

USER MANUAL



VERTICAL STORAGE TANK - INDIRECT HEATING

HP TANK 500 PR-HE
HP TANK 1000 PR-HE

INDIRECT
HEATING

FOR HARD WATER
APPLICATIONS

UPTO 4 BAR
PRESSURE

INSTRUCTION MANUAL FOR V-GUARD VERTICAL STORAGE TANK - INDIRECT HEATING SYSTEM

Dear Customer,

We congratulate you for being the proud owner of a V-Guard 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 with Heat Pump.

THE PRODUCT:

- a) Storage tank: Rockwool insulated Vertical Hot water storage unit with Indirect Heating (Made of Hot dip galvanized Steel) Jacketed type, tank in tank design, intend to use for Hard water (Refer the Normal water quality standards from page no. 11) Application.
- 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 - Galvanized Supporting stand with Round sections & Plates for Grouting.
- d) Makeup tank - Dedicated makeup tank for refilling the water in the outer jacketed tank.

Note: This unit is designed for operating pressure upto 4 kg/cm².

TECHNICAL SPECIFICATION

VERTICAL STORAGE TANK - INDIRECT HEATING		
Hot Water Storage Tank		Vertical Storage tank - Indirect Heating - Pressurized
	Capacity (Liter)	500 & 1000
	Material	Hot Dip Galvanized Steel
	Orientation	Cylindrical - Vertical
	Corrosion protection	Sacrificial Anode & Anti-Corrosive paint
	Tank Welding	High quality MIG Welding
	Electric backup	3kW x 2 No's (500 L) & 3kW x 3 No's (1000 L)
	Cleaning /service provision	Flanged Hand Hole & Drain pipe
	Temperature Sensor	2 No's Sensor Pocket is provided
	Supporting Structure	Galvanized Supporting stand with Round sections
	Operating pressure rating	Working up to 4 kg/cm ²
	System Inlet/Outlet Pipes material	Galvanized Iron
	Size of Inlet/Outlet Pipes	3.18 cm (1 ¼)
	Makeup tank	PUF insulated SS Makeup tank with brass float valve
	Safety valves	PRV,VRV
Weight of Tank with stand (kg)	190 (500 L) & 260 (1000 L)	
Tank Dimensions (LxWxH),cm	85 x 85 x 220 (500 L) & 100 x 100 x 250 (1000 L)	
Tank Insulation	Material	High density industrial Rockwool Insulation
	Thickness	100 mm
Outer cladding	Material	0.5 mm (24 SWG), Plain Aluminium sheet
Packaging	Material	Corrugated sheet with Bubble cover Wrap

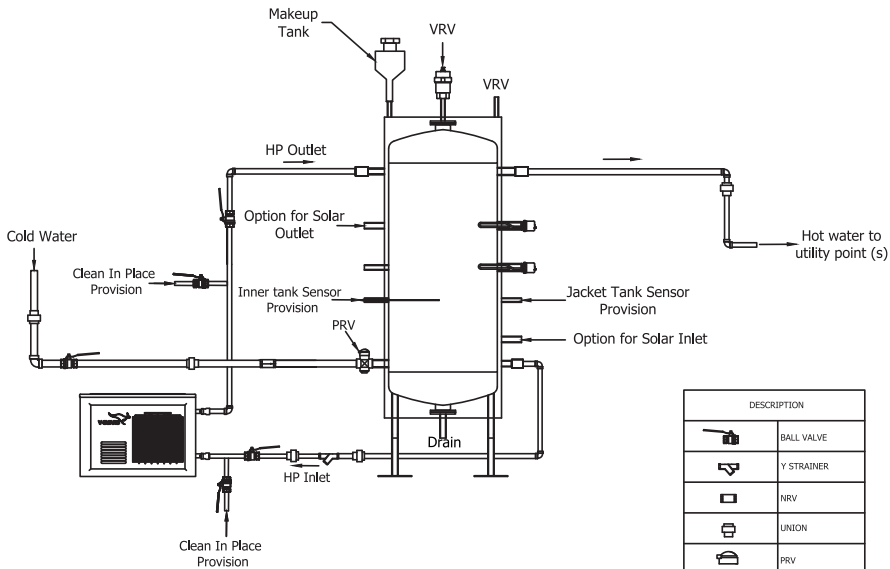
Plumbing Instructions:







1. Connect the Tank with Heat pump as shown in connection diagram. (Page No 9 /10)
2. Connect tank with main cold water inlet and Hot water Outlet.
3. Fill the Makeup tank with normal water (Municipal/Corporation water) till the level reached upto the float valve.
4. Open the cold water Inlet and fill the tank completely.
5. Ensure all the accessories as per connection diagram and there is no leakages.
6. Ensure that the safety valve like PRV, VRV etc. are mounted as per the connection diagram.
7. For plumbing, use only pipes which can withstand temperature up to 100°C at the outlet, for hot water.
8. Exposed pipelines carrying hot water should be properly insulated, to avoid heat losses.
9. Please ensure that unions are installed wherever it is required.
10. Install a ball valve in the drain pipe, for draining purpose.
11. For plumbing use only pipes intend for hot water Applications.

Safety Precautions:

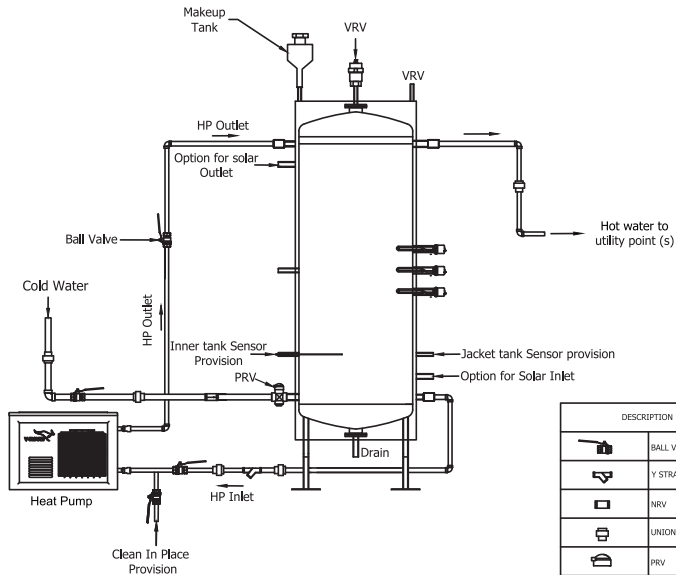
1. Tank stand should be properly grouted on terrace surfaces.
2. Safety valves should be checked and maintain at regular intervals.
3. Ensure that electric shock protection device, like ELCB is incorporated in the electric circuit before giving power supply to the backup heater.
4. Customer should ensure that the system is protected with a earthing, lightning Arrester.







TYPICAL CONNECTION DIAGRAM FOR HP TANK 500 PR-HE



DESCRIPTION	
	BALL VALVE
	Y STRAINER
	NRV
	UNION
	PRV
	HEATING COIL

TYPICAL CONNECTION DIAGRAM FOR HP TANK 1000 PR-HE



DESCRIPTION	
	BALL VALVE
	Y STRAINER
	NRV
	UNION
	PRV
	HEATING COIL

NORMAL WATER QUALITY STANDARDS

Sl.No	Description	Desirable Limit
1	Total Hardness	150 to 1500 ppm (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
Makeup tank	Refilling the makeup tank with normal water (Non Hard)	Once every 6 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 tank is connected to inlet water quality beyond the specified limit.
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*/ Pressure Release Valve*.
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.
12. In case of using Hard water in the Jacket.

*NEGATIVE PRESSURE, IF DEVELOPED INSIDE THE WATER HEATER STORAGE TANK, CAN CAUSE TANK LEAKAGE. PLEASE NOTE THAT HIGH PRESSURE CAN DEVELOP INSIDE THE TANK IF PRESSURE RELEASE VALVE IS NOT PROVIDED OR IF THE PRESSURE RELEASE VALVE IS NOT INSTALLED AS PER THE PROCEDURE SPECIFIED IN THE PLUMBING INSTRUCTIONS. IN SUCH CASES V-GUARD WILL NOT BE RESPONSIBLE AND THE TANK REPLACEMENT WILL BE ON A CHARGEABLE BASIS.

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 modifications / alterations are made by unauthorized persons.
5. 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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CIN: L31200KL1996PLC010010