

Solartwin water heating *indirect* plumbing

at Kingsmead Primary School
single cylinder twin coil application
with four PV pumped Solartwin panels
schematic plumbing diagram: essential features only

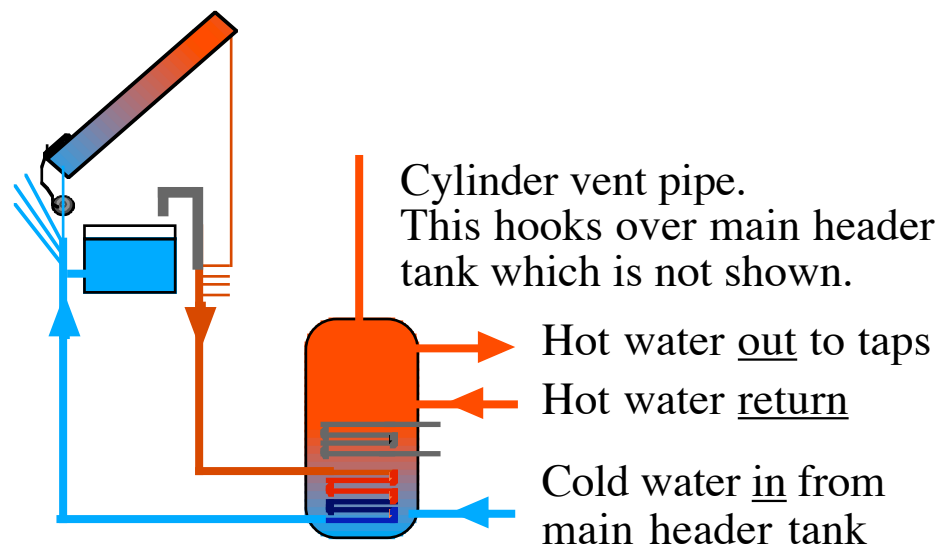
Our installation has its own small header tank, drawn in blue.

A variable speed PV (solar electric) pump feeds each panel.

Only one of four solar hot water panels is shown here.

All four panels run "in parallel". Each has its own PV panel and PV pump running side by side.

Each 2.8 square metre Solartwin panel contains about 2 litres of water. When the sun shines, this water heats up. It is pumped to the cylinder's lower heat exchanger and back again. The panel has freeze-tolerant silicone pipes inside. They don't crack when they freeze. Silicone pipes also carry water to and from the panel (the fine lines).



A big 750 litre solar hot water cylinder holds - and heats - tap water. It has two heat exchangers in it instead of only one, as is usual. The upper heat exchanger delivers heat from "backup heating" boilers. These are fuelled by burning either biomass (wood) or mains gas.

The lower heat exchanger is for *indirect* Solartwin pre-heating. The heat exchanger moves solar heat from the panel into the cylinder. The temperature varies widely - in the range of 15-75C, or even more. How hot depends mainly on how bright the sun shines. It also depends on how much hot water is used each day.

Solartwin *100% solar pumped solar hot water for UK's schools!*