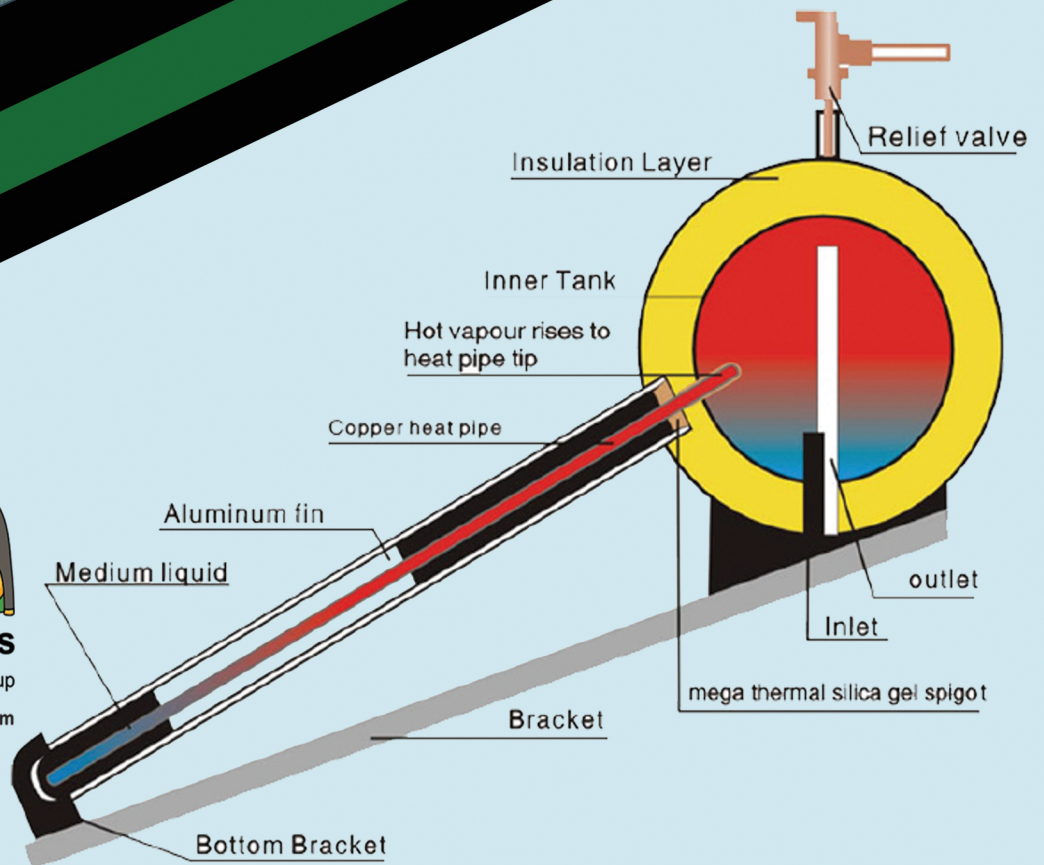


# SOLAR WATER HEATER



**ATON**   
**The Solar Energy Experts**  
 رواد و خبراء الطاقة الشمسية بالعالم - A.R.E Group  
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# A.R.E GROUP

## Advantages:

- \* Highly efficient absorber of high performance with daily average efficiency over 50%;
- \* Start up quickly, heat pipe transfer the heat energy into the storage tank in one direction.
- \* Withstand pressure of 0.4 MPa, can be connected directly with city water pipe.
- \* Higher daily efficiency than JB series.
- \* The storage tank and the heat pipe are metallic sealed;
- \* No water inside the evacuated tubes; the solar water heater can still in service even with several tubes breakage;
- \* Stainless steel inner cylinder stands 100,000 fatigue tests without any distortion;
- \* Highly efficient insulation with polyurethane foam;
- \* Simple structure, easy to assembly and install, diffuse flat plate reflector can be assembled easily with its module structure;
- \* Can be used all year round in the cold climate;
- \* Can be used together with Auxiliary electric boost;
- \* Automatically controlled;
- \* Long service life, can be used as long as 15 years;
- \* Large-scale solar hot water system can be installed either with parallel or series connections

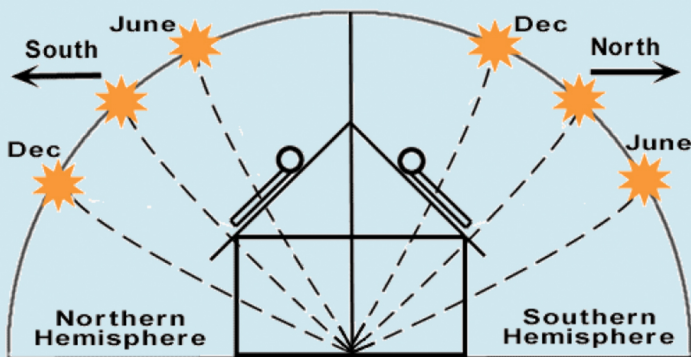
## Technical Data

### Pressure water tank :

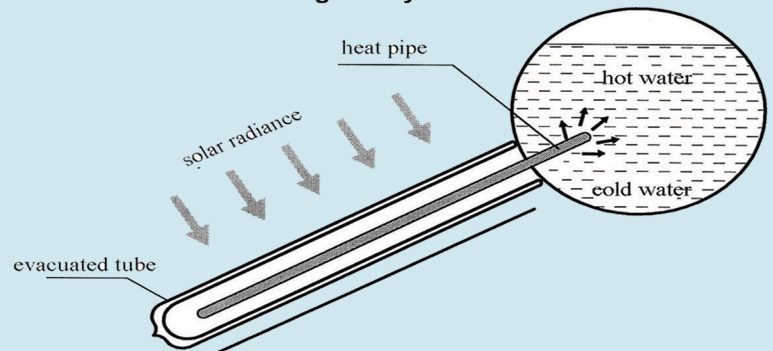
Inner/outer diameter of tank:  $\Phi 370\text{mm}/\Phi 470\text{mm}$   
 Outer tank material: galvanized steel sheet, surface plastic painting aluminum, electrophoresis  
 Thickness: 0.4mm  
 Insulating layer: foaming polyurethane,  
 Thickness: 50mm  
 Thermal conductivity: 0.022w/m.k  
 Inner tank: stainless steel(SUS 304)  
 components C:  $\leq 0.07\%$  Cr: 17.00~19.00% Ni: 8.00~10.00%  
 Thickness: 1.2mm  
 Sealing rubber: 110 methylsilicone rubber with vinyl  
 Dustproof rubber: EPDM      Frame: Aluminum alloy  
 Collector tilt angle: 45°      Tailstock: Nylon 66  
 Daily efficiency: > 50%      Heat loss coefficient: 10W/m<sup>2</sup>  
 Working pressure: < 0.6MPa      Electric booster: 1000W

### All glass solar vacuum tube performance :

All glass solar vacuum tube performance  
 Structure: all glass concentric dual tube structure.  
 Glass material: borosilicate glass Out tube diameter and thickness:  $\Phi 58\pm 0.7\text{mm}/1.8\text{mm}$   
 Inner tube diameter and thickness:  $\Phi 47\pm 0.7\text{mm}/1.6\text{mm}$   
 Length of tube 1800( $\pm 5\text{mm}$ );  
 construction : gradual change of SS-C/CU selective complex absorptive absorptive coating Absorbing rate : >93%  
 Emitance : <8%(80°C)  
 Vacuum degree :  $P < 5 \times 10^{-3} \text{ Pa}$   
 Solar radiance exposure :  $\leq 2.8\text{MJ}/\text{M}^2$   
 Get the calories : 9.1MJ/M<sup>2</sup>  
 Average heat loss :  $\leq 8.6\text{W}/(\text{M}^3.\text{K})$   
 Bearing hailstone ability: hailstone diameter 25mm.  
 Lifetime: Over 15 years



### Working theory



### Solar Collector Orientation

