

## Hi-AquaSmart Series

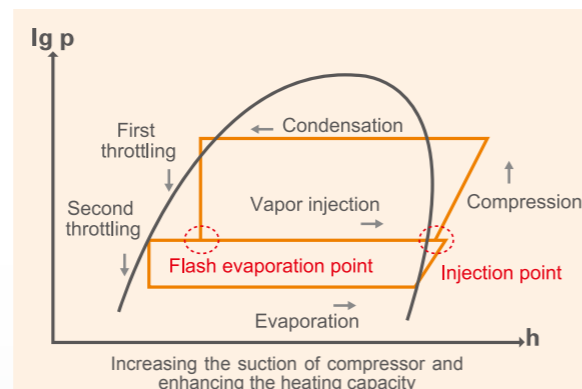
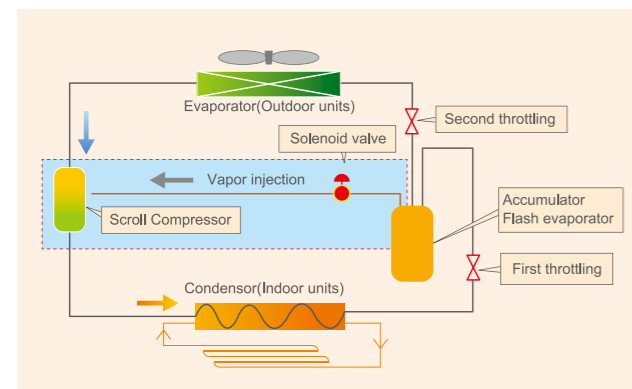
High-efficiency Air to Water Heat Pump  
3 in 1 Solution

Hisense air to water heat pump system absorbs the free energy from outside atmosphere, which only consume less electricity to generate more heat energy. Hi-AquaSmart Series have better performance, high efficiency, high energy-saving, less CO<sub>2</sub> emissions. This Series can be easy to install on new building or existing building. High efficient Hisense air to water heat pumps can obviously reduce the energy consumption of the building. In addition, it can work with a traditional heating source, such as oil or gas boiler.



## Enhanced Vapor Injection

Hisense adopts vapor injection scroll compressor, which provides higher compression ratio, smoother oil supply and lower noise level.



The vapor injection system and stepless inverter technique greatly improve the refrigerant cycle system. It effectively increases refrigerant flow through vapor injecting, thus substantially enhancing the heating capacity.

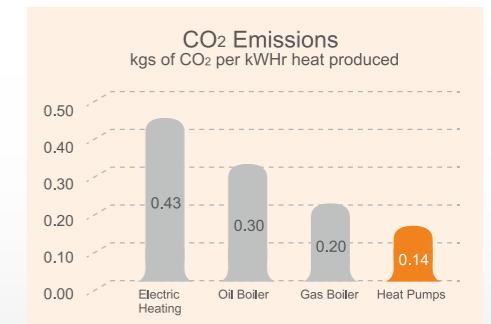
## Less CO<sub>2</sub> Emissions

Using a heat pump can significantly reduce CO<sub>2</sub> emissions.

### Lower CO<sub>2</sub> emissions

Because heat pumps collect free energy from the air, they produce much less CO<sub>2</sub>.

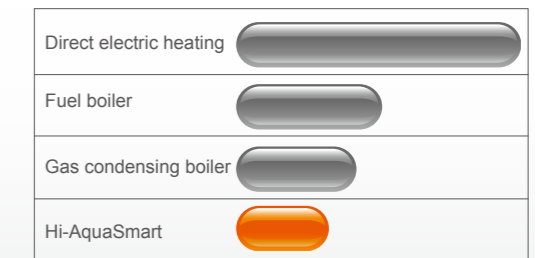
- 66% less than Electric Heating
- 50% less than Oil Heating
- 30% less than Gas Heating



## Economical

Compared to the other heating modes, such as electricity, gas, coal/oil, solar, and so on, the heat pump system is more efficient and the annual cost reduction is obvious.

### Average annual running cost

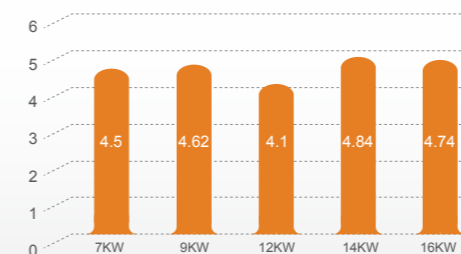


## High Efficient Water Pump (DC)

Hi-aquasmart Series is equipped with a high efficient DC(inverter) water pump, which can minimize energy consumption during operating time. It has a better linear controllable for capacity output and wider adaptability for many application places compared with AC water pump.



## COP up to 4.84



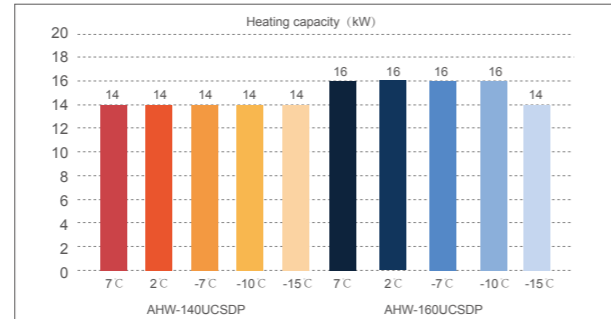
Hi-AquaSmart Series is efficient, all products' COP is higher than 4.1, successfully meeting customers' requirements.

| Capacity | Hisense | Brand A | Brand B |
|----------|---------|---------|---------|
| 7kw      | 4.5     | 4.4     | 4.4     |
| 9kw      | 4.62    | 4.23    | 4.65    |
| 12kw     | 4.1     | 4.49    | 4.45    |
| 14kw     | 4.84    | 4.44    | 4.22    |
| 16kw     | 4.74    | 4.2     | 4.1     |

\* Peak value  
\* at standard condition working at heating capacity at +7°C (heating water at 35°C)

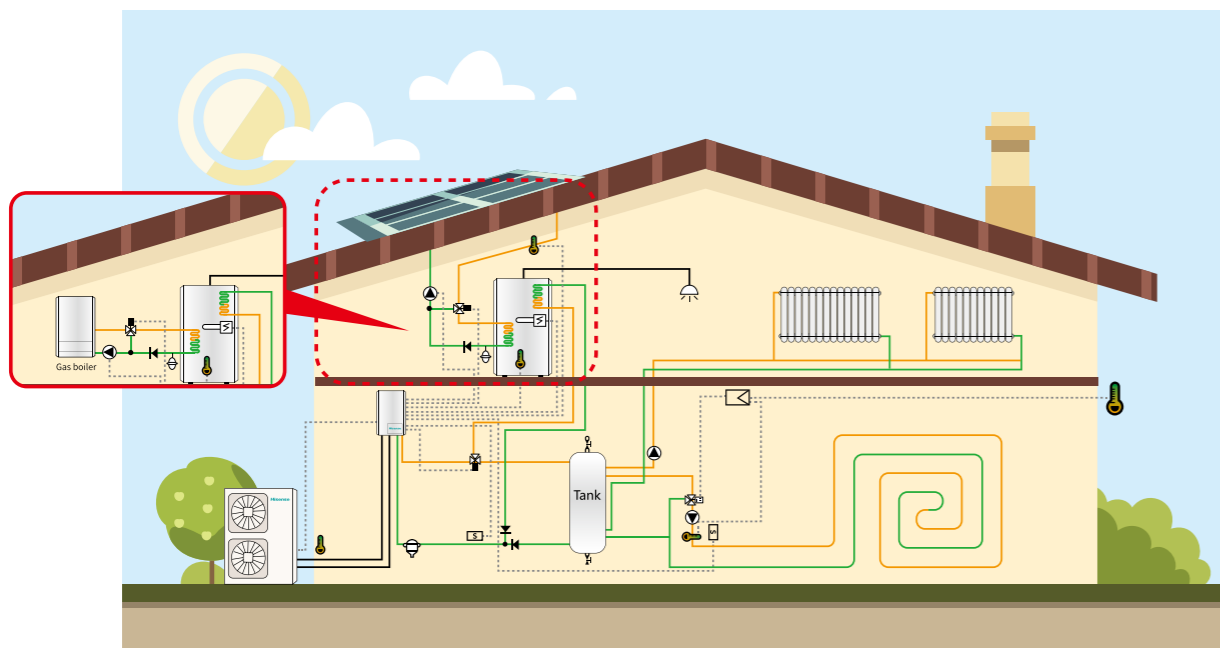
## Strong Heating Capacity Under Low Ambient

Hi-AquaSmart 14kw outdoor unit can maintain the same nominal capacity even at -15°C without electrical booster heater, and 16kw outdoor unit also can maintain the same nominal capacity even at -10°C without electrical booster heater. So designer don't need to oversize the heat pump's capacity even at outdoor temperatures as low as -15°C.



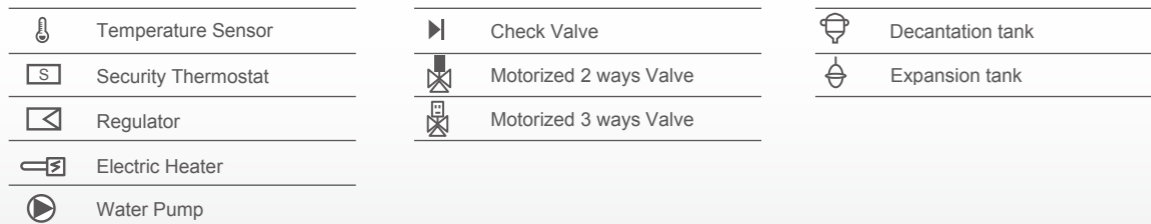
## Assembly Various Heat Sources

Hi-AquaSmart is allowed to combine with existing boiler or solar, so undoubtedly Hi-AquaSmart will be the best alternative to traditional boiler system in old building, and also as a hot water back-up solution to the existing boiler. In case that one heating unit was not working due to some unforeseen problem, this system can ensure heating system no stopping.



### Operation system

- Underfloor heating
- Domestic hot water
- Low temperature radiators
- Hi-aquasmart+solar/boiler(optional)

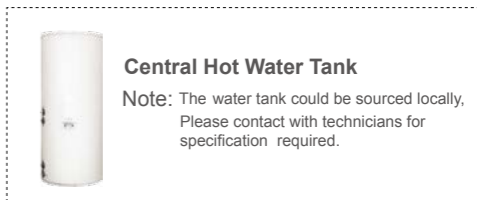


### Specification for Outdoor unit

| Outdoor unit                               |                  | AHW-070UCSDP            | AHW-090UCSDP | AHW-120UCSDP    | AHW-140UCSEP                          | AHW-160UCSEP |      |
|--|------------------|-------------------------|--------------|-----------------|---------------------------------------|--------------|------|
| Indoor unit                                |                  | AHM-070UXCSAPA3         |              | AHM-160UXCSAPA3 |                                       |              |      |
| Refrigerant                                |                  | R410A                   |              |                 |                                       |              |      |
| Power supply                               |                  | AC1Φ,220~240V/50Hz      |              |                 |                                       |              |      |
| Compressor                                 |                  | Double-rotor compressor |              |                 | Scroll compressor with Vapor-injected |              |      |
| Condition 1<br>Ta7/6°C LWC35°C<br>(DT=5°C) | Heating capacity | kW                      | 7            | 9               | 12                                    | 14           | 16   |
|  | COP              |                         | 4.50         | 4.62            | 4.10                                  | 4.84         | 4.74 |
| Condition 2<br>Ta7/6°C LWC45°C<br>(DT=5°C) | Heating capacity | kW                      | 6.2          | 8.1             | 10.8                                  | 12.5         | 14.8 |
|  | COP              |                         | 3.87         | 3.97            | 3.53                                  | 3.70         | 3.95 |
| Cooling<br>Ta35°C LWE18°C<br>(DT=5°C)      | Cooling capacity | kW                      | 6.5          | 8               | 10.5                                  | 12           | 13.5 |
|  | EER              |                         | 3.00         | 2.90            | 2.80                                  | 2.77         | 2.53 |
| Dimensions                                 | H*W*D            | mm                      | 800×950×370  |                 |                                       | 1380x950x370 |      |
| Operation Ambient Range                    | Heating          | °C                      | -20~35       |                 |                                       |              |      |
|  | DHW              | °C                      | -20~43       |                 |                                       |              |      |
|  | cooling          | °C                      | 10~43        |                 |                                       |              |      |
| Heating Sound pressure                     | dB(A)            |                         | 51           | 52              | 54                                    | 51           | 52   |
| Cooling Sound pressure                     | dB(A)            |                         | 50           | 51              | 53                                    | 50           | 51   |

#### Note:

The cooling and heating performance in agreement with EN14511.  
 Heating condition: Outdoor Air Temperature 7°C DB/6°C DB, Inlet/Outlet water temperature 30°C/35°C.  
 Cooling condition: Outdoor Air Temperature 35°C, Inlet/Outlet water temperature 12°C/7°C.  
 Piping length:7.5 meter; Piping lift:0 meter



### Specification for Indoor unit

| Capacity              |         | AHM-070UXCSAPA3      | AHM-160UXCSAPA3 |
|-----------------------|---------|----------------------|-----------------|
| Power supply          |         | AC1Φ,220~240V/50Hz   |                 |
| Heating capacity      | kW      | 7                    | 16              |
| Hot water capacity    | kW      | 7                    | 16              |
| Power input           | kW      | 0.245                | 0.245           |
| Dimensions            | H*W*D   | 890×520×320          |                 |
| Net Weight            | kg      | 55                   | 58              |
| Heat Exchanger        |         | plate heat exchanger |                 |
| Hot water temperature | Heating | °C                   | 15~55           |
|                       | DHW     | °C                   | 15~55           |
|                       | cooling | °C                   | 5~25            |
| Sound pressure level  | dB(A)   | 33                   | 33              |
| Piping connections    | gas     | mm                   | 9.53            |
|                       | liquid  | mm                   | 15.88           |
| Water pump            | type    | DC                   |                 |
|                       | brand   | Grundfos             |                 |
| Booster heating       | kw      | 3                    | 3               |