

# USER MANUAL

HOT WATER STORAGE UNIT  
FOR HEAT PUMP



VERTICAL STORAGE TANK UNIT

**HP-TANK 1000 VT**

SS304 L  
TANK

HIGH  
DENSITY PUF

WITH ELECTRIC  
BACKUP HEATER

## **INSTRUCTION MANUAL FOR V-GUARD HEAT PUMP STORAGE TANK UNIT**

Dear Customer,

We congratulate you for being the proud owner of a V-Guard Heat Pump Water Heating System. This Product comes to you from a company committed to total quality and dedicated to customer delight, since 1977. The immense trust and support our valued customer give us has always been, and always will be, our motivation to strive harder and harder to live up to their expectations. By using this product, you are not only helping the country save on raw materials (which goes into the generation of electricity) but also contribute towards a greener environment. We, the members of V-Guard, thank you and wish you many years of Economical hot water.

## THE PRODUCT:

- a) Storage tank: Vertical Hot water storage unit (made of SS 304-L) intend to use for Hot water Application and is PUF insulated and stores the hot water coming in from the Heat Pump.
- b) Back up Heating System: A Backup heater with thermostatic controller is provided in the storage tank as a back up heating system.
- c) Supporting stand - Supporting stand with MS powder coated material.

Note: The maximum permissible working pressure of Heat pump Water Heater is 1 kg/cm<sup>2</sup>.

## TECHNICAL SPECIFICATION

### HOT WATER STORAGE UNIT FOR HEAT PUMP

Hot Water Tank		Hot water storage unit for Heat pump - Non Pressurized
	Capacity (Liter)	1000
	Material	SS-304 L, Thickness- Cylinder - 1.5 mm & Dish end- 1.5 mm
	Orientation	Cylindrical - Vertical
	Corrosion protection	Sacrificial Anode
	Tank Welding	High quality TIG Welding
	Electric backup	3 kW x 3 No's
	Cleaning /service provision	Pipe at top & bottom
	Temperature Sensor	Sensor Pocket is provided
	Supporting Structure	ISA/ISC MS Powder Coated
	Designed pressure rating	Working up to 1 bar
	System Inlet/Outlet Pipes material	SS 304
	Size of Inlet/Outlet Pipes	3.18 cm (1 1/4)
	Size of Sensor provision Pipe	1.9 cm (3/4)
	Overnight Temperature Drop	<= 5°C
	Safety valves	VRV
Weight of Tank with stand (kg)	166 kg	
Tank Dimensions (LxWxH),cm	105 x 105 x 200	
Tank Insulation	Material	Industrial PUF Insulation, Density-38 kg/m <sup>3</sup>
	Thickness	50 mm
Outer cladding	Material	26 SWG, Precoated GI sheet
Packaging	Material	Carton Box

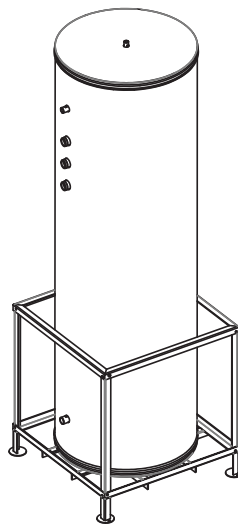
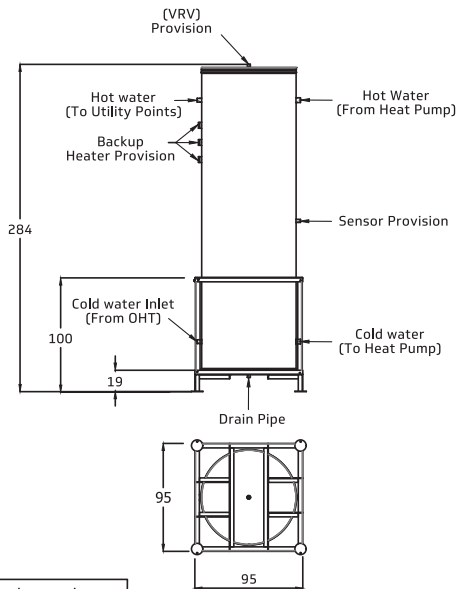
## **Plumbing Instructions:**

1. For plumbing connections please refer the provided connection diagram and heat pump user manual.
2. Please ensure all safety devices, valves are place at correct position.
3. For plumbing, use only pipes which can withstand temperature up to 100°C at the outlet, for hot water.
4. Exposed pipelines carrying hot water should be properly insulated, to avoid heat losses.
5. Each part connected to unit needs to connect with union and installed with ball valve.
6. Install a drain valve at the lowest point of the system to enable the system to be drained.

## **Safety Precautions:**

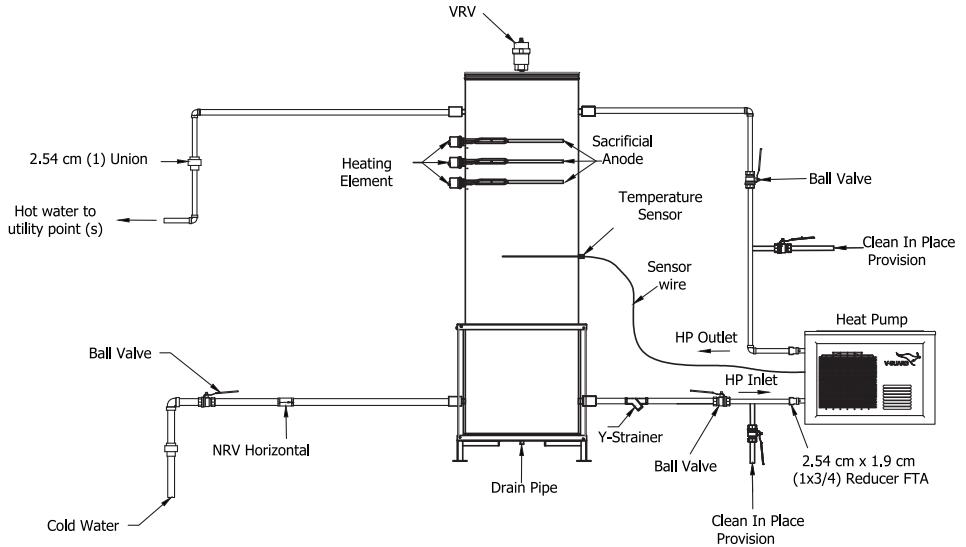
1. Ensure level of all tanks
2. Tank stand should be properly grouted on terrace surfaces.
3. Safety valves should be checked and maintain with regular intervals.
4. Ensure that electric shock protection device, like ELCB. Is incorporated in the electric circuit before giving power supply to the backup heater.
5. Ensure that the heater is properly earthed.
6. For pressure pump connection, pressurized models must be selected.
7. Customer should ensure that the system is protected with a earthing / lightning Arrester.
8. For 1000 L tank, It is recommended to fasten the stand to the ground with the bolting option.

## PRODUCT ASSEMBLY\_HP-TANK 1000 VT



All dimensions are in cm

TYPICAL CONNECTION DIAGRAM FOR NON-PRESSURIZED VERTICAL HEAT PUMP TANK



## NORMAL WATER QUALITY STANDARDS

Sl.No	Description	Desirable Limit
1	pH	6.5 - 8.5
2	Total Hardness	300 ppm (maximum)
3	Alkalinity	200 ppm (maximum)
4	Total Dissolved Solids	500 ppm (maximum)
5	Chloride	200 mg/l (maximum)

### MAINTENANCE INSTRUCTIONS:

Though the maintenance required for this product is minimal, the customer is advised that a little bit of care (a few easy-to-do jobs) is required to maintain the high level of performance and life of the system.

Item	Maintenance procedure	Maintenance schedule
Sacrificial Anode	Check the condition anode	Once every 6 months
Electric wiring	Check earthing and continuity	Once every 3 months
Plumbing	Check for leakages	Once every 6 months
Valves	Check for smooth functioning	Once every 3 months

## **Terms and conditions**

### **The warranty does not cover**

1. Rust formation on supports, damage(s) / defect(s) of any nature resulting from repairs effected by unauthorized persons, improper selection of model/ capacity or misuse of any kind.
2. Any parts of the system which are replaced / repaired.
3. Accessories external to the original equipment.
4. Damage(s) due to improper selection of accessories external to the original equipment.
5. Tank leakage and repairs due to scale formation if the system is connected to hard water\*\* supply.
6. Damage(s) due to improper plumbing, civil and electrical work.
7. Damage(s) resulting from exceeding the maximum permissible water pressure as specified by V-Guard.
8. Damage(s) resulting from absence or improper installation of VRV.
9. Damage(s) resulting from not grouting the supports properly.
10. Heat loss resulting from not insulating the outlet plumbing properly and / or not providing a horizontal NRV at inlet.
11. Damage(s) resulting from natural calamities such as storm, heavy rain, hail stone falling, earthquake, fire etc.

\*\*Refer normal inlet water quality standards.

### **The warranty is void**

1. If the installation of the system is not in accordance with the installation / plumbing instructions specified by V-Guard.
2. If the installation / repair / replacements are carried out by unauthorized persons.
3. If the system is shifted to a new location from the location at which the system was originally installed by authorized direct marketing associates / dealers of the company.
4. If the system is not connected directly to an overhead tank.
5. If the modifications / alterations are made by unauthorized persons.
6. Warranty does not cover if the system is connected to the water supply which does not meet the inlet water quality standards mentioned in this Instruction manual.

## PRODUCT DISPOSAL INSTRUCTION

Material categories	Instruction
Metals (Stainless steel, Aluminium, Galvanized iron, Mild steel, Brass, copper)	The materials shall be disposed through authorized recycler in order to protect environment at the time of product final disposal.
Paper (Carton box, Corrugated buffer, Instruction Manual, sticker)	
PUF	
Rockwool	
Rubber	
Thermocol	
Plastics	
Glass	

Plastic Waste EPR Reg. No.: BO-13-000-07-AAACV5492Q-22



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SCAN TO AVAIL THE  
**DIGITAL**  
**WARRANTY**  
BY REGISTERING YOUR  
PRODUCT ONLINE



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