Solar Thermal Integrated Packages

- High efficiency Flat Plate Collectors
- Low stagnation temperatures
- Compatible pump stations and controls
- Range of roof mounting options
- Pre-heat Storage vessels and Thermal Stores
- Bespoke or packaged solutions

solar keymark

Lochinvar®
HIGH EFFICIENCY BOILERS & WATER HEATERS

Solar Thermal Integrated Packages

Our Solar Thermal Packages have been designed to integrate with products from our established range of Direct gas-fired Water Heaters, but they can also be used with Indirect Water Heating systems. Packages are available with our high efficiency Flat Plate collectors, which provide high thermal output but with low stagnation temperatures. Components include Pump Station, Controls and a choice of Roof fixings. Pre-heat Storage vessels and Thermal Stores are also available.

Primary Hot Water Source

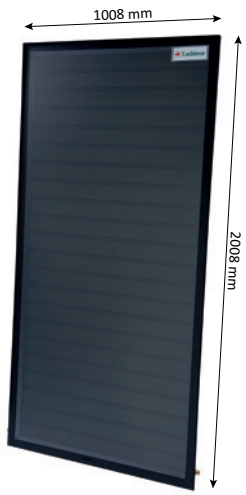
In commercial and industrial buildings, it is possible for up to 50% of the hot water demand to be satisfied by solar energy, but it is equally important to consider the primary method of generating hot water.

Solar Thermal can be integrated with all Water Heater types and methods, and combining a high efficiency gas-fired condensing Water Heater will ensure that fossil fuel is conserved, whilst providing a reliable and efficient method of generating hot water. Integrated systems can also help to reduce carbon emissions.

LSP20+ Flat Plate Solar Thermal Collectors

One of the key features of the LSP20+ collector is the meandering pipework, which is folded into the absorber plate. This design enables the collector to operate at high efficiency and improves reliability, to the extent that this product is covered by a 10-year performance warranty and a 20-year anti-corrosion warranty.

Collector Identification Reference		LSP20+
Efficiency no (Aperture)	%	81
a1a with wind, in relation to aperture	W/(m²K)	3.63
a2a with wind, in relation to aperture	W/(m²K²)	0.011
Gross surface area	m²	2.03
Aperture area	m²	1.79
Collector contents	litres	1.6
Weight	kg	36
Max. working pressure	bar	6
Max. stagnation temperature	°C	196
Min / max inclination	°	15/90
Glass tube material		4mm Safety solar glass
Collector material		Copper
Test and approvals		EN 12975, Solar Keymark ISO 9001



Lochinvar Solar Thermal Package – Components

- LSP20+ Solar flat plate collectors
- Roof fixing options, including 'A' frame for flat roof installation and mountings for 'on roof' or 'in roof'
- Controls Package including Pump Station, Solar Controller, Flow sensor, Expansion vessel, RHI compliant heat meter, Discharger collection vessel, Glycol heat transfer fluid, Two port valve and BMS alarm module

We can also supply suitably sized Pre—heat vessels and Thermal Stores

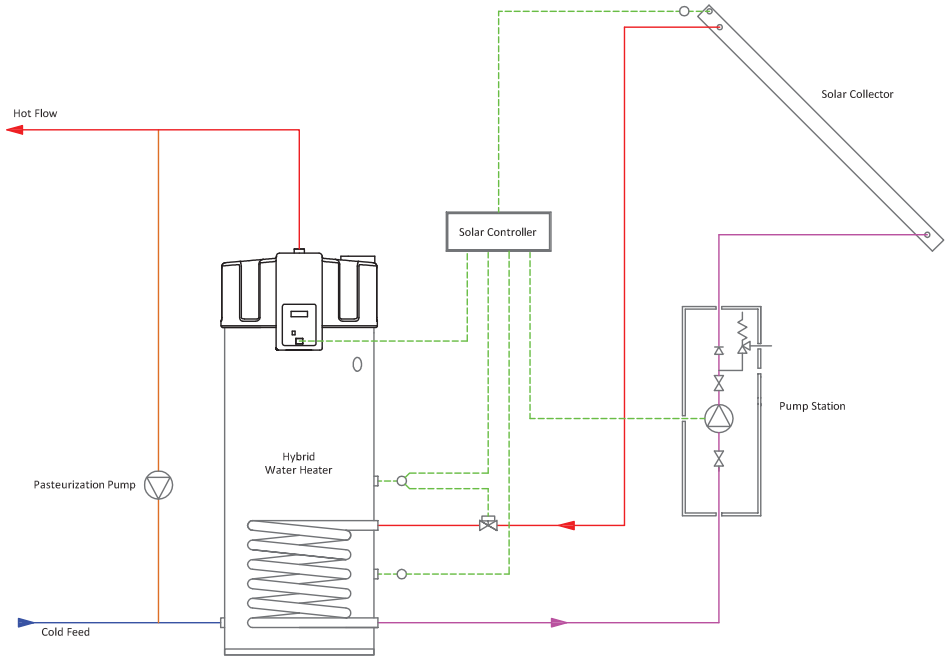
Solar Controller

Pump Station

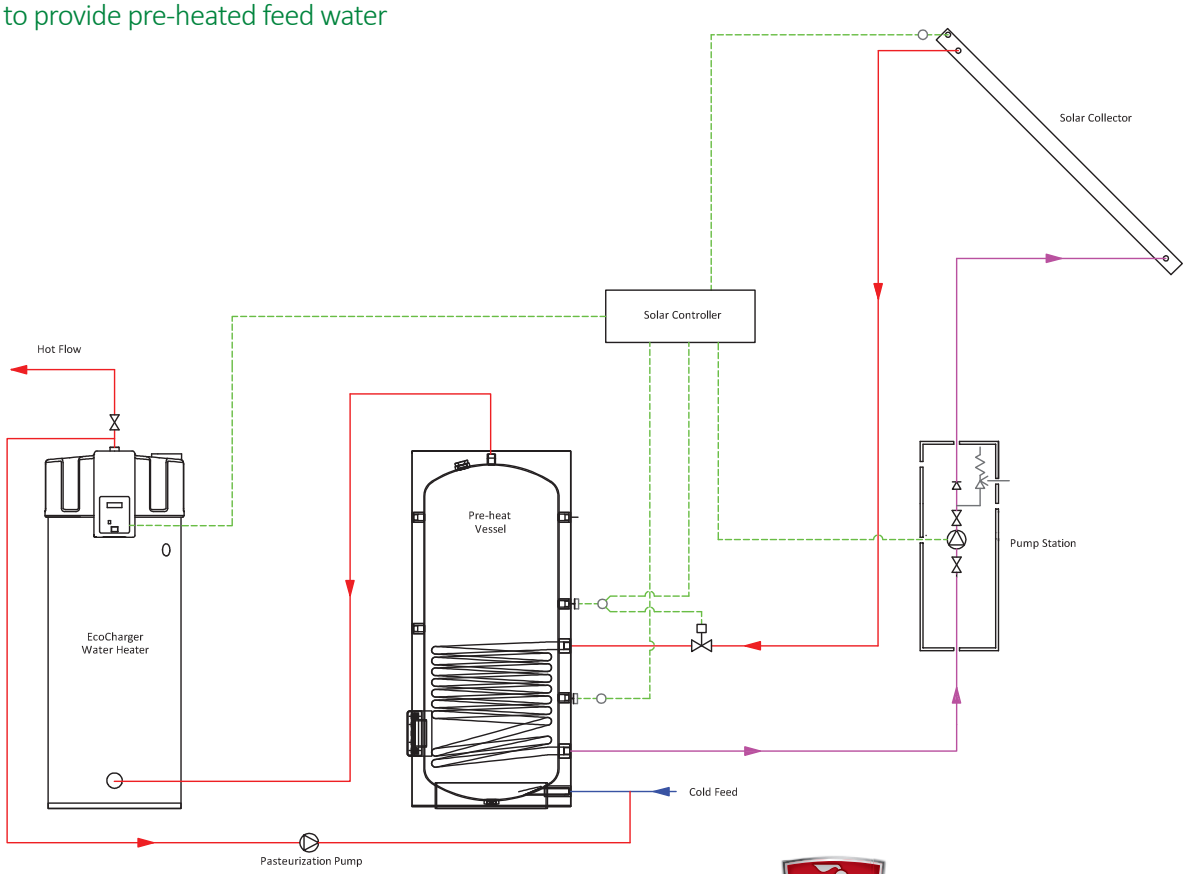
Pre-heat vessel

Typical Schematic Drawings

Solar thermal system with Hybrid water heater, suitable for small systems of up to 4 collectors; removing the requirement for additional Pre-heat Vessel or Thermal Store



Solar Thermal system with gas fired condensing water heater using the HSV Thermal Store to provide pre-heated feed water



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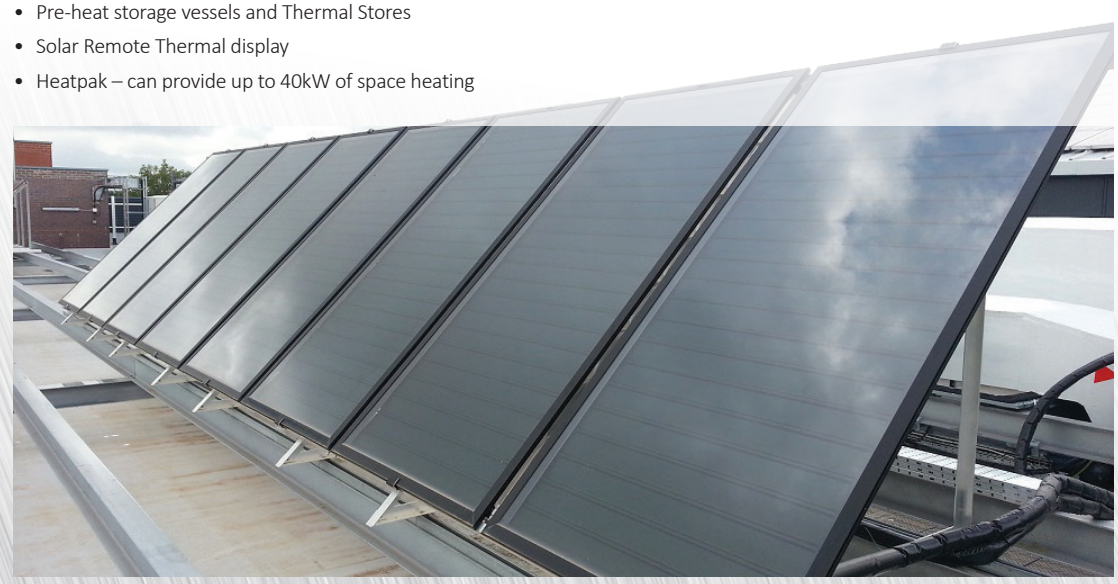
LSP20+ Flat Plate collector packages
Flat roof with A frame

Item reference	Number of Collectors	Gross surface area – m²	Net surface area – m²
LSPA02	2	4.06	3.58
LSPA03	3	6.09	5.37
LSPA04	4	8.12	7.16
LSPA05	5	10.15	8.95
LSPA06	6	12.18	10.74
LSPA07	7	14.21	12.53
LSPA08	8	16.24	14.32
LSPA09	9	18.27	16.11
LSPA10	10	20.3	17.9
LSPA11	11	22.33	19.69
LSPA12	12	24.36	21.48
LSPA13	13	26.91	23.27
LSPA14	14	28.42	25.06
LSPA15	15	30.45	26.85

Roof mounting or roof-integrated options are also available

Ancillary Equipment

- EcoCharger Hybrid Water Heaters
- Pre-heat storage vessels and Thermal Stores
- Solar Remote Thermal display
- Heatpak – can provide up to 40kW of space heating



Bespoke packages

Our standard Solar Thermal packages can cover up to 27m² of Solar collector surface area.
For systems with larger surface area, we can also offer a bespoke service.

Further information, including our Installation, Commissioning and Maintenance instructions are available at www.lochinvar.ltd.uk

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Lochinvar Ltd reserves the right to change specifications without prior notice

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