



SmartGen
ideas for power

HT10DC48

WATER ENGINE HEATER

USER MANUAL



SMARTGEN (ZHENGZHOU) TECHNOLOGY CO., LTD.



Chinese trademark

SmartGen English trademark

SmartGen — make your generator *smart*

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Software Version

Date	Version	Note
2016-07-25	1.0	Original release.



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1 OVERVIEW

HT Series Water Heater enjoys wide application on various engine coolant preheaters. It has fine cast aluminum enclosure and self-extinguishing engineering plastics end closure, multiple installation ways and easy and convenient use.

If during cranking the outside temperature is lower than 4°C, engine coolant and lubricant may condense into solid state and lose their lubricating and cooling properties, which can damage the engine. Engine heater should be installed to ensure normal starting and running of the engine when the outside temperature is lower than 4 °C.

HT Series Water Heater combines the following features: cast stainless steel inner pipes and end closure with high corrosion resistance; power and heating light indicators; 3 kinds of heaters with different heating temperature are optional (Standard heater: 40°C; 50°C and 60°C heaters are need to be customized).

Please login our company's official website to select heaters.

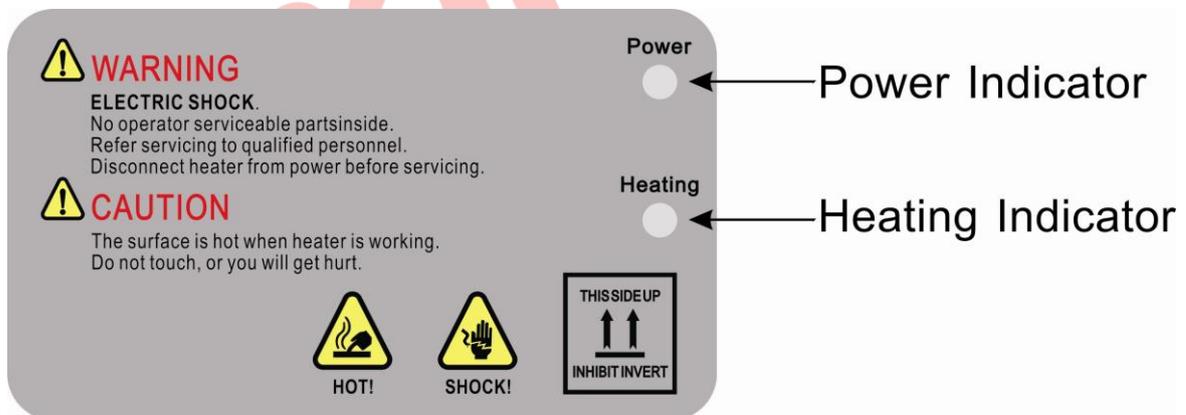
2 PERFORMANCE AND CHARACTERISTICS

- 1) Fine cast aluminum enclosure and special surface treatment with high corrosion resistance and high/low temperature capability;
- 2) Stainless steel inner pipes and end closure with high corrosion resistance;
- 3) Coolant temperature is controlled by thermostat which is installed within the heater. It has simple connections and high reliability;
- 4) Power and heating light indicators make it easy to observe the heater status;
- 5) There is a water drain valve with seal ring on the bottom of the heater so as to be used when needed;
- 6) Overheating thermostat provides the protection of dry heating and overheating;
- 7) Multiple installation ways apply to different installation situations;
- 8) DC supply (connect to battery or DC power supply);
- 9) This product can work normally at -25°C temperature.

3 TECHNICAL PARAMETERS

Items	HT10DC48 Parameters
Rated Power	1000W
Rated Voltage	DC52.5V
Rated Current	19A
Engine Displacement (L)	0~7
Thermostat Set Point	(40±3) °C
Thermostat Range	Off: (40±3)°C On: (25±6)°C
Overheating Thermostat Range	Off: (95±3)°C On: (80±6)°C
Insulating Resistance	≥50MΩ
Electrical Strength	AC 500V 1min
Inlet/Outlet Size	3/4"(Φ19mm)
Max. Water Pressure	0.5MPa
Protection Level	IP54
Vibration Resistance	(5~8)Hz Amplitude±7.5mm Triaxial (8~500)Hz a=2g Triaxial
Shock Resistance	Half-sine Wave; a _{peak} =50g; Triaxial
Working Conditions	-25 °C~+70 °C
Storage Conditions	-30 °C~+70 °C
Case Dimensions	203mm×150mm×177mm
Weight	1.2kg

4 INDICATOR



5 CONNECTIONS

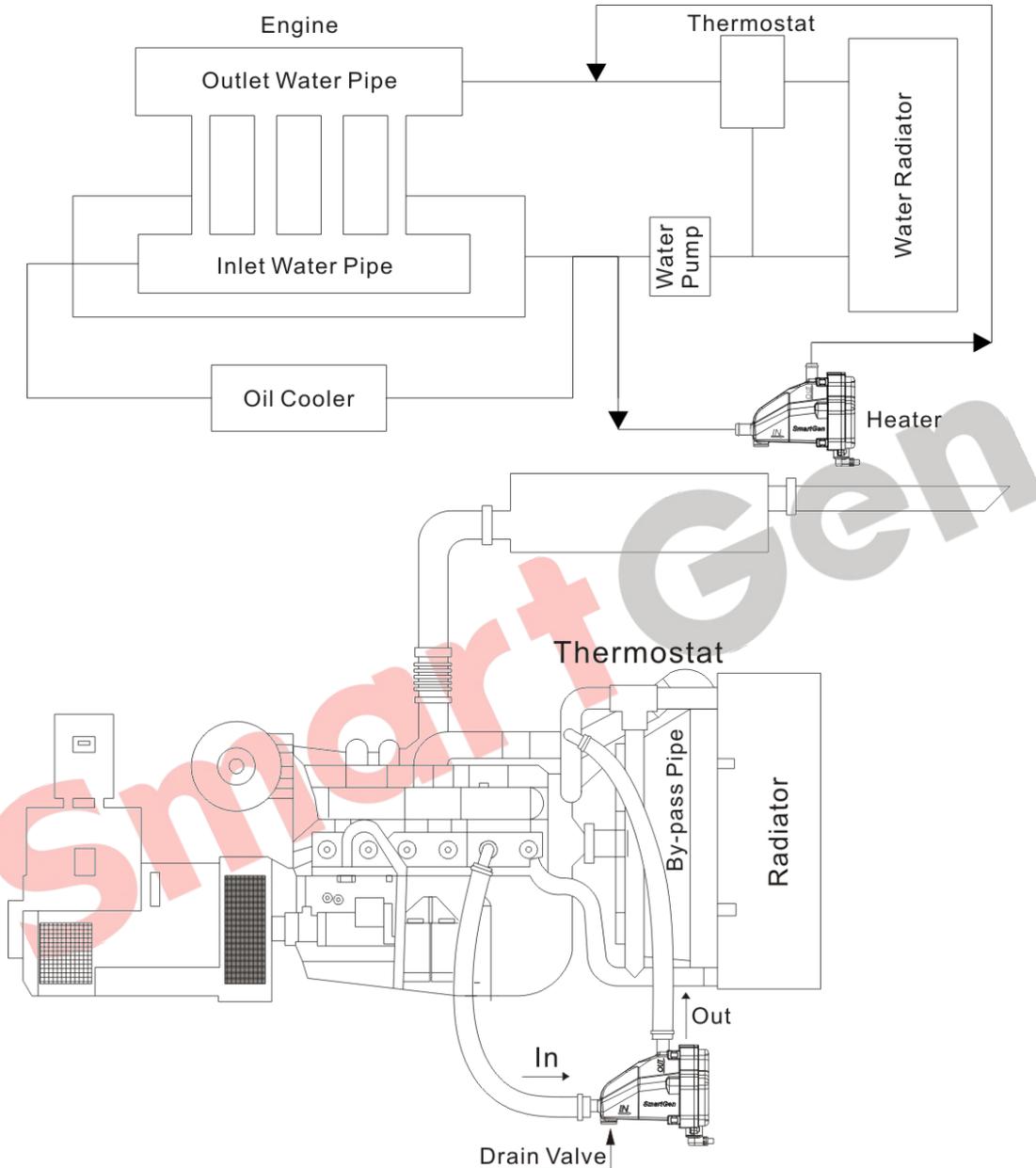
The supplied power cable is 2m long.

In the above diagram: B+ line (Red), B- line (Blue).

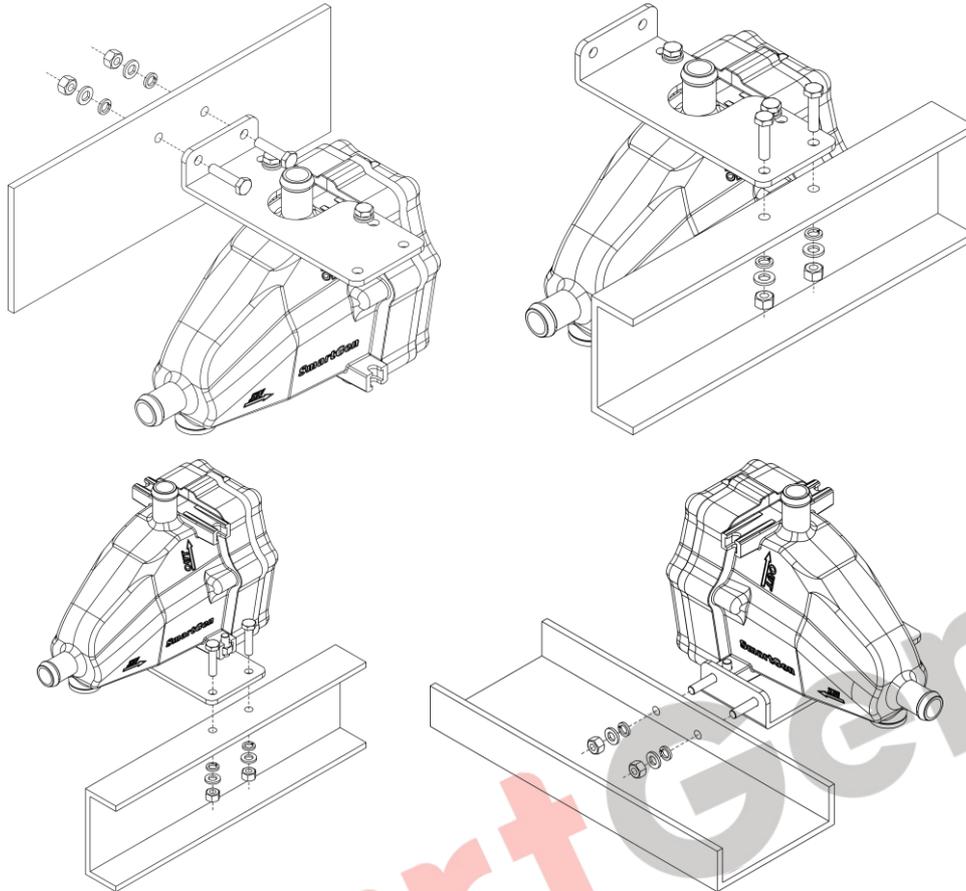
6 HEATER CONNECTION

Please install the heater vertically according to the diagram before use. Paying attention to direction of heater inlet and outlet, and ensure that the heater position is below the lowest water level of the engine and that all the air is exhausted out of the heater and it is topped off with water.

Heater connection diagram:



7 INSTALLATION INSTRUCTION



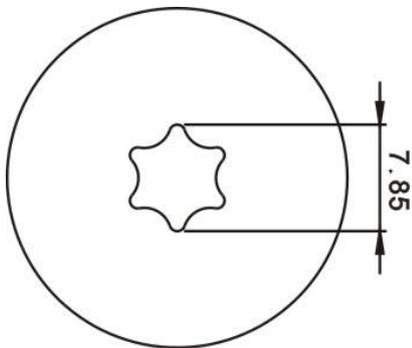
8 CAUTION

Before starting the machine, ensure that all the air is exhausted out of the heater and it is topped off with coolant. If water is used, please drain it off when generator is stopped to avoid internal corrosion. Otherwise, the remaining water freezes when temperature is lower than 0°C, which can damage the enclosure.

Corresponding antifreeze is strongly recommended.

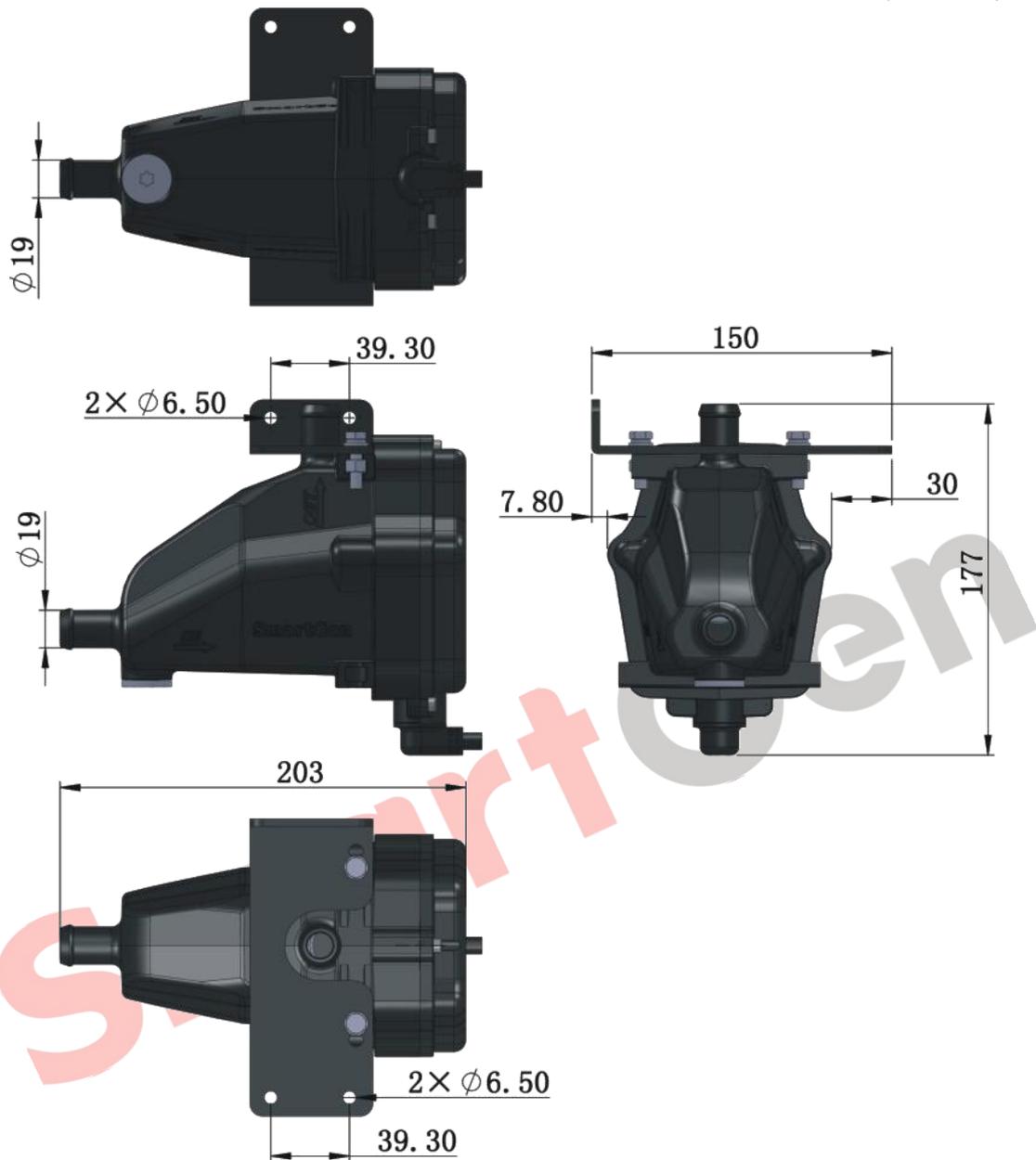
Earth line must be soundly connected to earth.

Drain valve: Can be opened or closed using hexagonal tools.



9 CASE AND INSTALLATION DIMENSIONS

(Unit: mm)



10 ADDITION: HEATER PACKING LIST

No.	Name	Quantity	Note
1	Heater	1	
2	Bracket	1	
3	Flat gasket	4	GB/T 95 6
4	Spring washer	4	GB/T 93 6
5	Hexagon nut	4	GB/T 6170 M6
6	Hexagon screws	4	GB/T 5783 M6x25
7	Hose clamps	4	$\phi 18$ - $\phi 33$
8	Certification	1	
9	User manual	1	