Sunflame®

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www.sunflame.com

Sunflame®

Storage Water Heater

2 YEAR WARRANTY ON PRODUCT

ISI

5 YEAR WARRANTY ON WATER TANK

1 2 3 4 5 MORE STARS MORE SAVING POWER SAVING

Operating Manual & Warranty Card

Cover Front

CONGRATULATIONS

You are now the proud owner of a sleek yet sturdy and highly dependable Storage Water Heater from Sunflame - a renowned name in Home Appliances. Sunflame Water Heater is specially designed to handle your toughest requirements in water heating and can give you uninterrupted service year after year. To get the best from your new purchase, we are providing you with some important and useful information about the features and capabilities of your Water Heater.

SALIENT FEATURES

Water Tank

The Sunflame Water Heater is fitted with an inner tank of stainless steel or 99% pure copper which is suitable for both hard and soft water. Each tank is hydraulically tested to withstand 120 psig (8kg/cm^2), whereas the normal working pressure is 50 psig (3.5kg/cm^2).

Insulation

The Sunflame Water Heater has been designed for a high degree of thermal efficiency. Vermin proof glass wool/puf is filled between the water tank and the casing prevents heat loss and retains the heat for longer periods.

Heating Element

The Heating element is ISI marked, embedded type nickel plated copper, sheathed, tubular and mineral filled, which ensure quick and efficient heating and long life.

Pilot Indicators

Each Water Heater has two flush mounted neon indicator lamps. The "Heating" lamp indicates normal, automatic heating process which gets switched off when the desired water temperature is achieved. The "Cut-Out" lamp glows whenever the thermal cut - out operates and breaks the electric supply, in case of thermostat failure or dry heating of the heating element.

Thermostat

This is provided to control the temperature of water at a desired level between 58°C to 65°C. This is also the first level of built-in safety.

Thermal Cut-Out

This is the second level built-in safety device which is provided to operate, when either the thermostat has failed or dry heating has taken place. This is set to operate at 81°C to 88°C and its operation is inducted by the neon bulb "Cut-Out". In case of thermal cut-out tripping due to dry heating, the cut-out may be reset by opening the screw of inspection cover and rotating the plate to access the lever/knob of thermal 'Cut-Out'. Press this lever knob to reset the cut-out wherever cut-out is on due to other reasons. The user is advised to contact the dealer for rectification.

Built-in Pressure Relief Valve

This is a double safety device which takes care of any pressure built up in the water heater, as well as the incoming pressure by opening and starting to drip. This is set at 50 to 55 psig and acts as a third level built-in safety device and also as an inlet pressure regulator.

Fusible Plug

This is the fourth level built-in safety device which has a plug made of special material with the characteristic of melting at 98°C. Therefore, in case of thermostat and thermal cut-out failure, this plug melts at 98°C and releases the internal pressure of the water tank. The additional function of this sub-assembly in the appliances is that ft can be used for water drainage, when the appliance is not being used for a long time. For draining the appliance, the inspection cover is opened and the fusible plug pipe is unscrewed and taken out. After complete drainage of the appliance, this pipe and the inspection cover is reassembled.

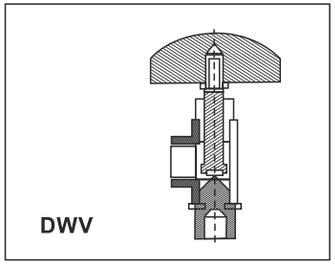
Note

- The temperature set is attained by the water in the appliance only when the thermostat cuts electric supply to the appliance and the pilot lamp indicating "HEATING" goes off. Therefore, it is advisable to use the water only after this happens, so that water at the desired temperature is available.
- The thermostat has an accuracy range of approximately ± 10% and therefore, the actual water temperature may be slightly different than as shown by the marking on the thermostat. .
- Thermostat is a sensitive device and the setting should be changed only when necessary and as infrequently as possible.

Optional Accessories

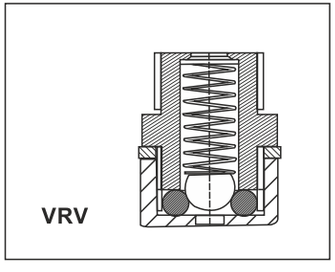
Dead Weight Valve (DWV)

This is a safety device which takes care of pressure built up inside the water tank. Designed to release pressure at 65 psig. This can be fitted at the outlet pipe as shown in the installation chart. A drainage connection should be provided for this valve for piping out the relieved water.



Vaccum Relief Valve (VRV)

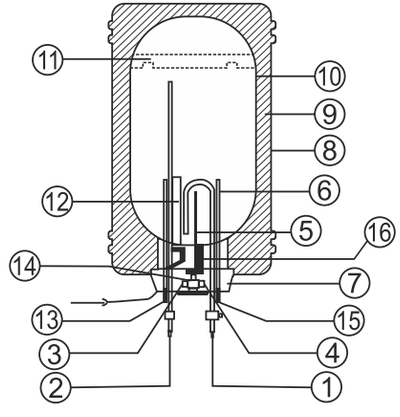
This is a safety device which takes care of vaccum inside the appliance which may be created in case the inlet is directly connected to municipal mains, or in multi-storeyed buildings with two or more stories.



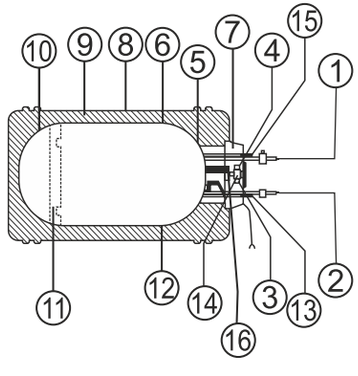
Pressure Reducing Valve

This is used for regulating incoming water pressure. This should be fitted where the incoming pressure is above 30 psig. Please refer to the installation chart.

PARTS IDENTIFICATION



Vertical Water Heater

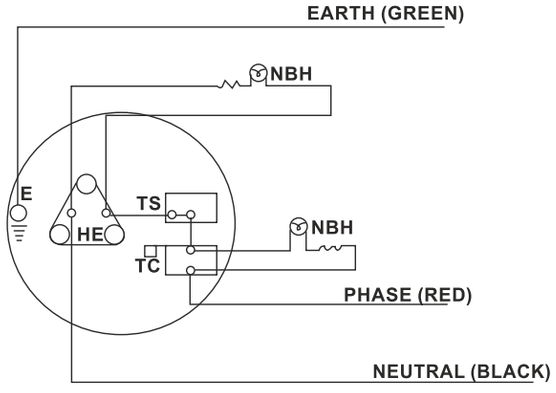


Horizontal Water Heater
(Suitable for wall and floor mounting)

1. Water Inlet Pipe
2. Water Outlet Pipe
3. Thermal Cut Out Indicator
4. Thermostat Indicator
5. Heating Elements
6. Thermal Cut Out
7. Inspection Cover
8. Outer Body
9. PUF
10. Tank
11. Mounting Bracket
12. Thermostat
13. Power Cord
14. Indicator Housing
15. Fusible Pipe
16. Fusible Plug

*** Only applicable for external temperature control system models**

WIRING AND PLUMBING



Circuit Diagram of Vertical and Horizontal Water Heater

Index
HE - Healing element
TS - Thermostat
TC - Thermal cut out
NBH - Neon bulb heating
NBC - Neon bulb cut out
E - Earthing terminal

Mounting
Mark the position of wall mounting bracket slots on the wall. Securely fix 4 nos. of M12x80 HEX (12 mm x 80 mm long hexagonal) bolts at the marked positions. Mount the water heater wall mounting bracket slots on to the bolts. Tighten the brackets rigidly with the help of 4 nos. M 12 nuts after placing the washers. Ensure that the Water Heater is mounted in a vertically upright position.

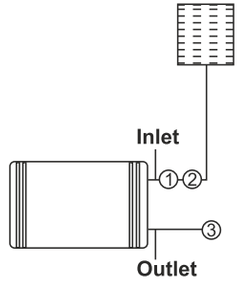
Plumbing
After proper mounting of the Water Heater, the outlet pipes are to be connected with 1/2" BSP union coupling. Proper plumbing should ensure no leakages from the joints. For various alternative ways of installation, please refer to installation charts.

Wiring
As depicted by the schematic diagram, the internal wiring and connections are complete and tested. The three core power cord is to be connected with a 15 Amp power plug. Ensure that the connections in the plug and socket are rigidly fixed and there are no loose contacts.

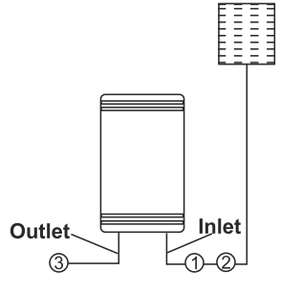
INSTALLATION

Normally, water are connected with the overhead tank. Since, the appliances are designed for a given working pressure, the exact installation conditions differ. To help you to install your water heater correctly, a simple chart showing the various alternative ways of installation is given

Case "A"
Inlet water pressure is less than 30psig. or height of water tank from appliances is less than 70 feet or water tank is situated not more than 5 floors above the appliances. The method of installation under these conditions are.



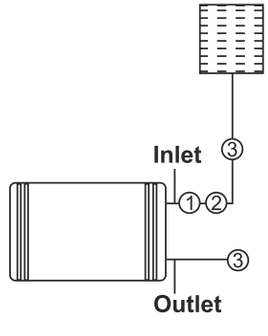
For Horizontal Models



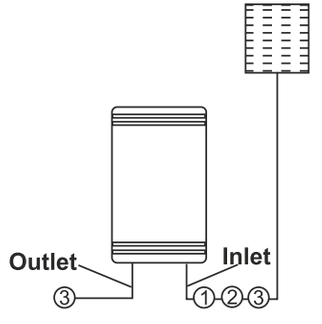
For Vertical Models

Index
1 Dead Weight Valve (DWV)
2 Vaccum Relief Valve (VRV)
3 Pressure Reducing Valve (PRV)
4 Stop Cock

Case "B"
Inlet water pressure is more than 30 psig or height of water tank from appliances is more than 70 feet or water tank is situated more than 5 floors above the appliances. The method of installation under these conditions are



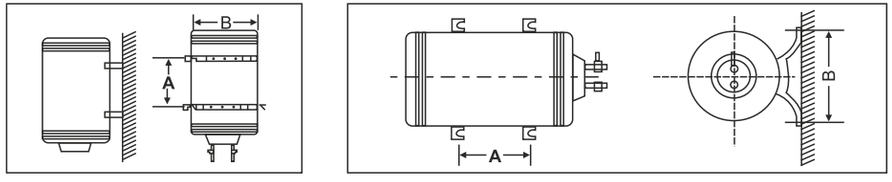
For Horizontal Models



For Vertical Models

INSTALLATION-MOUNTING

Mounting/Dimensions for vertical and horizontal mounted Water Heaters



Capacity L	Dimensions			Pipe Size BSP	Bolt Size
	A	B	C		
15	505mm	315mm	280mm	1/2"	M 12X80
25	590mm	380mm	280mm	1/2"	M 12X80
35	642mm	380mm	280mm	1/2"	M 12X80
50	680mm	430mm	280mm	1/2"	M 12X80

TECHNICAL DATA

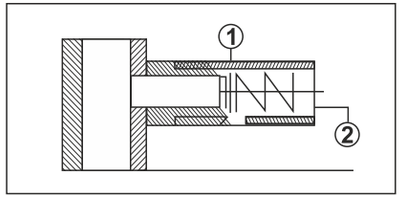
SUNFLAME STORAGE WATER HEATER
Power Supply : Single Phase AC 50 Hz 230 V

Capacity L	15 L	25 L	35 L	50 L
Wattage (W)	2000 Watt	2000 Watt	2000 Watt	2000 Watt
Supply	230 V, 50 Hz, AC, Single Phase	230 V, 50 Hz, AC, Single Phase	230 V, 50 Hz, AC, Single Phase	230 V, 50 Hz, AC, Single Phase
Times for heating up for cold to 60°C Temp. rise	55 min. max	85 min. max	120 min. max	150 min. max
Reheating Times	50 min. max	80 min. max	110 min. max	120 min. max
Mean Water output	45°C min.	45°C min.	45°C min.	45°C min.
Mixing Factor	40% max	40% max	40% max	40% max
Water Tank	SS	SS	SS	SS
Outer Body	CRCA	CRCA	CRCA	CRCA
Type Class I Drip Proof				

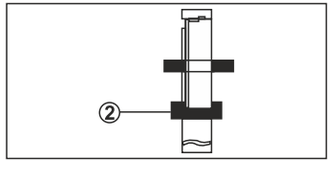
*2 Years warranty, conditions apply as per the warranty card. Size and specifications are subject to change without prior notice.

MAINTENANCE CHART

Care and cleaning	Frequency	
1. BPRV should be opened (1) with the help of spanner open pressure setting Grubs screw (2) all scaling must be removed from all the parts like seat, spring and housing and then it should be reassembled.	Every 3 months/1 year of seasonal use	If the water quality is bad because of hardness and suspended impurities, then inspection should be done once every month while in use.



2. Fusible plug assembly should be opened from (2) and all scaling must be removed and reassembled.	Every 3 months/1 year of seasonal use	



3. Heating element dismantling by the authorized service centre, cleaning of the scale and reassembly. Replace if the tube is excessively corroded.	Every 18 months/6 years of seasonal use	In case of bad water quality, this inspection to be carried out every 6 months of continuous use of every 2 years of seasonal use.
4. Dead Weight Valve- Dismantling and cleansing of valve seat etc. and reassembly.	Every 3 months/1 year of seasonal use	
5. Vaccum Relief Valve- Dismantling and cleaning of valve seat spring etc. and reassembly.	Every 3 months/1 year of seasonal use	

Note:

(I) The user Is advised to contact the Sunflame appliance authorized service cents In case there Is any problem.

(ii) In view of continuous improvements the design and specifications of the product are subject to change without any prior notice.