



SST Heating Energy Co., Ltd

Address: No.21 Lanhe, Nansha, Guangzhou(511400), China

Tel : 020-3498-1196

E-mail : info@chinawatertank.com

Web : www.chinawatertank.com

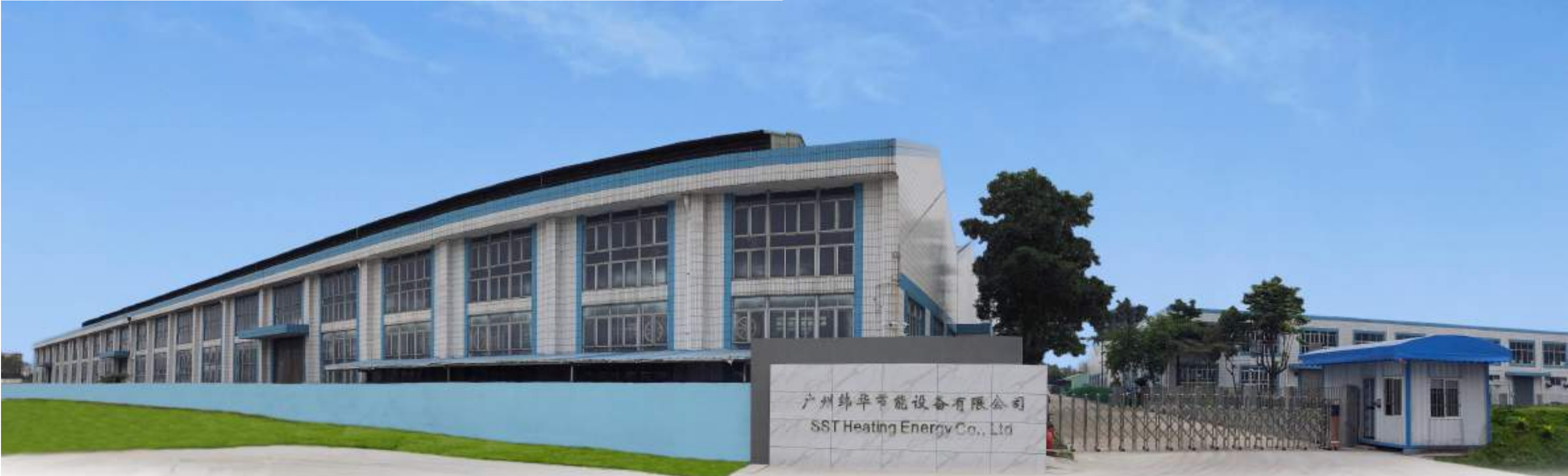


SST Heating Energy Co.,Ltd

---Stainless steel water tank customization master



WARM HOME



Focus on R&D of stainless steel water tank for over 15 years



Digital management with multiple automatic production lines



Annual production capacity exceeds 200,000 units



National high-tech enterprise, Industry-Academia-Research base of Guangdong University of Technology



Equipped with a core R & D team, achieved more than 40 patents

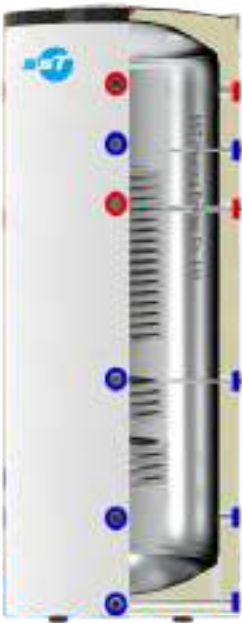


SST Heating Energy Co.,Ltd, founded in 2006, is the most mature manufacturer and exporter of stainless steel customized water tanks and the largest producer of Duplex stainless steel water tank with butt-welding technology in China, and has obtained more than 40 patents. Its products include: heat pump water tank, buffer tank, electric water tank, pressurized solar water tank, DHW tank, heat recovery water tank, relevant accessories of solar hot water system and stainless steel customized products.

SST has obtained ISO 9001 (Quality), ISO 14001 (Environment), ISO 45001 (Health and Safety) certifications, and passed CE and ERP, WaterMark, SAA and CB certificates. The water tank materials certified by RoHS and REACH. SST water tank is mainly exported to Europe, North America, Australia, South Africa and other countries and regions.

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PAWT

24-hour hot water



Energy saving

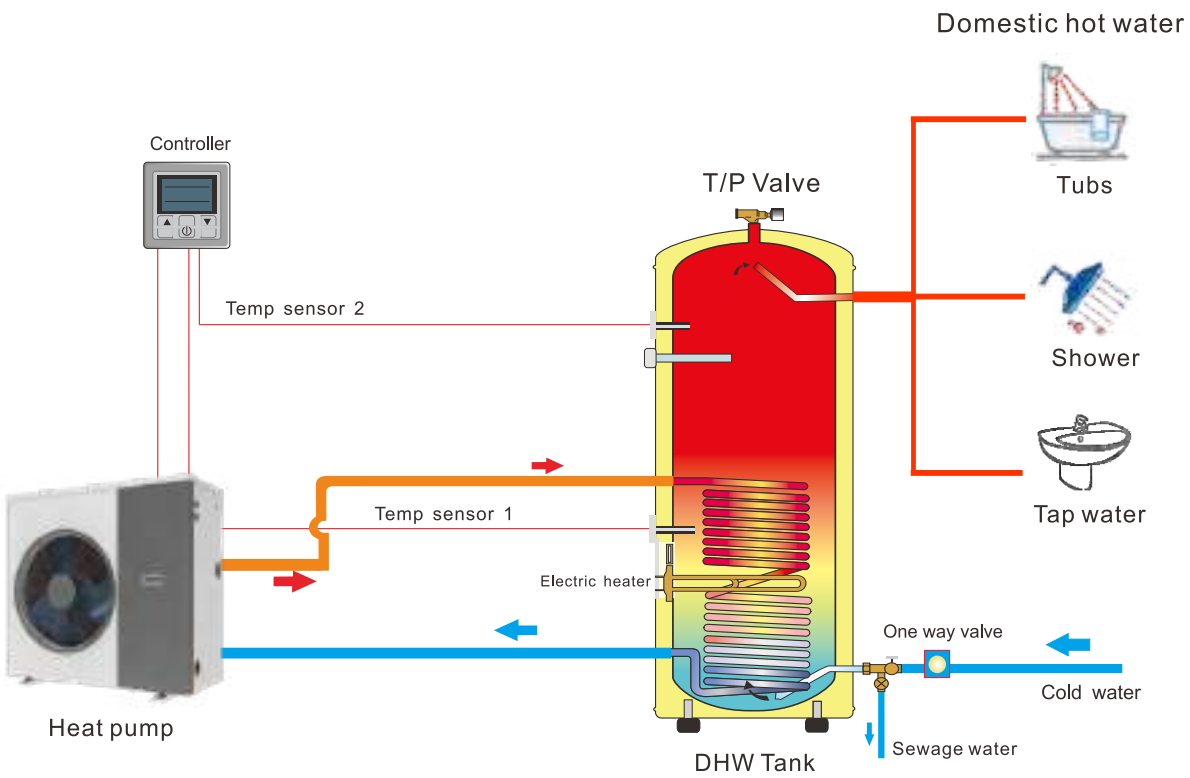


Central heating



Model	PAWT-250L	PAWT- 500L	PAWT-600L	PAWT-800L	
Capacity(L)	250L	500L	600L	800L	
Inner / outer diameter(mm)	Φ470 / Φ560	Φ600 / Φ700	Φ650 / Φ760	Φ800 / Φ900	
Inner tank material	SUS304 / SUS316L / Duplex S-S				
Outer shell material	Galvanized steel with painting / SUS304 / PU soft coat				
Insulation thickness(mm)	δ 45mm	δ 50mm	δ 55mm	δ 50mm	
Connection size(inch)	1/2"	3/4"	1"	1.5"	2"
Electric heater	1.5Kw / 3.0Kw	220~240V	50~60Hz		
Heat exchanger type	Stainless steel coil / Aluminum coil / Copper coil				
Package size(mm)	630x630x1570	780x780x1940	---	---	

* It is stainless steel pressurized thermal insulation tank, max working pressure is 6bar and max test pressure is 10bar
** It can work with heat pump, gas boiler, fireplace, air conditioning and other heating systems



Heat pump tank is an energy efficient way of supplying domestic hot water needs, and can complement any heat pump for space heating.

Unlike a traditional hot water heater, a heat pump water heater uses electricity to move existing heat from one place to another instead of generating heat directly.

Heat pumps are often used by homeowners to heat and cool homes, but they can also be used either as a stand-alone water heating system or in a combination system for both hot water and space conditioning.

Heat exchanger

In addition to adding stainless steel wave or smooth coils to heat the water in tank, the water inside can be heated up by wrapping copper and aluminium coils around the tank.



Aluminum coil



Copper coil

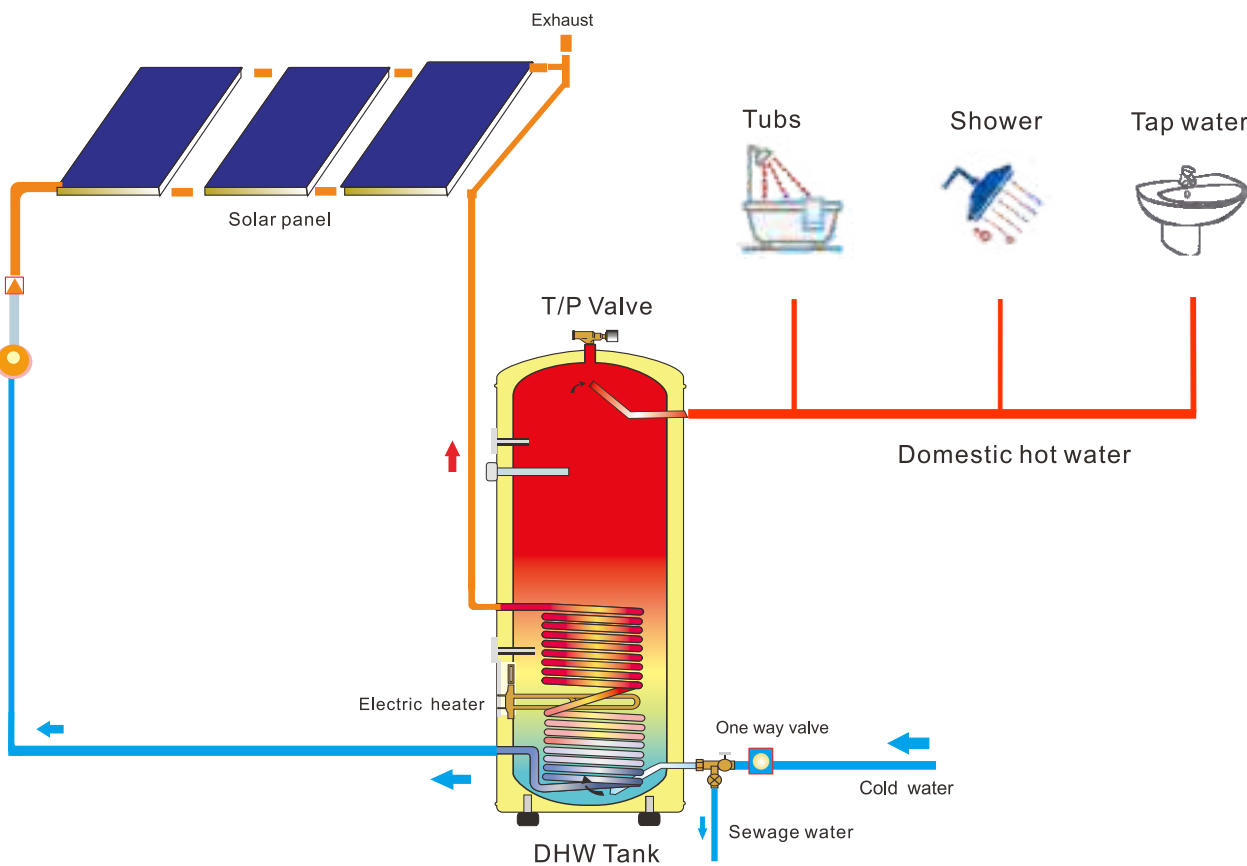


Smooth stainless steel coil



Stainless steel wave coil





Solar water tanks are used in solar heating packages to act as buffer tank. When the sun is shining, the water will be heated in the solar storage tank for later use, most commonly in the evening.

Most solar water heater contain a heat exchanger to separate the potable water from the solar heating solution (Water/Glycol) and have a great insulation value that can retain the heat for day.

The hot water can be used for domestic water, like showering、bathing、cleaning and washing.



OEM&ODM High-efficiency coil Drinking water standard



Capacity(L)	150L	200L	300L
Inner / outer diameter(mm)	Φ370 / Φ470	Φ470 / Φ560	Φ500 / Φ600
Height(mm)	1410	1312	1572
Inner tank material	SUS304 / SUS316L / Duplex S-S		
Outer shell material	Galvanized steel with painting / SUS304 / PU soft coat		
Connection size(inch)	1/2" 3/4"	1" 1.5"	2"
Electric heater	1.5Kw / 3.0Kw	220~240V	50~60Hz
Heat exchanger diameter(mm)	Φ22 / Φ28 / Φ32		
Package size(mm)	540x540x1560	630x630x1400	670x670x1650

* It is stainless steel pressurized thermal insulation tank, max working pressure is 6bar and max test pressure is 10bar
** The water tank is mainly used in pressurized solar system. It can be installed vertically or horizontally

Container Loading Quantity

	50L	100L	200L	250L	300L	500L	800L	1000L
20GP	124pcs	80pcs	40pcs	39pcs	35pcs	21pcs	11pcs	11pcs
40GP	264pcs	172pcs	80pcs	79pcs	75pcs	45pcs	26pcs	26pcs
40HQ	307pcs	176pcs	106pcs	79pcs	75pcs	45pcs	26pcs	26pcs

PAWT



<<< Electric water tank

75 °C high
temperature sterilization



Size
customization



Rapid heating



Capacity(L)	50L	80L	100L	150L	
Inner / outer diameter(mm)	Φ370 / Φ470				
Inner tank material	SUS304 / SUS316L / Duplex S-S				
Outer shell material	Galvanized steel with painting / SUS304 / PU soft coat				
Connection size(inch)	1/2"	3/4"	1"	1.5"	2"
Electric heater	1.5Kw / 3.0Kw		220~240V	50~60Hz	
Installation type	Horizontal / Vertical				
Package size(mm)	540x540x680	540x540x980	540x540x1170	540x540x1560	



PWT

* It is stainless steel pressurized thermal insulation tank, max working pressure is 6bar and max test pressure is 10bar
** It can be applied to hot water systems in hotel, household, apartment, villa, etc

Buffer tank >>>

System buffer



High cost
performance



Environment
protection



PWT

Capacity(L)	100L	150L	200L
Inner / outer diameter(mm)	Φ370 / Φ470	Φ370 / Φ470	Φ470 / Φ560
Inner tank material	SUS304 / SUS316L / Duplex S-S		
Outer shell material	Galvanized steel with painting / SUS304 / PU soft coat		
Connection size(inch)	1/2"	3/4"	1" 1.5" 2"
Electric heater	1.5Kw / 3.0Kw	220~240V	50~60Hz
Installation type	Horizontal / Vertical		
Package size(mm)	540x540x1170	540x540x1560	630x630x1400

* It is stainless steel pressurized thermal insulation tank, max working pressure is 6bar and max test pressure is 10bar
** It is mainly used in heat pump, solar system, fireplace, boiler, and other heating systems





Cost-effective



Rapid heating



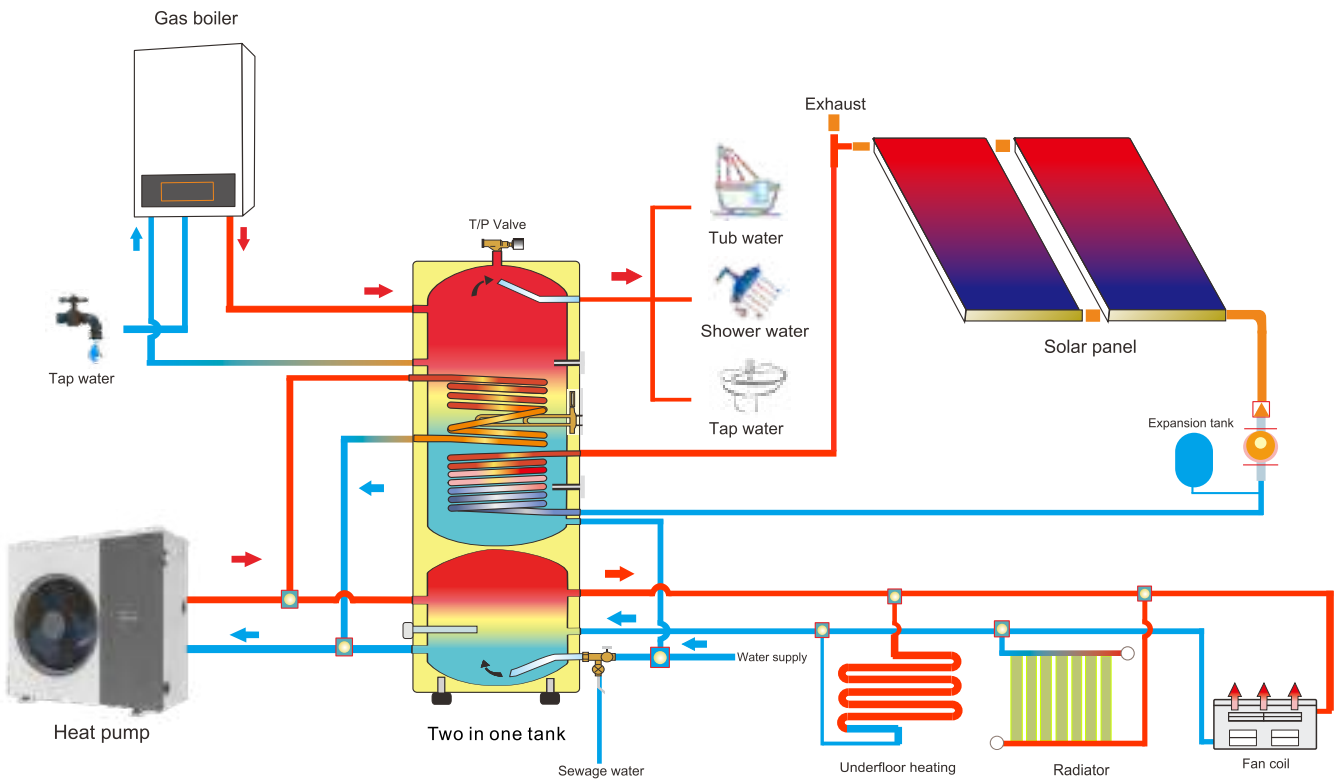
Energy saving



The two-in-one storage tank combines domestic hot water tank and buffer tank, the top tank with coil will be used for sanitized water and lower tank for heating.

The capacity, design, height of DHW tank and buffer tank can be customized.

Both top and lower tanks can be equipped with separate electric back-up heaters.



Combined tank for heat pumps – DHW tank & central heating buffer.

The complete solution is the combination of a sanitary water tank and a central heating buffer, working with heat pump, solar panels and gas boiler.

Two-in-one water tank saves installation space, transport and labour costs.

MULTIFUNCTIONAL WATER TANK

- Stainless steel tank, up to the drinking water standard
- Professional technical and design support for system customization
- DHW&Heating&Cooling



PDWT(DHW&buffer)



PCWT(tank with tank)



PMWT(tank in tank)

Capacity(L)	200L	250L	300L	500L
Inner capacity(L)	150L+50L	200L+50L	200L+100L	300L+200L
Inner diameter(mm)	Φ470	Φ470	Φ500	Φ600
Outer diameter(mm)	Φ560	Φ560	Φ600	Φ700
Insulation thickness(mm)	δ 45mm	δ 45mm	δ 50mm	δ 50mm
Inner tank material	SUS304 / SUS316L / Duplex S-S			
Outer shell material	Galvanized steel with painting / SUS304 / PU soft coat			
Connection size(inch)	1/2"	3/4"	1"	1.5" 2"
Electric heater	1.5Kw / 3.0Kw	220~240V	50~60Hz	

* Bespoke options available

** Two-in-one design can save installation spaces & labor costs

Capacity(L)	200L	300L	400L	500L
Inner capacity(L)	120L+80L	200L+100L	250L+150L	300L+200L
Inner diameter(mm)	Φ470	Φ500	Φ550	Φ600
Outer diameter(mm)	Φ560	Φ600	Φ650	Φ700
Insulation thickness(mm)	δ 45mm	δ 50mm	δ 50mm	δ 50mm
Inner tank material	SUS304 / SUS316L / Duplex S-S			
Outer shell material	Galvanized steel with painting / SUS304 / PU soft coat			
Connection size(inch)	1/2"	3/4"	1"	1.5" 2"
Installation type	Horizontal / Vertical			

* Better separation of water for domestic, floor heating and solar system

** Connect with heat pump, solar system, gas boiler and other systems at the same time

Capacity(L)	300L	400L	500L	600L
Small inner capacity(L)	120L	120L	120L	120L
Inner diameter(mm)	Φ500	Φ550	Φ600	Φ650
Outer diameter(mm)	Φ600	Φ650	Φ700	Φ760
Insulation thickness(mm)	δ 50mm	δ 50mm	δ 50mm	δ 50mm
Inner tank material	SUS304 / SUS316L / Duplex S-S			
Outer shell material	Galvanized steel with painting / SUS304 / PU soft coat			
Electric heater	1.5Kw / 3.0Kw	220~240V	50~60Hz	
Heat exchanger diameter(mm)	Φ22 / Φ28 / Φ32			

* The large and small tank have larger heat transfer area and faster heating effect

** The design can meet needs of users with multi-function such as hot water, heating and buffer

Flow heater >>>



Shell material	SUS304 / SUS316L				
E-heater type	Detachable / Non detachable thread / Flange electric heater				
Electric heater	1.5Kw / 3.0Kw 220~240V 50~60Hz				
Thermostat	Bimetal thermostat / Rod temperature controller				
Diameter(mm)	Φ76		Φ90		
Connection size(inch)	1/2"	3/4"	1"	1.5"	2"

* Customizable with accurate temperature control
** It can be used in heat pump system, swimming pool system, bathtub, floor heating, radiator and other systems as auxiliary heating



<<< Stainless steel mini tank



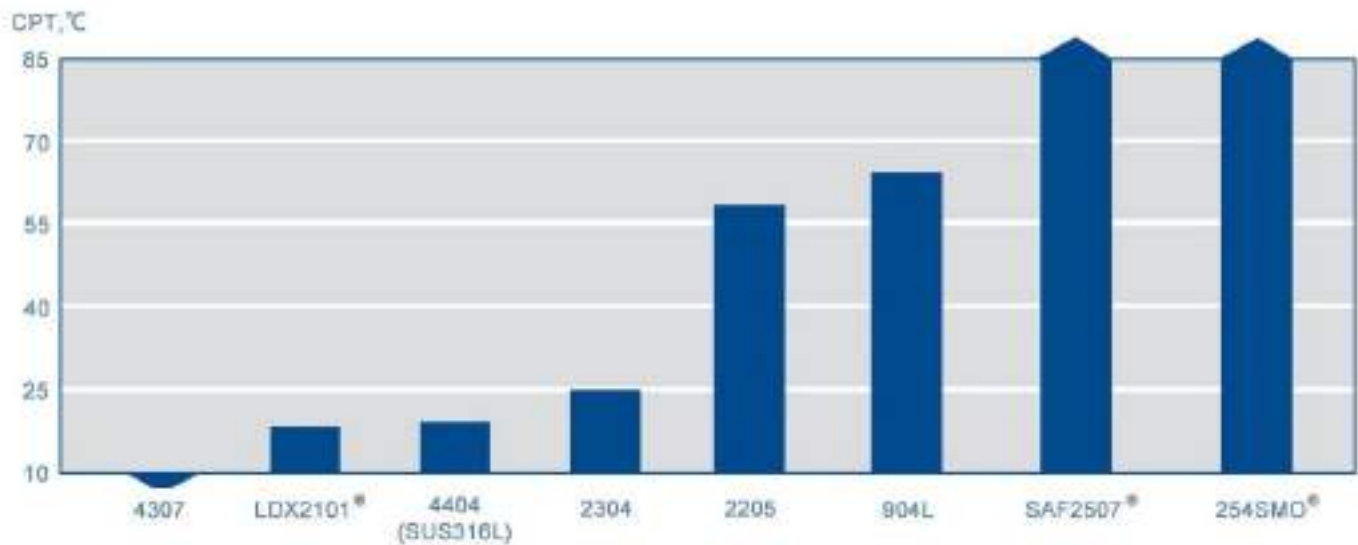
Shell material	SUS304 / SUS316L				
Diameter(mm)	Φ63.5 / Φ76.2 / Φ90 / Φ101.6				
Thickness(mm)	0.8 / 1.0 / 1.2 / 1.5 / 2.0				
Connection size(inch)	1/2"	3/4"	1"	1.5"	2"
E-heater type	Detachable / Non detachable thread / Flange electric heater				
Electric heater	1.5Kw / 3.0Kw 220~240V 50~60Hz				

* Customizable with accurate temperature control
** It can be used for coffee machine, water dispenser, spa instrument and other heating system

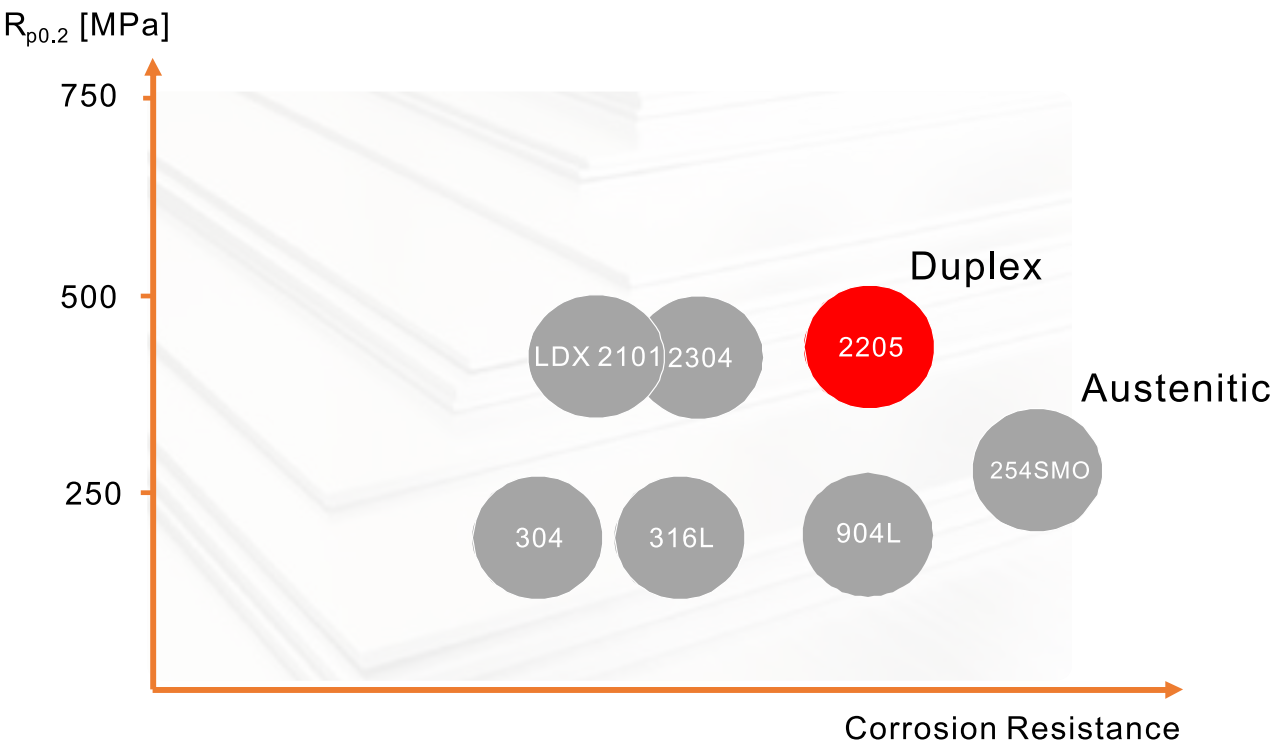
Composition of Duplex stainless steel



Ferritic-austenitic stainless steels are known as Duplex 2205 and combine the advantages of ferritic and austenitic steel. Due to the high content of Cr,N and Mo, which makes Duplex 2205 good resistance to localised and uniform corrosion.



The above figures show typical critical pitting corrosion temperatures (CPT) in 1M NaCl measured according to ASTM G150 using the Avesta Cell. Test surfaces wet ground to 320 mesh. CPT varies with product form and surface finish.



Test Result

The pitting corrosion resistance of Duplex stainless steel is far more than SUS304 or SUS316L.
Test conditions:
Solution:6% ferric chloride solution
Test method: Soak

Duplex is the best choice for stainless steel hot water tank.

* Duplex 2205 achieve better tensile strength, yield strength and toughness than SUS304 and SUS316L steels at the same diameter and ambient pressure.

Material	Tensile strength (min) MPa	Yield strength MPa	Toughness (max)
			HB
SUS304	515	205	201
SUS316L	485	170	217
2205	655	450	293

Material	100L	200L	300L	400L
SUS304	1.2mm	1.5mm	1.5mm	2.0mm
SUS316L	1.2mm	1.5mm	1.5mm	2.0mm
2205	1.0mm	1.0mm	1.0mm	1.5mm

** For the same diameter and pressure, Duplex 2205 can be used at a thinner thickness than austenitic steel, due to the higher strength of austenitic steel, which makes Duplex 2205 more advantageous in terms of tank costs and transport.

Detection process



100% leakage test

The tank testing pressure is 0.8~1.0MPa and keep it for 3 minutes, there are no bubbles in the pool and no deformation of the tank. It turns out that the water tank has no leakage

Material testing



Salt spray corrosion test

The corrosion resistance of the inner tank is tested through NSS experiment. The experimental results show that the product has good corrosion resistance and can be used in the environment with poor water quality

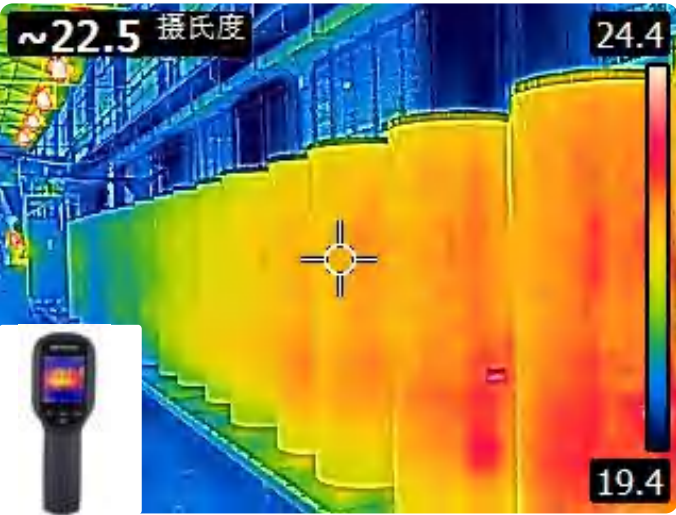
Internal inspection of water tank

Through the endoscope, it is convenient to observe the inner tank after pickling, and ensure that the products are qualified after pickling



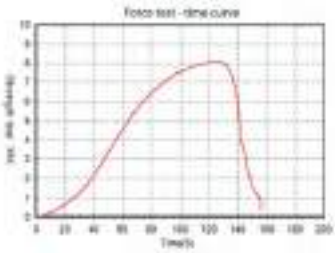
Raw material analysis

Raw materials, for example, stainless steel sheet, coils, connectors and so on



Infrared thermal imaging

Inspect polyurethane foaming process and foaming quality through high-precision infrared radiation imaging with thermal sensitivity (NETD)<60Mk (0.06 °C)



Mechanical property test

Measure the tensile (compressive) strength, elongation, shear strength, welding strength and other mechanical properties of materials, and output the performance change curve for material mechanics research



ISH Expo in Germany



ISH Expo in Beijing



ISH Expo in Paris



HVACR in Vietnam



ISH Expo in Sydney



Heat Pump Expo in Shanghai

Partners



Certificate



ERP



Water Mark



CE



SAA



ISO45001



ISO14001



ISO9001



CB



Apartment



Villa



Milk plant



Hotel



School



Fireplace



Hospital



Household

