

# Homeowners: Combination Tanks and Systems

From RVR

## Combination Tanks and Systems

An alternative for some people is to connect their solar collectors to a Combination tank.

It allows the connection of multiple heat sources into a single large "Buffer" tank which then supplies heat to the central heating. The advantage of this is that solar and any other heat source can be used to contribute to Central Heating as well as Hot Water.

These systems typically cost more than a simple Solar DHW system and only make sense if you are building a house and wish to use multiple heat sources. If you are building or renovating a house and are interested in finding out more, then please keep reading below.

## Combination Tanks

There are two models of combination tank available from RVR. Both work in almost exactly the same way.

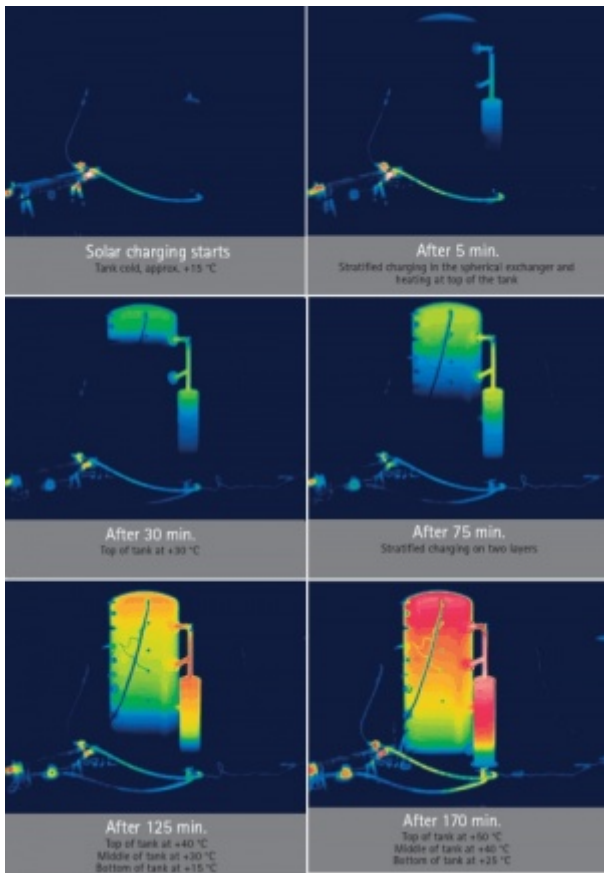
### Proclean Combination Tank



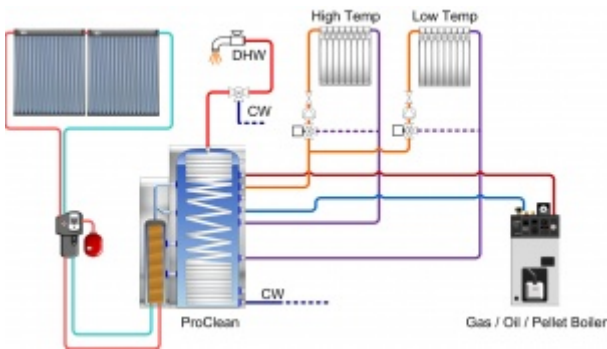
The Proclean tank is like a large central heating buffer tank. This means that it is full of the treated central heating water (CH Water) that circulates around your radiators and through the central heating side of your boiler.

It also eliminates the need for a separate water heating tank as it contains a built in coil within the CH water which is designed to heat the domestic hot water (DHW) on demand.

The proclean has a stratifier on the side which always loads solar in as high up the tank as possible. Cold water is drawn from the bottom of the tank and heated by the coil in the stratifier. This is then delivered to the highest point in the tank that is not warm. This allows the solar to contribute to DHW early in the morning if the tank is cold.

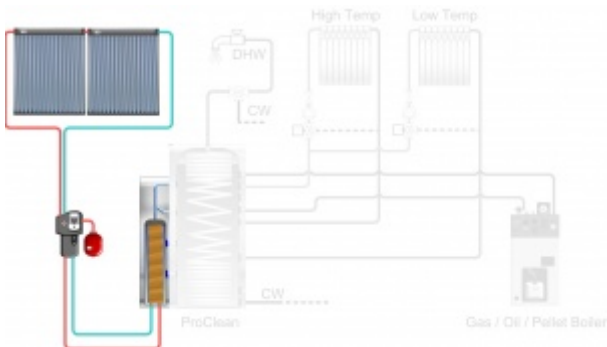


### How a ProClean combination cylinder works



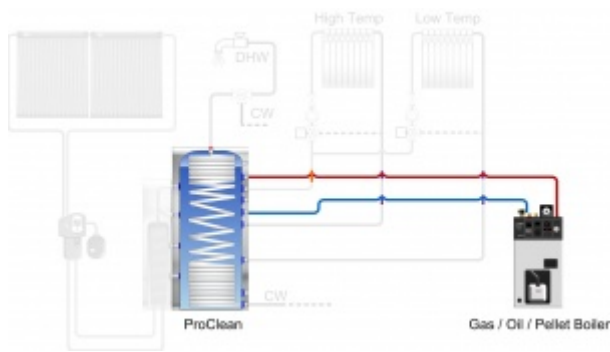
The design of the Proclean combination tank means many heat sources can be connected in to it. However, to explain how it works we will assume there is only solar and one other heat source connected.

### The Solar Circuit



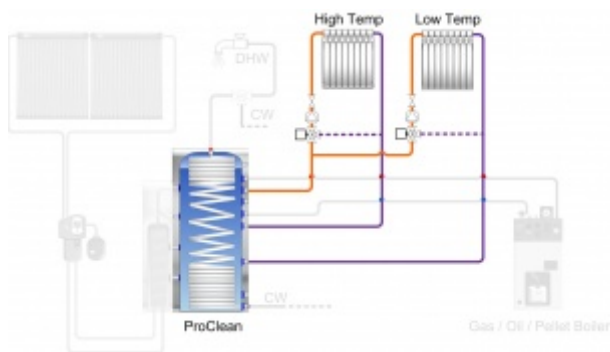
The "solar circuit" is highlighted above. The solar system is connected to the stratifier on the side of the Proclean. This means it is heating the central heating water directly in the buffer tank.

## The Boiler Circuit



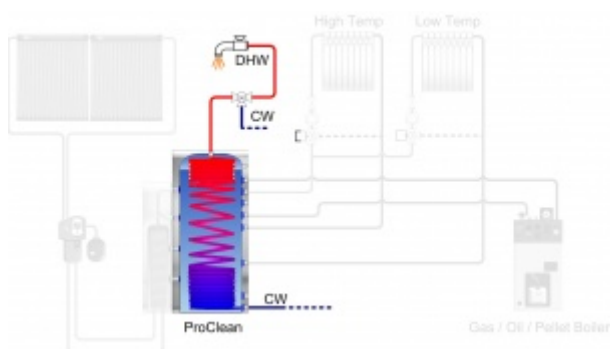
The boiler or other heat source is plumbed in to the top of the tank. The Central heating water in the buffer is pumped out, through the boiler, heated and returned to the buffer tank.

## The central heating circuit



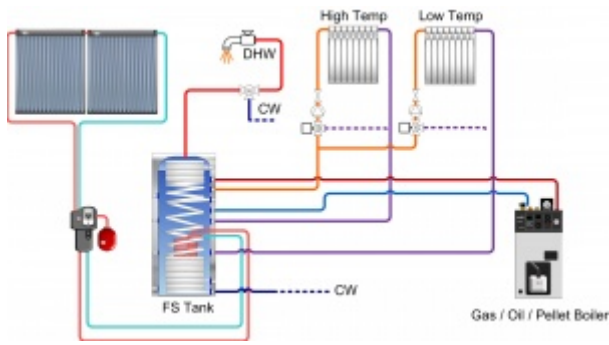
Multiple boilers and heat sources can be connected and they all contribute to heating the central heating water in the buffer tank. This central heating water can then be pumped out through radiators or underfloor heating as required to heat the house.

## Domestic Hot Water



Domestic water in a combination system works slightly differently to in a regular system. As hot water is required, incoming cold water is drawn through a large coil in the buffer tank and heated instantly on-demand. The water coming out the top of the cylinder is typically within 5-10°C of the temperature of the central heating water.

## FS Combination Tank



An alternative to the proclean systems above is a slightly cheaper FS tank product, also from TiSun. This works in exactly the same way but does use a solar coil instead of the stratifier. This costs less to produce but is also a little less effective at prioritising any gains the solar can provide.

## Further reading

If you are interested in our Combination tanks, you can have a look at the Proclean ([http://www.rvr.ie/default.aspx?subj=catalog/ProductsList&catIdPath=0\\_42\\_68\\_106](http://www.rvr.ie/default.aspx?subj=catalog/ProductsList&catIdPath=0_42_68_106)) product group or the FS Single coil ([http://www.rvr.ie/default.aspx?subj=catalog/ProductsList&catIdPath=0\\_42\\_68\\_105](http://www.rvr.ie/default.aspx?subj=catalog/ProductsList&catIdPath=0_42_68_105)) or FS Twin coil ([http://www.rvr.ie/default.aspx?subj=catalog/ProductsList&catIdPath=0\\_42\\_68\\_115](http://www.rvr.ie/default.aspx?subj=catalog/ProductsList&catIdPath=0_42_68_115)) product groups.

Alternatively, why not have a look at our general information pages about our Solar Water Heating products and Solar Central Heating products.

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