WHAT IS A WATER BOOSTER?

A Water Booster is a water heating unit that can be fitted to most slow combustion, solid fuel heaters. These can be single or double copper or stainless steel coils. With the Yunca heaters these are installed inside the firebox and are connected by a piped system to the normal household electric water cylinder 180 litre (40 gallon). A permit may be required and a registered plumber should do the installation.

Today there are cylinders available that already have inlets in them to receive the pipes from the water booster unit. Do not turn your cylinder off, it is a booster only that you are fitting. Set your temperature for your cylinder at 65°C, a tempering valve should be fitted (and is mandatory in some localities). A pipe supplies water from the cylinder to the water booster unit where it is heated and returned to another pipe back to the cylinder therefore creating a flow through which hot water constantly travels when the fire is in operation.

How does it work?

The water booster works by thermal convection. Hot water being much lighter than cold rises and the heavier cooler water falls from the cylinder to the water booster and is then heated therefore creating a thermal convection cycle. The following conditions should be observed when connecting the unit.

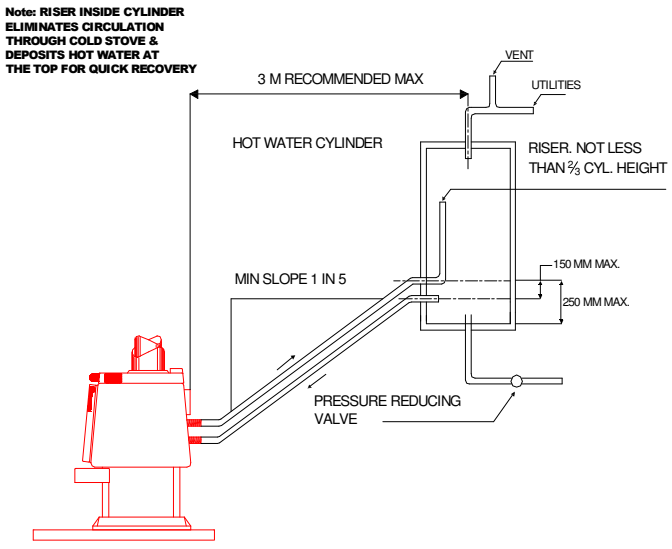
1. Ensure that the correct manufacturer's water booster unit is used.
2. The bottom of the water cylinder must be above the top of the water booster outlet from the unit – the higher the better.
3. A. The cylinder should be no more than 3 metres away from the fire – the closer the better.
   B. If so, a circulating pump can be fitted on the hot line
4. The hot water return pipe must rise continuously from the outlet at the back of the heater to the water cylinder to prevent an air lock forming and to improve efficiency.
5. If a riser pipe is not already fitted to a cylinder one should be fitted during installation of the water booster. The riser pipe must extend two thirds of the cylinder height.
6. Use sweeping bends only. Sharp bends or restrictions should be avoided. These reduce the flow factor.
7. The pipes from the water booster to the cylinder should be lagged to prevent heat loss.
8. The system must be free flowing. For that reason no stopcocks or taps should be fitted.
9. The fire should never be lit until the water cylinder has been filled.

We note that water booster installations can vary from house to house so your plumber should work out its feasibility for your particular situation.

A 2kW electric element takes 6 to 7 hours to heat a normal 180 litre (40 gallon) cylinder from cold to 85°C.

WARNING

When fitting a water booster please consider the following information:
The hot water within the cylinder may rise above the accepted temperature of 65°C. This may result in damage to dishwashers and automatic washing machines. Also to eliminate the rise of the scalding temperature we suggest the installation of a tempering valve (this is a local body requirement in many areas. Please seek the advice of your local authority).



This diagram is standard for any typical water booster installation