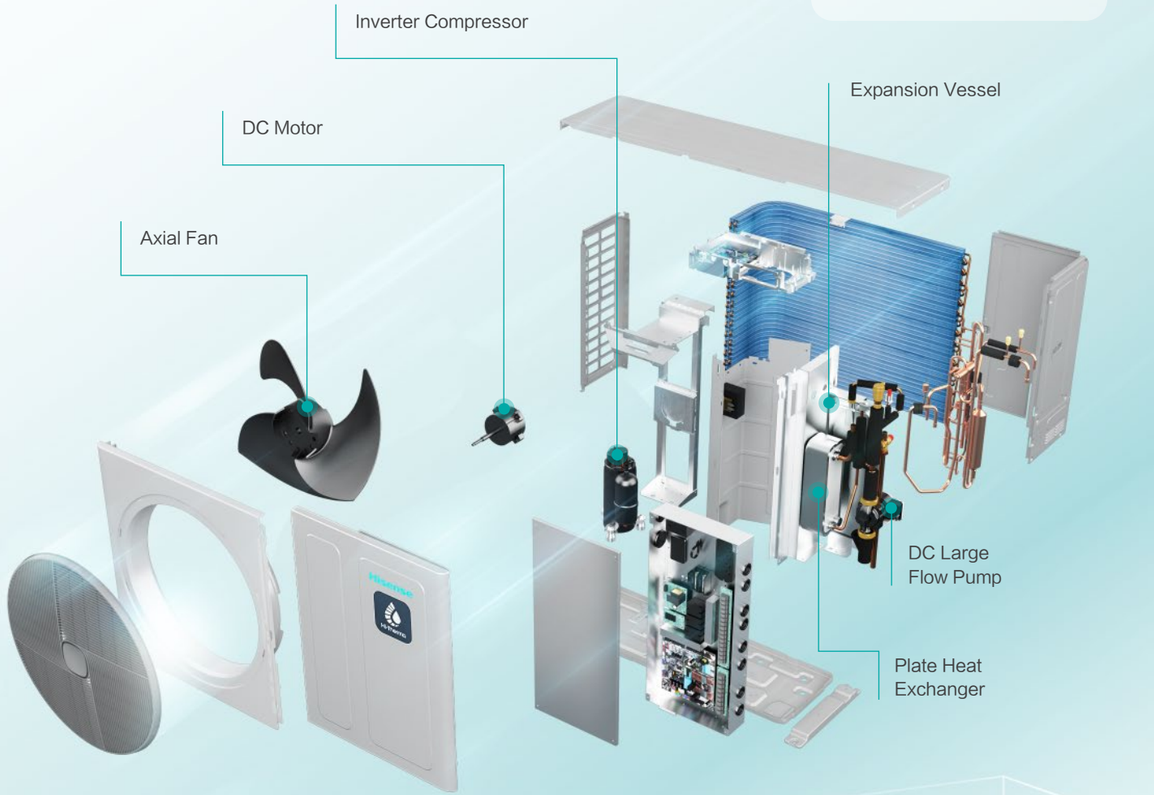
Water Pump

High head and large
water flow pump

## 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 simpli–fies the on–site installation work.

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 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.






## Specification (4~8kW)

041-K021

| Model | | | | | AHZ-044HCDS1 | AHZ-080HCDS1 |
|---|---|---|---|---|---|---|
| Power Supply | | | | | 220-240V ~ 50Hz | |
| Heating Operation*1 | OAT (DB/WB) 7/6℃ | IWT/OWT 30 / 35℃ | Capacity(Min./Nom./Max.) | kW | 1.85 / 4.40 /7.00 | 2.10/ 8.00 / 11.0 |
| | | | COP (Nom.) | – | 5.10 | 4.90 |
| | | IWT/OWT 47 / 55℃ | Capacity (Nom./Max.) | kW | 4.40 / 6.00 | 8.00 / 9.00 |
| | | | COP (Nom.) | – | 3.00 | 2.80 |
| | OAT (DB/WB) -7 / -8℃ | IWT/OWT 30 / 35℃ | Capacity (Nom./Max.) | kW | 4.40 / 5.00 | 5.80 / 7.30 |
| | | | COP (Nom.) | – | 3.26 | 3.14 |
| | | IWT/OWT 47 / 55℃ | Capacity (Nom./Max.) | kW | 4.00 / 4.20 | 5.00 / 6.40 |
| | | | COP (Nom.) | – | 1.97 | 1.94 |
| Cooling Operation*1 | OAT (DB/WB) 35/-℃ | IWT/OWT 12 / 7℃ | Nominal Capacity | kW | 4.40 | 6.50 |
| | | | EER | – | 4.00 | 3.35 |
| | | IWT/OWT 23 / 18℃ | Nominal Capacity | kW | 5.60 | 7.00 |
| | | | EER | – | 5.60 | 5.10 |
| Seasonal Performance*2 | Water Outlet 35℃ | SCOP | | – | 5.17 | 5.00 |
| | | Seasonal Heating Efficiency ( ηs) | | % | 204 | 197 |
| | | Energy Rating | | – | A+++ | A+++ |
| | Water Outlet 55℃ | 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 | | | $m^3/h$ | 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 | | ℃ (DB) | -25~35 | |
| | | Outlet Water Temperature | | ℃ | 15~60 | |
| | DHW | Outdoor Ambient Temperature | | ℃ (DB) | -25~40 | |
| | | Tank Water Temperature | | ℃ | 30~55(75*4) | |
| | Cooling | Outdoor Ambient Temperature | | ℃ (DB) | 5~46 | |
| | | Outlet Water Temperature | | ℃ | 5~22 | |
| Nominal Water Flow | IWT: 30℃ / OWT: 35℃ ΔT: 5℃ | | | $m^3/h$ | 0.77 | 1.38 |
| Min. Water Flow Rate | | | | $m^3/h$ | 0.50 | 0.60 |
| DC Water Pump | Max. Lift Pressure | | | m | 9 | |
| | Max. Water Flow Rate | | | $m^3/h$ | 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℃.
OAT: Outdoor ambient temperature; IWT: Inlet water temperature; OWT: Outlet water temperature

011-1W0661/0662

# 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-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℃ | 30 / 35℃ | 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 |
| | | 47 / 55℃ | 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℃ | 30 / 35℃ | 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℃ | 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 / —℃ | 12 / 7℃ | 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℃ | 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℃ | 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℃ | 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 | | | $m^3/h$ | 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 |
| | | 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 | | ℃ (DB) | -25~35 | | | | | | | |
| | | Outlet Water Temperature | | ℃ | 20~65 | | | | | | | |
| | DHW | Outdoor Ambient Temperature | | ℃ (DB) | -25~43 | | | | | | | |
| | | Tank water temperature | | ℃ | 30~60(75*2) | | | | | | | |
| | Cooling | Outdoor Ambient Temperature | | ℃ (DB) | 5~46 | | | | | | | |
| | | Outlet Water Temperature | | ℃ | 5~22 | | | | | | | |
| Water Flow Rate | 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 | | | | | | | |
| | Max. Water Flow Rate | | | $m^3/h$ | 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) | | | | | | | |

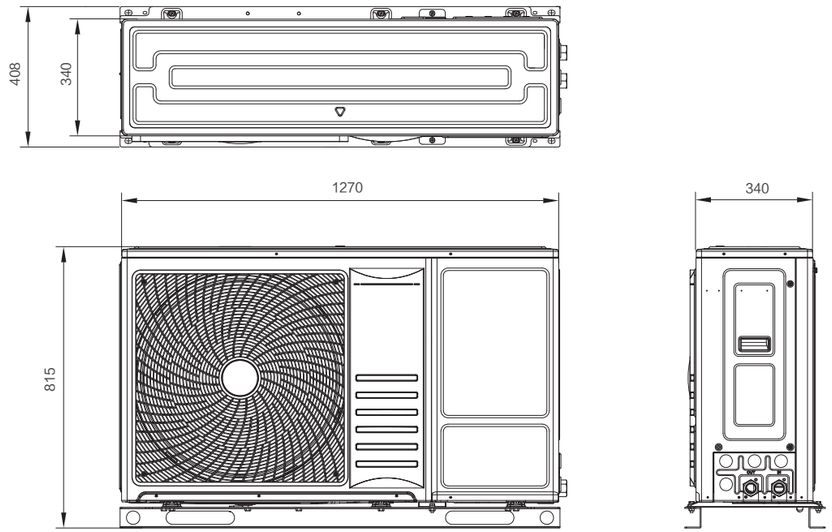
NOTES:
*1: Heating/Cooling nominal performances at full load conditions according to EN 14511.
Pipe length 7.5 m; height difference ODU/IDU 0 m; heating performance are integrated (included defrost cycles).
*2: According to EN14825. Climate Zone AVERAGE. Energy efficiency scale from A +++ to D.
*3:The 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℃.
OAT: Outdoor ambient temperature; IWT: Inlet water temperature; OWT: Outlet water temperature



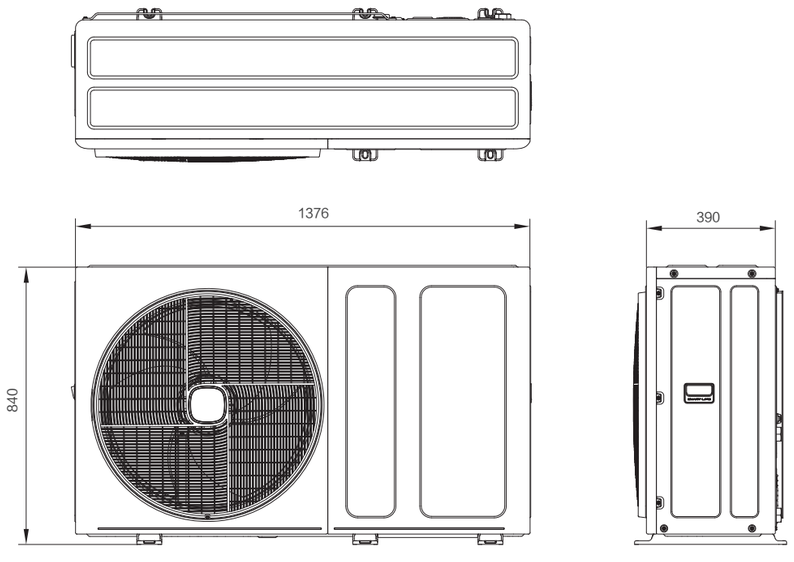
# Dimensions

Unit: mm

## 4~8kW




## 10~16kW



# Thermal tank

Hot water heating installation options

## Why optimal for a domestic hot water tank?

Whether your requirement is only hot water or you wish to integrate it with solar systems, we provide you with unparalleled solutions that prioritize most convenience, energy effectiveness, and reliability.


### Stainless steel tanks

#### Convenience

Options are available in stainless steel with capacities of 200 and 300 liters HDHWT-200/300L30HE.

#### Effectiveness

Top-notch insulation ensures minimal heat loss. It can be used as a single unit or as part of an integrated system.

#### Reliability

To prevent the growth of bacteria, the unit can heat water up to 75℃* at regular intervals.

Note：This temperature range 55℃-75℃ is achievable only when the booster heater is in use.

## Specification

| Model | | | HDHWT-200L30HE | HDHWT-300L30HE |
|---|---|---|---|---|
| Casing | Colour | | Neutral white | |
| | Material | | Epoxy coated steel / Epoxy-coated mild steel | |
| Tank | Empty weight | kg | 49 | 60 |
| | Net water volume | L | 185 | 260 |
| | Material | — | DUPLEX 2205 | |
| | Maximum water temperature | ℃ | 75 | |
| | Energy efficiency class | | B | |
| | Operating pressure | bar | 6 | |
| | max pressure | bar | 10 | |
| Heat exchanger | Tube material | | Stainless steel (SUS316L) | |
| | Face area | $m^2$ | 1.8 | 2.07 |
| | Internal coil volume | L | 9.9 | 11.4 |
| | Operating pressure | bar | 3 | |
| Booster heater | Capacity | kW | 3 | |
| Power supply | Phase/Frequency/Voltage | V/Hz | 1N, 220~240V, 50Hz | |
| Protection method | | | Temperature and pressure relief valve ( 95℃/0.6Mpa ) | |
| Safety Thermostat | Automatic Reset | ℃ | 75 | |
| | Manual Reset | ℃ | 87 | |

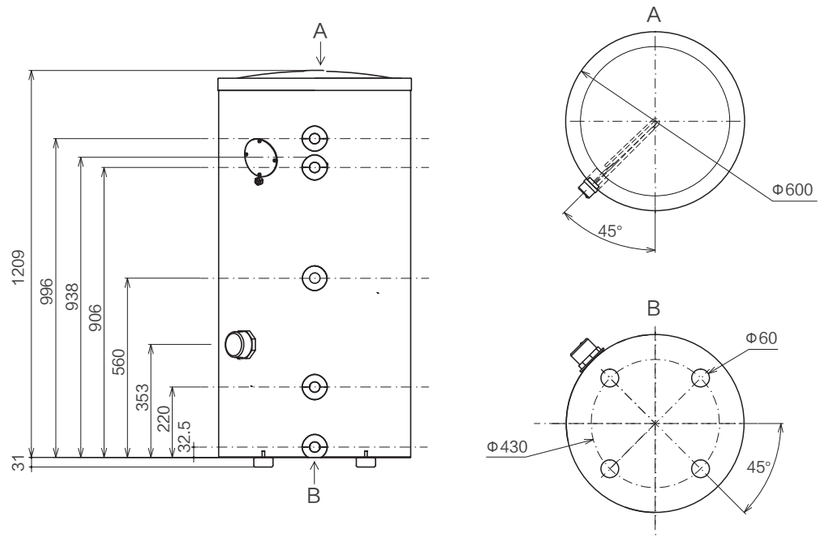




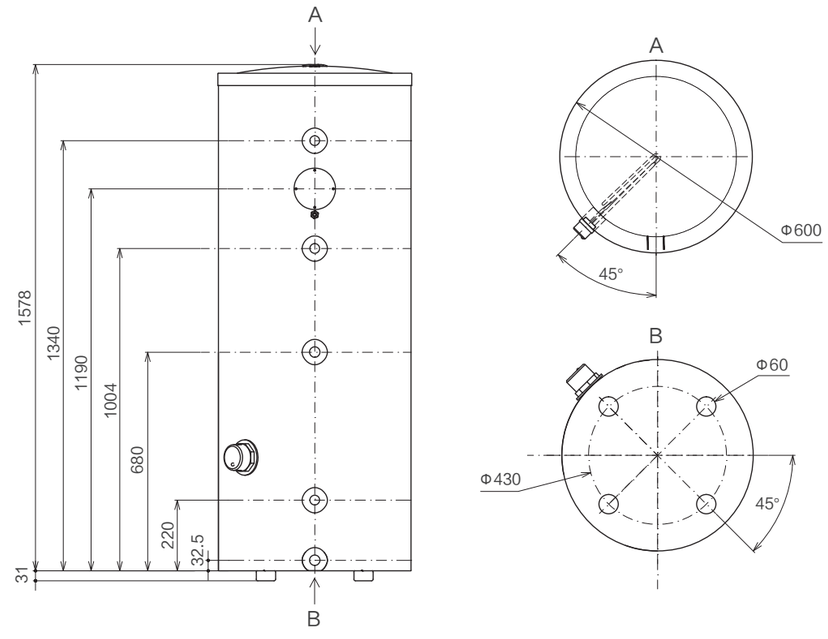
## Dimensions

Unit: mm

### 200L




### 300L



# Integra

Hi-Therma Integra is a split heat pump system, with the indoor unit additionally equipped with a domestic hot water tank. The all-in-one design of this elegant unit allows it to provide maximum service in minimal space.

### High Efficiency and Excellent Performance

### User Convenience

### High Intelligence

### Easy Installation and Maintenance

Outdoor Unit

Integra


### 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.

### 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.



## 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.


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

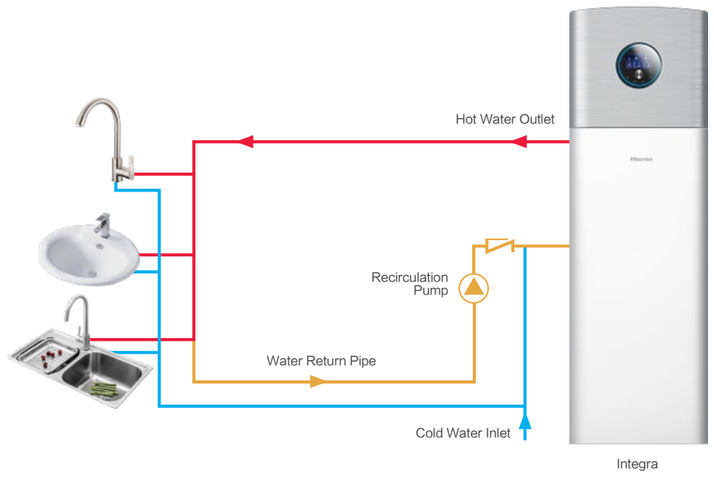
### Easy Transportation

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.

Unit: mm

## 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.



Hi-Therma

# 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

AIR TO WATER
HEAT PUMP

| 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 | | | |

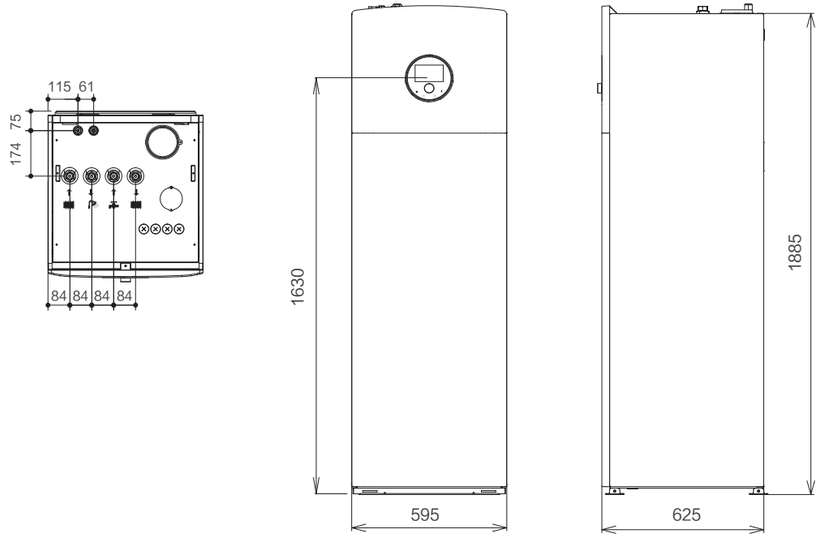
| Model | | | 100(3.5 HP) | 120(4.0 HP) | 140(5.0 HP) | 160(6.0 HP) | 100(3.5 HP) | 120(4.0 HP) | 140(5.0 HP) | 160(6.0 HP) |
|---|---|---|---|---|---|---|---|---|---|---|
| Indoor Unit Type | | | AHS-100 HCDSAA-23 | AHS-120 HCDSAA-23 | AHS-140 HCDSAA-23 | AHS-160 HCDSAA-23 | AHS-100 HEDSAA-23 | AHS-120 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.) | Φ9.53 (3/8") | | | | | | | |
| | Gas pipe (Piping diameter) | mm (in.) | 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

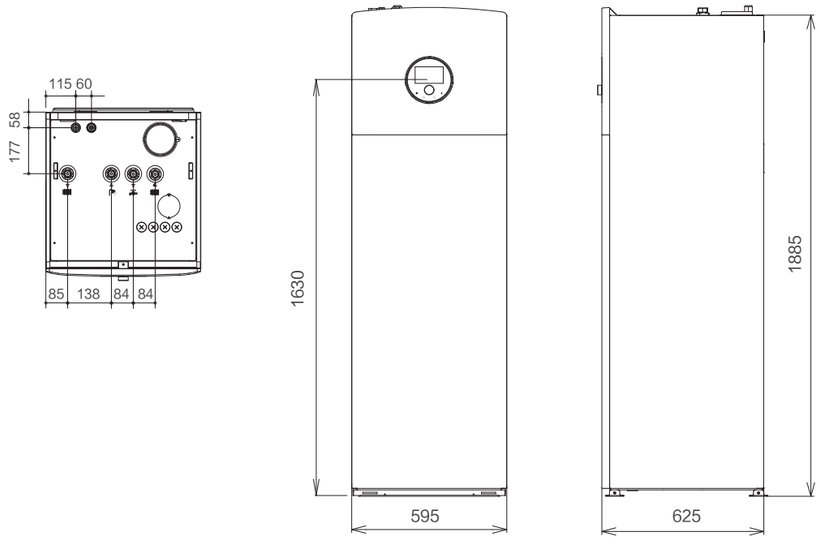
## Dimensions

4~8kW

Unit: mm




10~16kW






# Accessories & Engineering Tools

## Accessories

### Ambient Temperature Sensor

HC-T-01M

Measure the outdoors ambient temperature in the area where the outdoor unit is installed.

### Water Temperature Sensor

HTS-E1000A1

Water temperature sensor for pipeline, tank and hydraulic components

### Wall Mount Temperature Sensor

HCT-S01E

Wall mounted room temperature sensor, with communication to heat pump system.

### Room Thermostat

HSXE-VC04

Room thermostat for room temperature control, with communication to heat pump system. Compatibility：Split Heat Pump System

### 3-way Valve

HESE-3W25A

Valve to allow operation in heating/hot water

### Electronic anode

HOPT-EAT01

Protect the inner tank of the water heater, enhance its corrosion resistance, and prolong its service life.

### Hi-Mit II adapter

HCCS-H64H2C1M#01

Hi-Mit II smart APP solution.


### Auxiliary electric heater

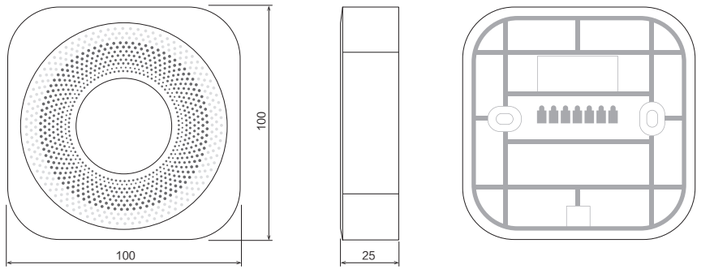
DRE-300WG
DRE-600WG
DRE-S600WG

Auxiliary electric heating for use in emergency situations when the heat pump malfunctions

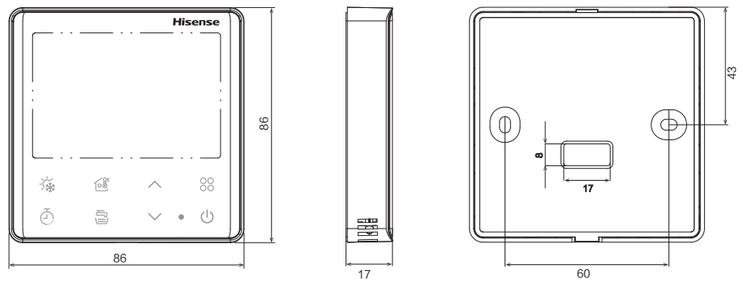
## Dimensions

unit:mm

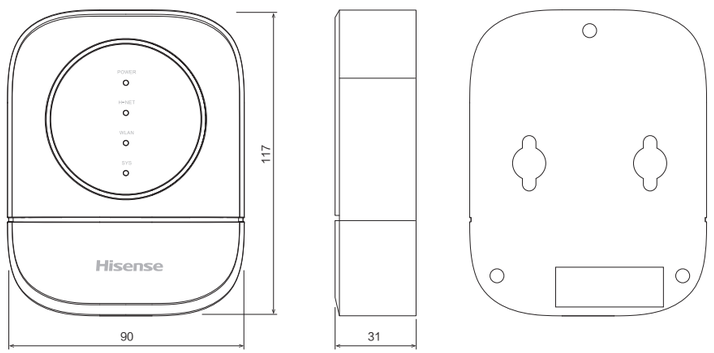
HCT-S01E




HSXE-VC04




HCCS-H64H2C1M#01




## Engineering Tools

### Hi-Therma Designer

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. The user could open and edit the project at any time and anywhere.

- **User-friendly operation**
  This program provides a lot of pictures, schemas and explanations. With less input and choice, the user can get the proper selection quickly and easily.
- **Energy consumption calculation**
  The software includes the build-in climate history data for hundreds of cities, which enabling easy load calculation. Furthermore, the user can calculate the annual energy consumption and efficiency.
- **$CO_2$ emission calculation**
  The user can calculate the $CO_2$ emission that can be reduced from conventional heating systems with other energy.
- **Noise level assessment**
  The noise level to the closed house, such as neighbor's house, could be assessed with a simulation according to the outdoor unit installation.
- **Selection comparison**
  Through this function, users can compare two different selections for one project, so as to get the best solution.
- **Customization of accessories**
  The installer can input and customize the accessories which is used to buy locally.
- **Report**
  A professional report with full information and quotation can be output to submit to clients. The user can select the part of full size report to make a short report.

https//:www.hitherma-designer.com