

# PRO pressurized solar water heater



PRO -100L  
PRO -150L  
PRO -200L  
PRO -300L

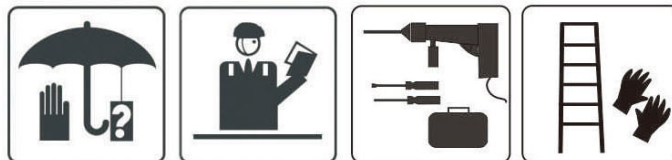
■ Please an appropriate preservation

## Foreword

Dear customer:

Congratulations on your purchase of high efficient solar water heaters PRO, Installing for superior performance in order to operate reliably at optimal efficiency, it must be correctly installed. Please ensure that you employ the services of a certified installer who will ensure the installation follows the manufacturer's guidelines and meets all government and health regulations. The PRO system has been designed with ease of installation as one of the key design features. This manual includes a clear step by step installation guide. If you come across any issues not covered by this manual during the installation, please contact with your accredited installer or representative agent.

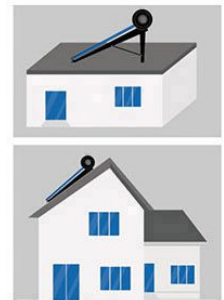
Please check the manual before intallation





## UNIQUE DESIGN

- With ADJUSTABLE bracket (suitable for both flat roof and sloop roof).
- New designed vacuum tube holder.
- New design electric element cover.
- 316L stainless steel socket.



100/150/200/300L

### Pressure Solar Water Heater

#### WATER TANK

Material of Outer Tank Shell	Stainless Steel
Material of Inner Tank Chest	SUS304-2B
Water Tank Diameter	[470/360 MM]
Water Tank Insulating Layer	Imported Polyurethane [55MM]
Heat Preservation Period	72~80 Hours

#### Vacuum Tube (Heat Pipe)

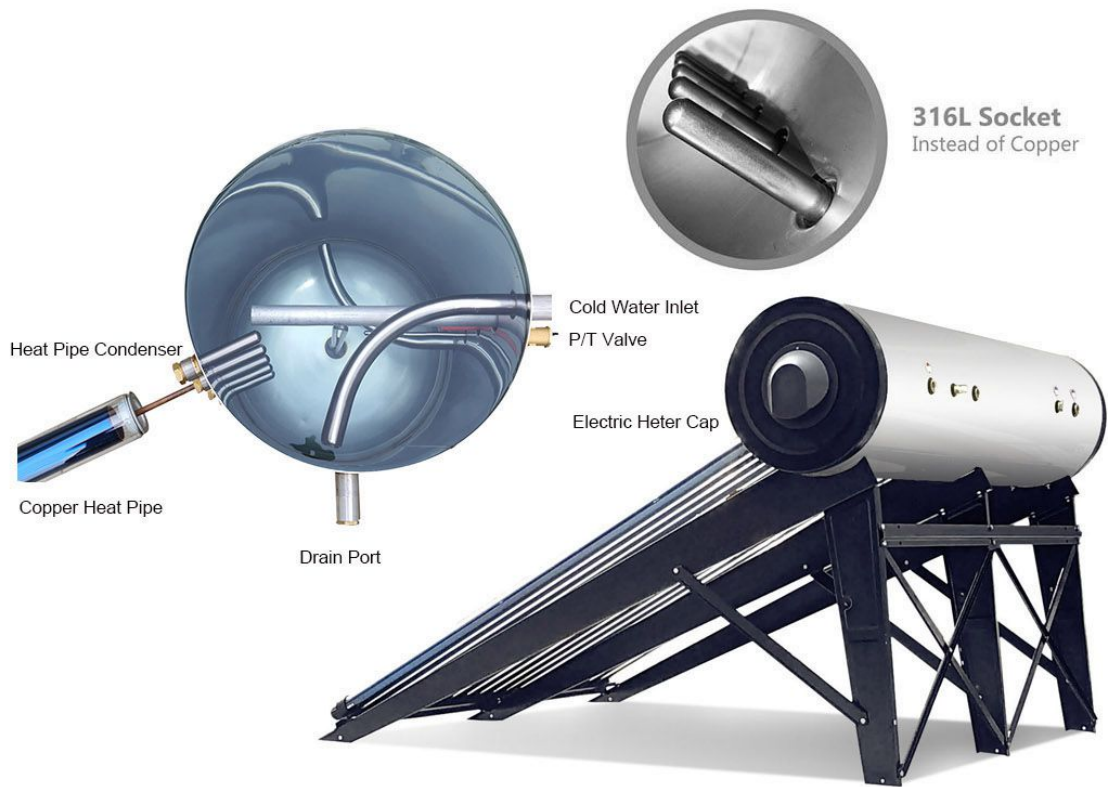
Tube Structure	All-Glass Double-Tube Co-Axial Structure
Glass Material	High Borosilicate 3.3 Glass
Tube Size	[58x1800 MM]
Heat Pipe Material	TU1 Copper
Heat Pipe Size	Φ14mm Diameter,80mm Length
Heat-Transfer-Fin	Premium Complete Type(Super Model)
Maximym Operation Pressure	1.2Mpa
Heat pipe Condenser Pocket	316L

#### Bracket

Bracket Material	Stronger Adjustable Galvanized Steel
Bracket Angle	[30°]
Bolts & Nuts	Stainless Steel

# Water Tank Description

Adopting 316L/SUS-304-2B stainless steel as inner chest material, in the meantime, use 316L stainless steel as heat socket, and high density PU foam as insulation material Which makes solar heaters outstanding in the market!



## Technical Parameter

MODEL	Vacuum Tube		Capacity (L)	Absorber Area (M2)	Suitable for (Person)
	Pcs	Size(mm)			
PRO - 100L	10	58×1800	100	1.33	2~3
PRO - 150L	15	58×1800	150	1.995	6
PRO - 200L	20	58×1800	200	2.66	8
PRO - 300L	30	58×1800	300	3.99	12-13



## Vacuum Tube Holder

New Aesthetic designed vacuum tube holder is much thicker & bigger than traditional one, What is more important, it is much easier for installation.

New Design



Traditional

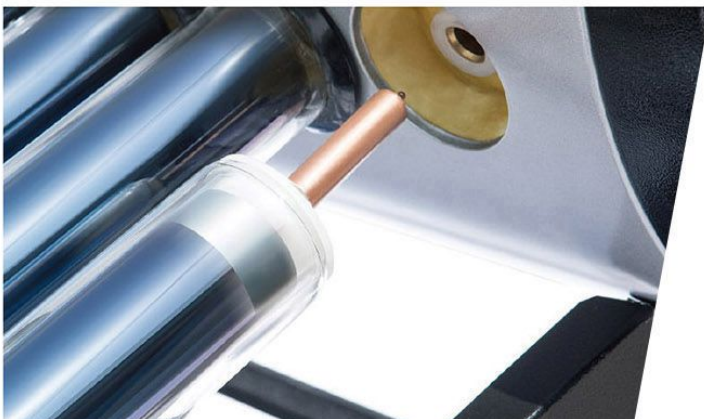
## Heat Pipe Description

- As the heat pipe has less heat capacity, it works very quick even under cloudy days and collect heat effectively.
- It can work normally even -37 degrees, as there is no water in the vacuum, it can effectively prevent low heat efficiency due to frost cracking or scaling!
- Each individual tube can work independently, and the whole system can still work if any one of them get damaged, the lifespan of our heat pipe is more than 15 years.



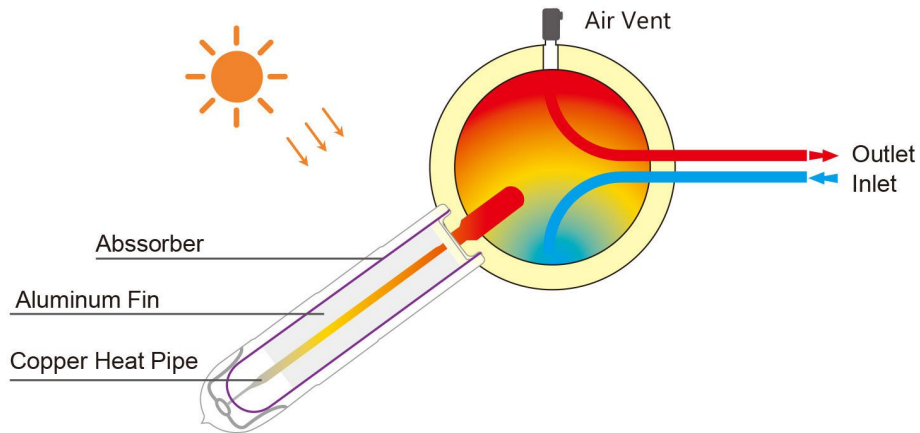
## Heat Pipe Solar Tubes Performance & Specification

<b>MODE</b>	Φ14mm
<b>Heat Pipe Material</b>	Oxygen Free Copper(TU1) Cu=Ag>99.99% (O <sub>2</sub> <16ppm)
<b>Condenser Dimensions</b>	Top: Φ14mmx80mm, Body: Φ8mm
<b>Heat-Transfer-Fins</b>	0.3mm/0.0098" thick sets of aluminum fins, 1630mm
<b>Starting Speed</b>	30sec.
<b>Stagnation Temperature</b>	236 C





## How it works?



## pressurized solar water heater working principle

- The heat pipe pressurized solar heater tank has no exhaust hole, therefore, it must bear the pressure come from tap water and hot water, when use, the hot water comes out because of water pressure.
- Vacuum tube absorbs solar energy, and conductive copper pipe transfers the heat into the pressurized solar water heater tank. In this case, the water inside the tank becomes hot.
- No water in the heat pipe makes the whole system can bear pressure.



## CORE ACCESSORIES

P/T Valve	Check Valve	Electric Heater Element (Screw Type) 1", 1 1/2", 1 1/4"
		
Magnesium Anode (Screw Type) 3/4"	110/220V, 50~60HZ	Air Vent
		

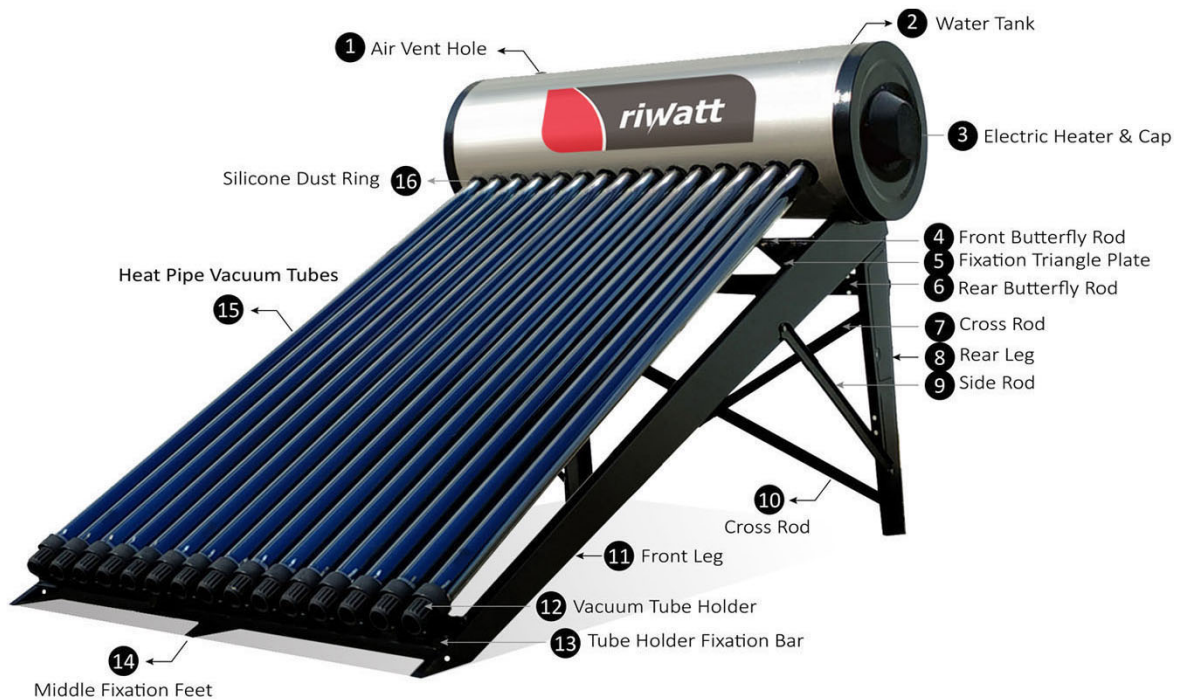
# Product installation

## Special warning :

1. Installing the water heater must be with caution on the high position what required of a professional installer operation, pay attention to their personal safety!
2. Transportation and installation, gently especially for the fragile glass tubes
3. Before installation, please carefully read the installation instructions in strict accordance with the manual operation, and by the professional installation. Otherwise the improperly installed may lead to serious personal injury and property damage, the installation is divided into four parts: frame installation, tank installation and tubes installation and connection of the water heater piping.

## [ frame mounting ]

Solar water heater should be in the sunny square, use galvanized iron wire or expansion screws or cement and fixed the roof pad bracket under hard objects





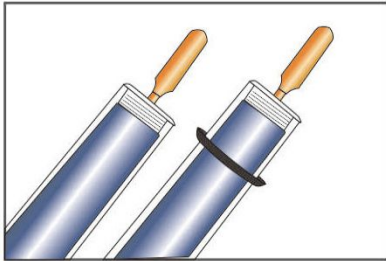
### [Tank installation]

Put the tank on the tank support after the frame completed assembly. Place the four screw bolts on the tank into the tank support, but let the screws not to be turned tightly temporarily. Please pay attention to the direction of vacuum tube hole to be the same angle direction with the tube holder on the bottom track(manifold). Fix the tube holders on the bottom track then turn down its male part.

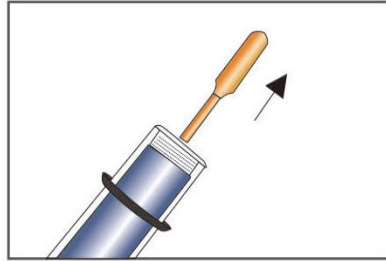




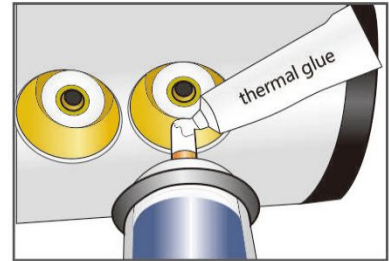
## Tube installation:



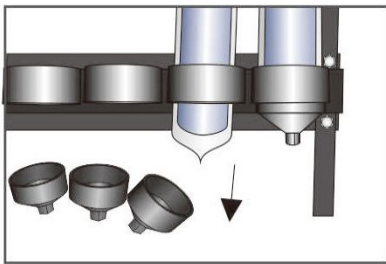
1. Dust ring with water jacket on the vacuum.



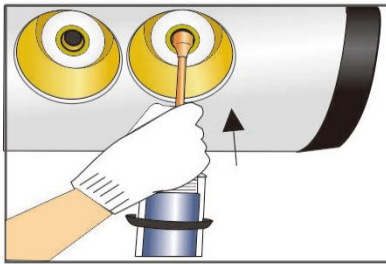
2. Removing the heat pipe header 20–30CM.



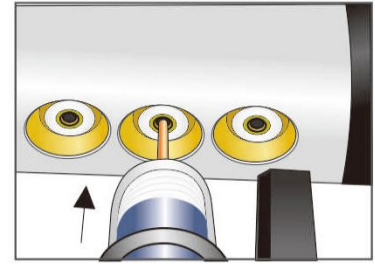
3. Evenly coated with thermal glue on the condenser .



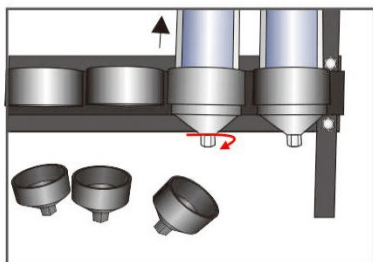
4. Vacuum tube tail into the pipe supports from top to bottom.



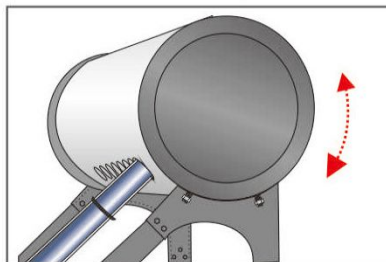
5. holding the heat pipe forced into socket on the tank.



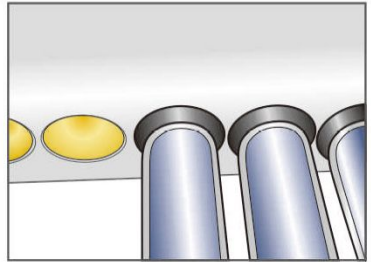
6. vacuum tube inserted into the tank according with the heat pipe.



7. turn the tube holder to be tightly (to keep vacuum tube could not be moved up and down )



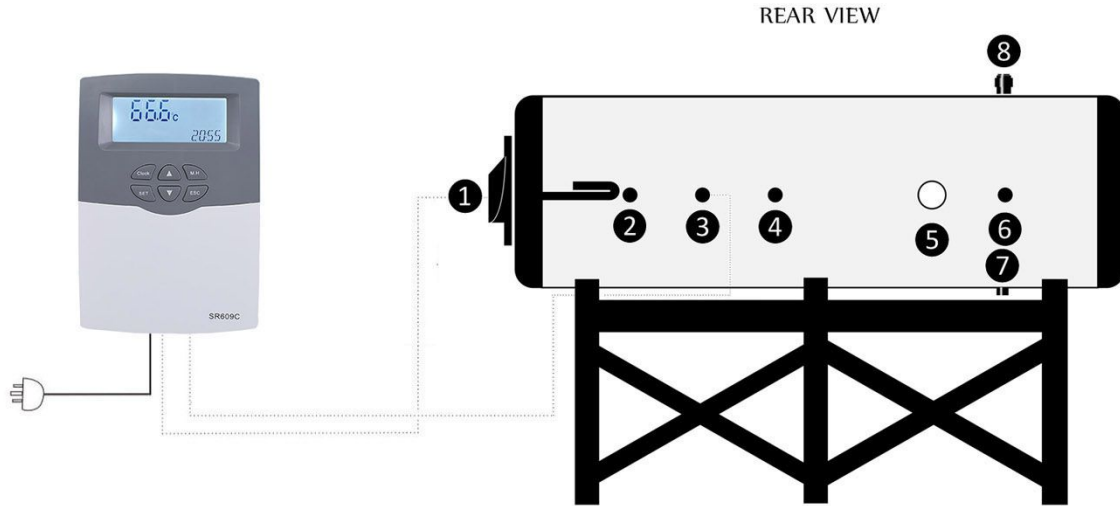
8. The tank angle is fine-tuning, and screw fastening on the tank bottom.



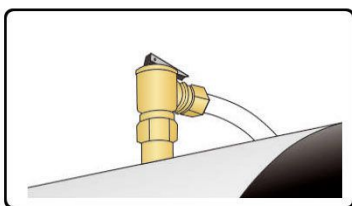
9. Slide the dust ring on the proper position.

## [Pipeline connections]

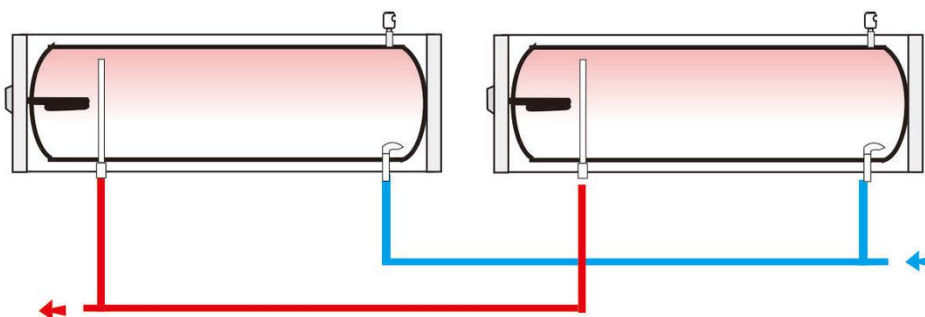
Connect the water pipe line , try to use the special composite pipe or cross-linked pipe, to reduce the water rust and heat loss, piping using insulation materials the better is fixed on the stand or building, if in the cold areas, drain valve can be added, so the emptying of the water in the pipe line.



Serial No.	Description	Size
1	Electric Heater	1"
2	Hot Water Outlet	3/4"
3	Sensor Port	1/2"
4	P/T Valve Hole	3/4"
5	Magnesium Anode	3/4"
6	Cold Water Inlet	3/4"
7	Air Vent Hole	1/2"
8	Drain Port	1/2"



The T/P exhaust port stringent blockage. It should have received an additional exhaust pipe to prevent the tank internal pressure is too high splash hot water to cause damage to persons and property.



Solar water heater can be connected more than in series, parallel way into the collective hot water system.

## Product Instruction

“PRO” : the new pressurized solar water heater, the cold water inlet connect with city water directly, Can withstand high pressure when it works.(Means if the cold water supply pressure in stable, when open the outlet valve will have hot water in time with same pressure;;)

### Attention(importance):

1.During the storm with lightening, please DO NOT use solar water heater and keep the tank full of water during the typhoon/hurricane.;

2.In the summer, if hot water not much used or water temperature is so high, please take some shade to cover part of vacuum tube to reduce the heating;

This solar water heater can use all day for four seasons; the lifetime is more than 15years; During this period, you can take some simple maintenance service as follows:

### 1.clean the vacuum tubes

If in lots of dust and dry area( North area), the vacuum tubes will have so much dity on it, it will reduce the reflecting rate for long time. So you need to clean vacuum tubes at least half year or one year according to the dirt condition. You can use soap water or washing powder water to help clean vacuum tubes. In the rainy areas, it's no need to do this.

### 2.clean the incrustation scale:

If the water temperature is too high, or water quality are not good in some areas, or use the water directly from ground that includes lots of impurity, all of these will cause lots of scale in the tank this will affect the efficiency of solar water heater. So you need to clean the tank exchange magnesium bar in every one or two years. This you must ask professional workers to help do it.

## Warranty Ordinance

Thank you for using our company solar water heaters. Our company will take service at list for you which according to the rules by the Protection of Consumers' Rights and Interests: the products can be exchanged free if the products has manufacturing defects or quality issues within 7days, warranty is 3/5/7 years for main machine, and 1 year for spare parts.

## Trouble Shooting

Trouble	Trouble reasons	Solutions
Sunny day , no hot water	The front of solar water heaters have occluder , high tower, trees, tall buildings, fences or other water heaters, short sunshine ,causing the water temperature is low.	Remove the occluder or move the solar water heaters to the place without occluder.
	1.Vacuum tube surface have thick dust. 2.hot outlet valves got leakage or can not closed well. 3. Vacuum tube or heat pipe damaged . 4.The T/P valve on the main water tank can not closed which cause the water keep flowing.	1.cleaning the tube surface and reflector. 2. check the valves. 3.replace tube or heat pipe. 4.check P/T valve.
No hot water come down during winter time.	1.pipelines freezes in winter time (Cold area winter is not normal, sometimes to freeze in the morning, after sun defrost in afternoon ). 2. weather is too cold .	1.The whole pipeline use heat pipe preservation . 2.Use electric heating belt together with water pipe lines ,outside with heat pipe preservation.

**riwatt**

Simple/Secure/Smart