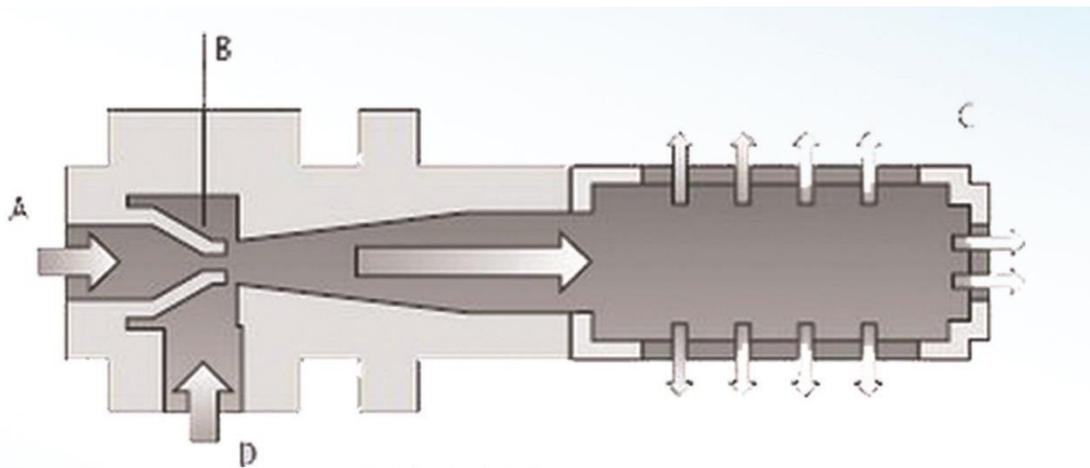


## SUNTY booster valve

### User manual

#### Working principle introduction

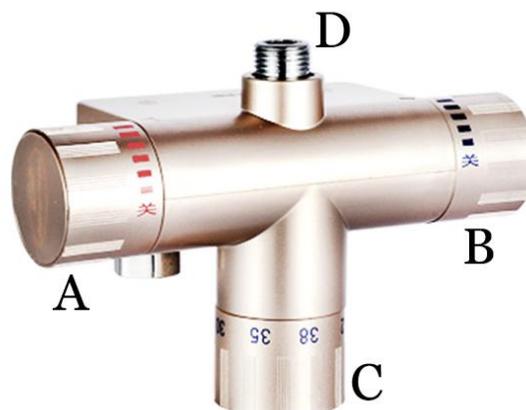


( Principle Diagram )

Using Venturi principle, when the water flow in the Venturi tube inside, the narrowest in the pipeline, once dynamic pressure reach to the maximum value, static pressure to achieve the minimum value. The flow velocity increases because of the cross sectional area changed. Water flow in a short time through the wide to narrow of the pipeline to make the formation of pressure difference, resulting in negative pressure, to make it emergence of siphon, so the pressurization happened.

#### Valve structure and installation

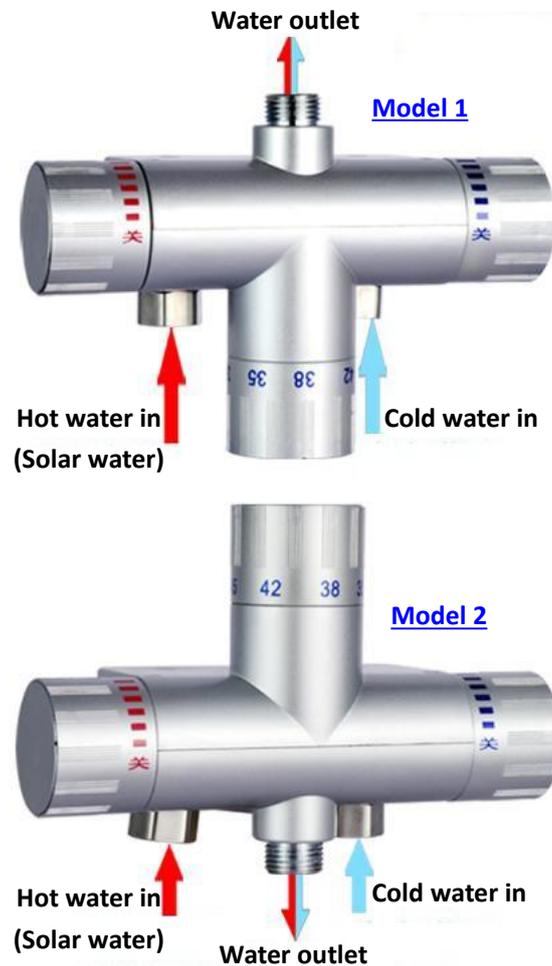
##### 1.Open installation model



- A. Hot water switch knob
- B. Cold water switch knob
- C. Temperature control knob

#### D. Overall Water outlet

There are two models of the open installation booster valve, one is water outlet is up and another one is down, that is optional according to the different conditions, and also color is optional for golden and silver.

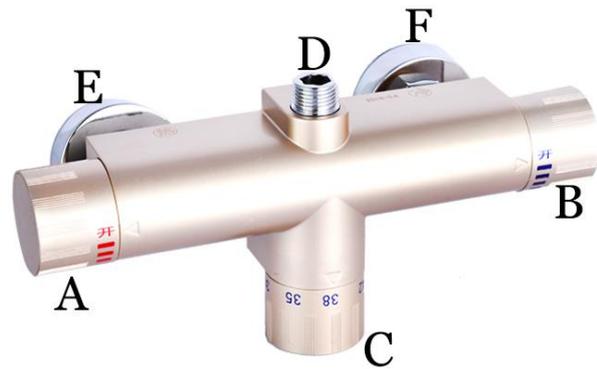


The distance between the hot water inlet and cold water inlet is 75mm, the hole inlet size is 1/2 inch (12.7mm), which is standard measurement, easy to install and change.

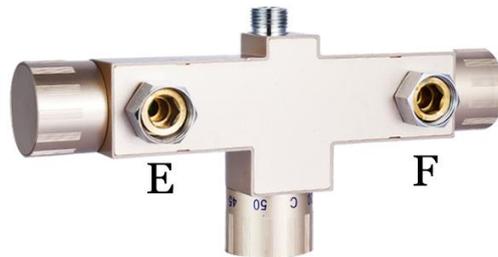


## 2. Concealed Installation model

- A. Hot water inlet
- B. Cold water inlet
- C. Temperature control knob
- D. Overall water outlet
- E. Hot water switch knob
- F. Cold water switch knob



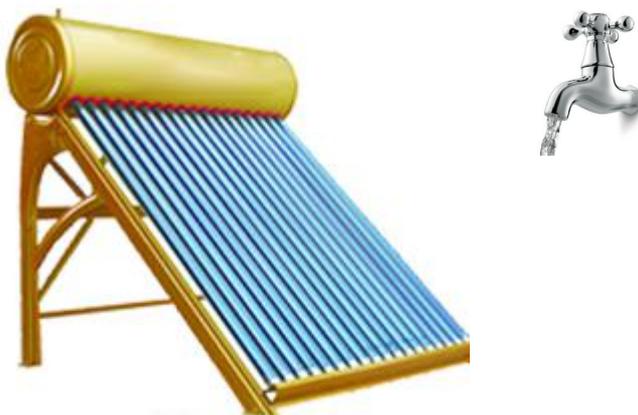
The distance between hot water and cold water inlet is 150mm, the accessories equipped with corner piece, it can be adjusted between 130-170mm.



(E to F is 150mm)

### ※Four conditions to use the valve

#### 1. Tap-water(high pressure)+solar water(low pressure)



Cold water is tap water with high pressure, hot water from solar water heater with low pressure(short distance), the booster valves using cold water pressure, through the valve jet forming Eddy Current, to make negative pressure and give hot water a suction energy,

and then increase the overall water output, low pressure water gets supercharged.

## **2. Pressure tank(high pressure)+Solar water heater(low temperature)**



The pressure in the cold water tank is high, but the pressure in the SWH is low, high pressure cold water flow to the booster valve jet forming Eddy Current, to make negative pressure and give hot water a suction energy, and then increase the overall water output, low pressure water get supercharged.

## **3. Cold water storage tank(higher pressure)+solar water(low pressure)**



Cold water pressure in the storage is higher than the water pressure in the SWH, but the drop head is not much higher. Meanwhile, the cold water is high pressure flow through the booster valve jet forming Eddy Current, to make negative pressure to absorb hot water from the SWH, and then make overall water in higher pressure.

#### 4. Cold water bucket(low pressure)+ solar water(high pressure)



Cold water bucket position is lower than SWH, hot water in in higher pressure. This condition, the high pressure hot water from SWH flow through the booster valve(cold water inlet), the cold water from bucket go through the hot water inlet. Once high pressure water pass through the booster valve jet forming Eddy Current, to make negative pressure for cold water suction, and then make overall water volume to increase the pressure.

#### ※ **Attentions and explanation**

1. The pressure between hot water and cold water should be triple and then can identify the pressure effect, under this condition, the water outlet volume can be triple too.

2. The temperature control knob is just used for hot to cold direction adjustment, the figures on it just for reference only, booster valve is not constant temperature valve, once the cold water and hot water changed, it can not be recovered to set temperature automaticly.

3. Booster valve is not clearly mentioned hot and cold water inlet, in general using conditions, cold water pressure is higher than hot water pressure, so the valve inlet marked as "hot and cold", easy to use.

If the hot water pressure is higher than the cold water pressure, please cross change the hot and cold inlet connection(which pressure is higher to connect the cold water inlet).