



# Brief introduction

Shenzhen H one was set up in 1993. Engage in heater appliances research, design and manufacture. Focus on heat sources, electronic control, heat transfer and exchange research. At same time, H one cooperate with some scientific research academies, to develop electronic control technology, special in induction heating control field, we gain fruitful harvests. H one owned the advanced technology synchronization the world level.

For single IGBT, two IGBT half-bridge, four IGBT full-bridge drive, we successively worked out one PWM direct drive single IGBT but synchronize with the lowest inflexion of voltage, ZCS drive circuit for two IGBT half-bridge, dual-PWM direct drive two IGBT but with software to adjust dead time to gain ZCS. This tech should be the advanced one drive tech all over the world..

From 2010 H one cooperated with China Scientific Research Academy to develop induction water heater system. Through lots of designs, testing, improvement and innovation, finally we success solved all tech difficulties. Break the traditional thinking, work out novel induction water heat structure, special water tank and water way also with good heat sink for some elements. The induction water heater system include water flow detect system, temperature detect system, power adjust system which based on the theory of PID arithmetic. All these techs applied in induction water heater let it heat the water very quick and keep the water temperature very stable.

In 2011 H one induction water heater had been export in batches. High quality, excellent performances, win some international buyers attention. Now H one have owned 3000W, 4000W, 5000W, 6000W, 7000W water heater, these different models can meet most different zones requirement all over the world. H one will continue develop more water heaters to suit for new markets.

Induction water heater should be the upgraded products of water heater in future, for it's more safety, more save water, more save energy, more healthy and more easy to use. H one will focus on heat tech research and development, constantly innovation to impel H one go ahead and development.

## Brief introduction

## Brief introduction



## Gained patents:

1	Reduce power in standby mode	Utility model	China	2010-06-02	201020213048.8
2	Half-bridge driver cookers zcs synchronous trigger circuit	invention	China	2010-06-24	201010209071.4
3	Heat sources temperature test method	invention	China	2010-11-02	201010528496.1
4	Heat sources temperature test method	Utility model	China	2010-11-02	201020587697.4
6	Induction heater device and its heat sink	Utility model	China	2011-07-19	201120255584.9
7	Induction water heater tank	Utility model	China	2011-07-19	201120255593.8
8	Induction water heater with dry burn against	Utility model	China	2011-07-19	201120255522.8
9	Induction water heater with helix water way	Utility model	China	2011-07-19	201120255602.3
10	Suit for dual-voltage drive thermoelectric circuit	Utility model	China	2011-10-31	201120423592.X
11	One power sources applied in thermoelectric component	Utility model	China	2011-09-23	201120359759.0
12	Helix water tank and induction water heater	invention	PCT	2011-11-29	CN2011/083146
13	Induction water heater and arch way water tank	Utility model	PCT	2011-11-29	CN2011/083150
14	Anti-dry burn induction water heater	invention	PCT	2011-11-29	CN2011/083153
15	Induction water heater and helix water tank	Utility model	China	2011-11-29	201120484297.5
16	Induction water heater and arch water tank	Utility model	China	2011-11-29	201120484910.3

## Knowledge of water heater

A lot of kinds water heater on market, and the specification is very professional for normal consumer, it's difficult to understand the difference and the means of these specifications. So consumers don't know how to select a water heater they preferred.

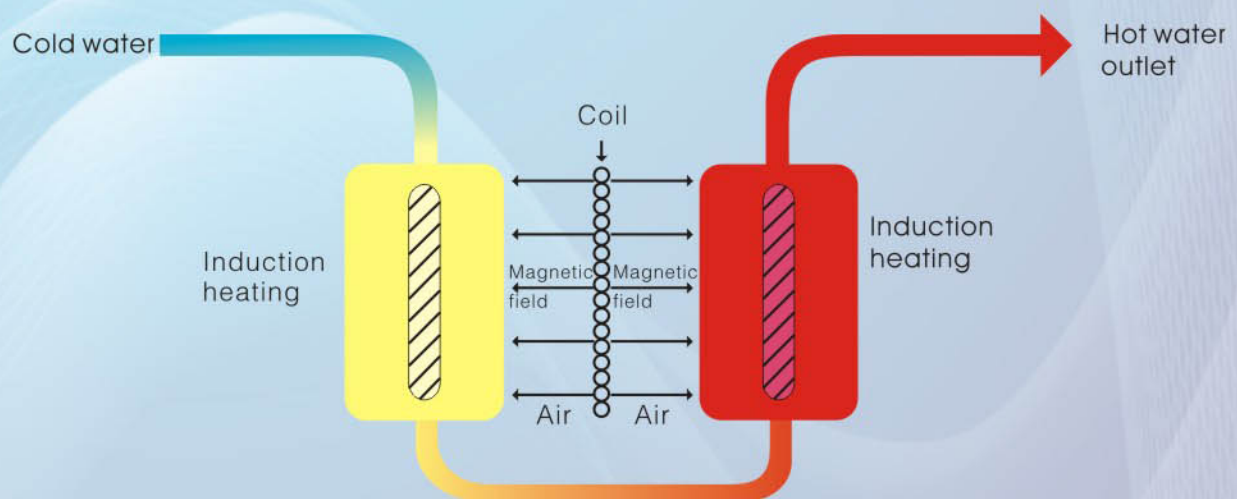
All kinds water heater include gas water heater, storage or instant electrical water heater, storage heat-pump water heater. Gas water heater, burning gas generate heat, and exchange heat to cool water. But it also generate CO<sub>2</sub>, some time if burned not enough will generate CO which easy let the people be poisoned. Thermal efficiency is very low, only about 45%. In working easy be affected by water pressure.

The normal electric water heater even be special insulated when it work, but after long time use, it's still very easy caused electric shock, because the heat is too convergences and easy have water scale, the scale will erode the insulation layer and result short to electricity. Heat pump water heater is a new tech applied in water heater, it root from traditional air condition tech, thermal efficiency is ok. But it's a storage water heater, with a big tank and a housing, connection and installation is very complicated. After long time use, may happen leak of cool media, the leak not only affect environment but also affect work efficiency. The water heater must place out of the room, water way is long will waste some water in using. Induction water heater applied the advanced invert tech invert DC electricity energy to high frequency magnetic energy, this energy can through insulation layer, easy be absorbed by the metal plate, which is put in the water tank and heat cool water directly. The plate not only can heat water, but also magnetize water and surge water molecule group become small. The small group water was proved very good to skin and health.

## Different water heater advantage and disadvantage compare chart

Sort	Gas Water Heater			Instant Water Heater			Storage Water Heater			Heat-pump Water Heater			Induction Water Heater		
Score	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Safety			■			■			■	■			■		
Water-saving		■		■				■				■	■		
Energy-saving			■		■				■	■			■		
Environment protection			■	■				■			■		■		
Health		■			■			■			■		■		
Easy use	■			■				■				■	■		
Comprehensive evaluation	★			★★			★			★★★★			★★★★★		

## Induction water heater work schematic





## The factors need to be considered when looking for a water heater

- 1.The ambient temperature where you live in a year. In different ambient temperature the people may like different water temperature during bathing. In normal situation ambient temperature around 25°C, people like water temperature between 38°C to 40°C, ambient temperature between 10~25°C, people like water temperature between 40~42°C, ambient temperature lower than 10°C, people like water temperature between 42~45°C.
- 2.The water pressure in your room, if the pressure too low and some models water heater may not work or work in bad condition. If the water pressure too high may caused the water heater broken inside, which may result some risk to you. The open water heater only can withstand 0.16 MPa water pressure, closed water heater should withstand more than 0.6 MPa water pressure.
- 3.The favorite water flow you may like, normally the flow should be in 1 liter/minute to 4.5 liter/minute.
- 4.The favorite water temperature you may like, normally it around 38°C to 45°C.

## Common specification of water heater

- 1.Power supply: What's kind AC power will be use.
- 2.Maximum power: The maximum power the water heater can work.
- 3.Tank capacity(storage): The water volume of the tank.
- 4.Water flow(instant): The water flow range it can work.

For an instant water heater, the maximum raised temperature should be decided by the maximum power. The follow charts show the relations of power, water flow and raised temperature.

## Flow, power, raised temperature chart

Water flow (l/m )	Power (w)	Heat efficiency	Heat energy (Kkal)	Raised temperature ( °C )	Input water temperature ( °C )	Output ( °C )
1	3000	0.95	2456.90	40.95	5	45.95
2	3000	0.95	2456.90	20.47	5	25.47
3	3000	0.95	2456.90	13.65	5	18.65
1.35	4000	0.95	3275.86	40.44	5	45.44
2.35	4000	0.95	3275.86	23.23	5	28.23
3.35	4000	0.95	3275.86	16.30	5	21.30
1.7	5000	0.95	4094.83	40.15	5	45.15
2.7	5000	0.95	4094.83	25.28	5	30.28
3.7	5000	0.95	4094.83	18.45	5	23.45
2	6000	0.95	4913.79	40.95	5	45.95
3	6000	0.95	4913.79	27.30	5	32.30
4	6000	0.95	4913.79	20.47	5	25.47
2.35	7000	0.95	5732.76	40.66	5	45.66
3.35	7000	0.95	5732.76	28.52	5	33.52
4.35	7000	0.95	5732.76	21.96	5	26.96

Above all, the user should consider ambient temperature, water pressure, water flow and outlet water temperature they prefer to select a water heater, also consider the ambient temperature floating in a year. If the ambient temperature above 20°C, the maximum power 3000W is enough. If the ambient temperature above 10°C, the maximum power 4000W to 5000W is enough, If the ambient temperature under zero, it's better to select the maximum power over 6000W or 7000W.



## HO-1240

### Specification

- Power supply: 220~240VAC
- Max Power: 4000W
- Temperature range: 36°C~45°C
- Water flow rate  $\geq 0.8\text{L/minute}$

### Characters

- Induction heating, no water scale, isolate water and electricity, never electric shock.
- Water flow detection to prevent dry burn.
- Multi-way temperatures detection combined water flow detection to control the power to heat, make output water temperature very stable.
- Water leak, electricity leak, over temperature, surge, etc., Multi safety detections and protections.
- Heating during using, save energy and water.
- Magnetize water and surge water become smaller group which helps to skin.





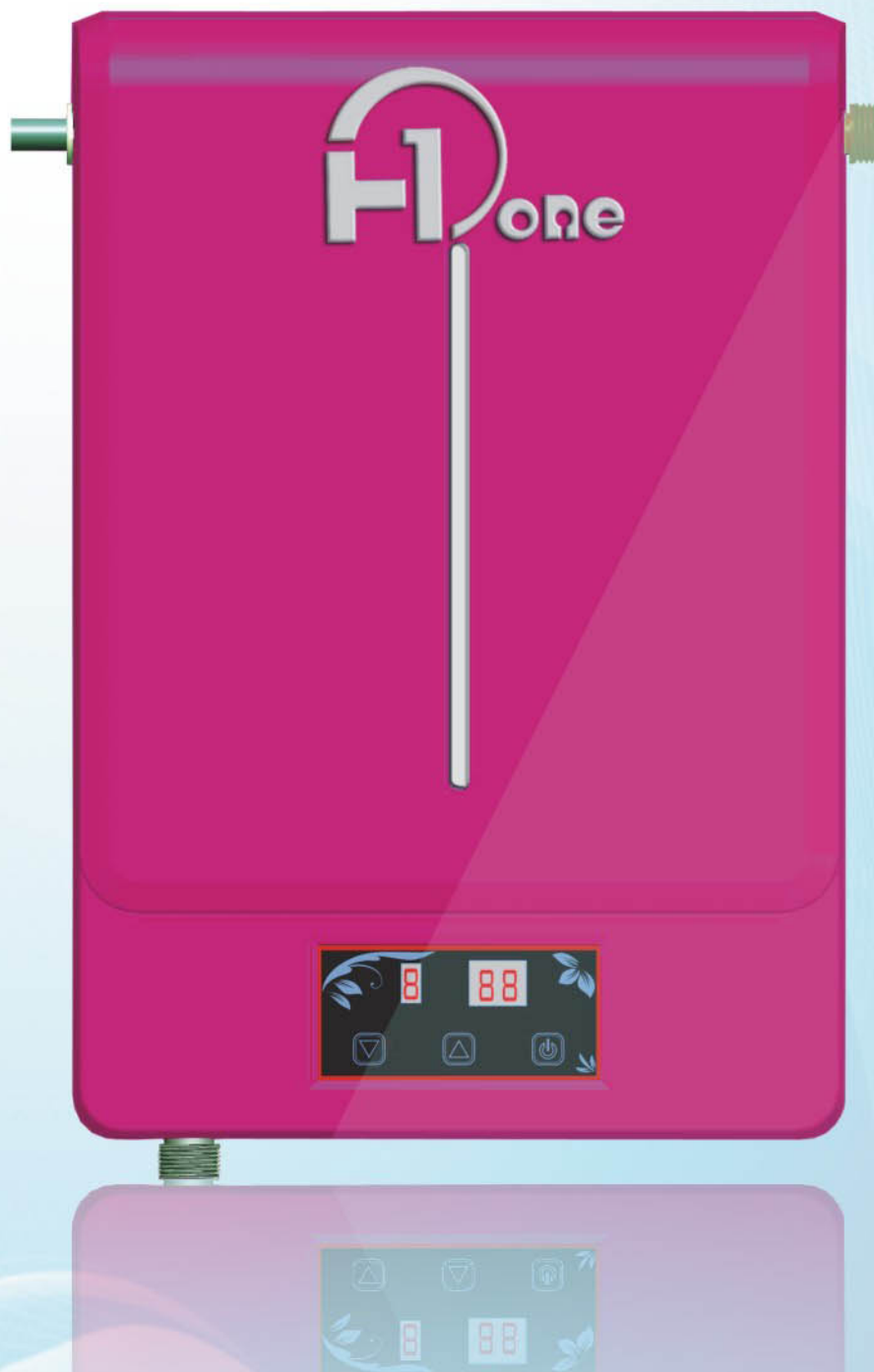
## HO-1230

### Specification

- Power supply:220~240VAC
- Max Power:3000W
- Temperature range:36℃~45℃
- Water flow rate  $\geq 0.8\text{L/minute}$

### Characters

- Induction heating, no water scale, isolate water and electricity, never electric shock.
- Water flow detection to prevent dry burn.
- Multi-way temperatures detection combined water flow detection to control the power to heat, make output water temperature very stable.
- Water leak, electricity leak, over temperature, surge, etc., Multi safety detections and protections.
- Heating during using, save energy and water.
- Magnetize water and surge water become smaller group which helps to skin.



## HO-1250

### Specification

- Power supply: 220~240VAC
- Max Power: 5000W
- Temperature range: 36°C~45°C
- Water flow rate  $\geq 1\text{L/minute}$

### Characters

- Induction heating, no water scale, isolate water and electricity, never electric shock.
- Water flow detection to prevent dry burn.
- Multi-way temperatures detection combined water flow detection to control the power to heat, make output water temperature very stable.
- Water leak, electricity leak, over temperature, surge, etc., Multi safety detections and protections.
- Heating during using, save energy and water.
- Magnetize water and surge water become smaller group which helps to skin.





## HO-1260

### Specification

- Power supply: 220~240VAC
- Max Power: 6000W
- Temperature range: 36°C~45°C
- Water flow rate  $\geq 1\text{L/minute}$

### Characters

- Induction heating, no water scale, isolate water and electricity, never electric shock.
- Water flow detection to prevent dry burn.
- Multi-way temperatures detection combined water flow detection to control the power to heat, make output water temperature very stable.
- Water leak, electricity leak, over temperature, surge, etc., Multi safety detections and protections.
- Heating during using, save energy and water.
- Magnetize water and surge water become smaller group which helps to skin.



**HO-1270**

### Specification

- Power supply: 220~240VAC
- Max Power: 7000W
- Temperature range: 36°C~45°C
- Water flow rate  $\geq 1\text{L/minute}$

### Characters

- Induction heating, no water scale, isolate water and electricity, never electric shock.
- Water flow detection to prevent dry burn.
- Multi-way temperatures detection combined water flow detection to control the power to heat, make output water temperature very stable.
- Water leak, electricity leak, over temperature, surge, etc., Multi safety detections and protections.
- Heating during using, save energy and water.
- Magnetize water and surge water become smaller group which helps to skin.