

Some combi (high pressure) boiler solutions from Solartwin

Draft of 11/3/02 call © Solar Twin
01244 403 407 Ltd 2001

Solartwin combi options	Likely costs	Efficiency issues	What it does	Summary of plumbing actions	Design constraints	- Cons - (ALL need extra space)	+ Pros + (All offer a solar combi)
1a/ Solar LOW pressure heat store pre-feed	£££	Solar is med, boiler is high.	Actually pre-heats water for your existing combi as it flows into it.	Intercept cold feed to combi. Pre-feed combi via indirect heat exchanger coil at top of low pressure vented heat store, min 170 l, with Solartwin recirculating heat store water. Fit thermostatic mixer valve to ensure max (?35) water temps for combi.	Needs solar-ready combi, also known as input temperature sensing fast modulating combi and needs manufacturers clear guidance on max water input temps.	If fitted to unsuitable boiler could wreck it.	Seamless and uses combi. Nice fast combi water flow at high pressure, often faster than before solar.
1b/ Solar HIGH pressure cylinder pre-feed	££££	Solar is med, boiler is high.	Actually pre-heats and stores hot water for your existing combi.	Intercept cold feed to combi. Pre-feed combi via direct high pressure unvented cyl, min 120 l, with Solartwin recirculating low pressure water on a circuit with mini header. Fit thermostatic mixer valve to ensure max (?35) water temps for combi.	Needs solar-ready combi, also known as input temperature sensing modulating combi and needs manufacturers clear guidance on max water input temps.	If fitted to unsuitable boiler could wreck it. Cylinder needs annual checks.	Seamless and uses combi. Nice fast water flow at high pressure, often faster than before solar.
2a/ Fit conventional LOW pressure hot water	££	Solar is high, boiler is med	Reverts to conventional LOW pressure hot water throughout the home and disconnects the water heater part of	Disconnect combi hot water heating system. Fit or reinstate conventional LP vented hw system. Install standard Solartwin.	Extra heat from space heating part of boiler may not be available in midwinter. Needs LP taps etc, so unlikely to be suitable for recently built or replumbed homes.	Low water pressures and boiler may not have enough peak capacity so rads may dip in temperature when hot water heating up.	Tradition: back to the tried and tested old style hot water system
2b/ Fit conventional HIGH pressure hot water	££££	Solar is med, boiler is med.	Reverts to conventional HIGH pressure hot water throughout home and disconnects water heater part of combi.	Disconnect combi hot water heating system. Fit or reinstate a HP but stored hw system. Install an indirect Solartwin with mini-header tank.	Extra heat from space heating part of boiler may not be available in midwinter.	Boiler may not have enough peak capacity so rads may dip in temperature when hot water heating up. Cylinder needs annual checks.	Maintains high pressures for HP taps etc, likely faster flows.
3a/ Third tap or full-parallel option	£££	Both can be high if used appropriately	Sets up a separate and parallel Solartwin system with extra solar taps/showers etc.	Keep combi plumbing. Add Solartwin into a new LP vented hw system. Run separate pipes to new taps etc, at main points of use such as bath or shower.	You must accept at the outset the presence of third taps and possibly surface mounted pipes etc!	Solar or not situation so you must decide daily on which source and inelegant appearance.	Can choose to be 100% solar and know that you are!
3b/ Port valve or part-parallel option	££	Both can be high if used appropriately	Gives you the choice of EITHER Solartwin OR the combi feeding your hot taps but not both.	Rather like third tap option, because you keep the combi plumbing, but without separate taps and showers because there is a "close before open" valve letting you supply either Solartwin or combi water but not both to existing	Needs low pressure taps and shower fittings etc, so unlikely to be suitable for recently built or replumbed homes.	Solar or not situation so you must decide daily on which source. Possible varying pressures.	Can choose to be 100% solar and know that you are!