

# Villa 300H – Instructions for Solar Panel and Boiler Use

## Introduction

A number of owners of the linked villas have been surprised at the level of recent utility bills. The size of the bills may be due to uncertainty around the most efficient use of the solar panel/electric immersion (switch no. 7)/gas boiler to provide hot water.

During my holiday in July 2010, I had a meeting at the villa with Bruno Quaresma of Pestana's construction department.

Detailed below are Bruno's instructions as to the options available to provide the villa with hot water.

## Solar Panel

There is a solar panel on the roof of the villa which, providing there is sufficient sunshine, will heat enough hot water without the need to consume any gas or electricity.

If relying on the solar panel to provide hot water:

- Switch number 7 on the electric panel in the boiler cupboard should be **OFF**
- The gas boiler should be switched **OFF**
- The red handles underneath the gas boiler should be in the position indicated below:



There should be enough sunshine in most months of the year to obtain all hot water via the solar panel with little need to use the gas boiler or electric immersion as back up.

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## Gas Boiler

In circumstances where there is insufficient sunshine to heat the water the gas boiler may be used instead. To use the gas boiler to heat the water:

- Switch number 7 on the electric panel in the boiler cupboard should be **OFF**
- The gas boiler should be switched **ON**
- There are 3 settings on the boiler – water only, radiators only or both water and radiators together. Select the appropriate setting for your needs.
- The red handles underneath the gas boiler should be in the position indicated below:



- When using the gas boiler hot water will be available instantly. You should switch the boiler off after you have used the hot water required as the boiler will continue to heat water and consume gas as long as it is switched on.

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## Electric Immersion and Timer

Switch number 7 on the electric panel in the boiler cupboard operates an electric probe contained in the water tank on the roof. One (potentially expensive) way to ensure that hot water is available at all times is to have this switch on at all times.



There is a water tank on the roof which holds 300 litres of water. When the water in the tank falls below 40 degrees and switch number 7 is on, the electric resistance in the tank kicks in and heats the water to 70 degrees. Having switch number 7 on at all times will ensure that the water never falls below a certain temperature. Heating 300 litres of water is likely to consume a lot of electricity so this may be an expensive alternative to ensuring there is always hot water when needed.

A timer has also been fitted at position 8 in the diagram above. This can be used to have the immersion on at specified times of the day rather than on at all times.

## Conclusion

It is up to each individual owner to decide how they source hot water and the advice above is based on my discussion with Bruno Quaresma.

I would ask that all owners ensure that they switch off the gas boiler and switch number 7 at the end of their stay to ensure that electricity and gas are not consumed unnecessarily when the villa is unoccupied.