

Guideline for Installation of Water Boiler (Steamer)



Insulation Type	Approx. Steady State Heat Loss (Watts) for Temp Diff of 60 deg C (200 ltr tank)	Reduction in Heat Loss
4.5" Brick Wall only	500	-
50 mm Rock Wool + 10 mm PoP + 4.5" Brick Wall	90	82%
50 mm Rock Wool + 10 mm PoP + 6" AAC Blocks	60	88%

Guideline for Installation of Water Boiler (Steamer) -contd

1. To determine volume of tank, consider daily water consumption of 40 ltr per person per day (40 LPD). Example; for a family of 5 members, the total daily requirement is 200 LPD (40 X 5). A cylindrical tank with a diameter of 1.5 feet and a height of 4 feet provides approximately 200 liters of storage capacity.
2. The boiler tank shall be made of either stainless steel or copper. Stainless steel tanks are generally preferred due to their superior pressure resistance compared to copper tanks.
3. The water boiler can be installed on any floor of the house, as long as the overhead feed tank is located at a sufficiently higher elevation to maintain a continuous gravity head on the boiler.
4. A water boiler should never be installed without proper insulation, as it leads to significant heat loss and increased electricity consumption.
5. Pressure Safety Measures:
To prevent pressure buildup and possible tank rupture, one of the following methods must be used:
 - Vent Pipe – Allows excess pressure to escape but also increases heat loss.
 - Pressure Relief Valve – Safely releases excess pressure without significant heat loss and is therefore the preferred option.

Summary of Key Guidelines

- Use insulation (Rockwool + PoP + AAC Blocks) to reduce heat loss
- Install pressure relief valve for safety
- Avoid vent pipe to minimize heat loss
- Calculate tank volume based on 40 LPD per person per day
- Insulation improves energy efficiency and reduces electricity bills
- Follow safety standards to prevent tank rupture

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Note: This document is meant for training and awareness only.

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