



## Solus II

Highest energy savings for hot water and space heating



### Solus II

Through its patented construction the SOLUS II guarantees quick and high solar energy harvesting without the additional use of pumps or regulators. The stored heat energy is used for the generation of hot water and for space heating support. With its very low heat loss, considerable amounts of CO<sub>2</sub>, energy and therefore money can be saved over the service life of a SOLUS II.

### Usage

- \* Family homes, apartment complexes and commercial applications
- \* Maximum energy savings for hot water and heating support
- \* Easy integration into all heating systems (radiators, in wall, under-floor or air systems)
- \* Optimised usage in combination with pellet, chip or log fuel Boilers
- \* Compatible with oil, gas or electric boilers

### Advantages

- \* Up to 40% saving on your annual heat energy bill
- \* Stratification system ensures rapid availability of solar heat. The boiler needs to fire up less often and therefore more energy can be saved
- \* Optimised water hygiene through the continuous flow heat Exchanger
- \* High-performance insulation system will store heat for several days
- \* Will accept more than one boiler, eg a pellet stove or gas boiler, and a log batch boiler, as well as solar

#### Solus II Comfort range in 550, 800 and 1000 Litres

The Comfort range delivers efficient hot water provision and particularly high energy savings. As with the Comfort-Pro range they are suitable for all types of heat source/connections.

#### Solus II Comfort-Pro range in 550, 800, 1000 and 2200 litres

In addition to the features of the Comfort range the Comfort-Pro range comes with a higher heat output hot water heat-exchanger which will provide a higher flow rate. The insulation contains an additional aluminium foil to ensure extremely low heat loss.



# Solus II - the most efficient combination system according to independent tests by Stiftung Warentest



In the test by the independent German Foundation for Testing Products (Stiftung Warentest) the SOLUS II system coupled with TUBO 11 CPC (which has been superseded by the TUBO 12 C) received by far the best rating with regard to efficiency.

### Special stratification technology

The Consolar combination thermal store leads the market due to its special stratification system. Due to its particular internal construction two or three times more water can be heated compared with similar systems without the patented water management system. The advantage is the boiler does not need to heat as often and more energy can therefore be saved.

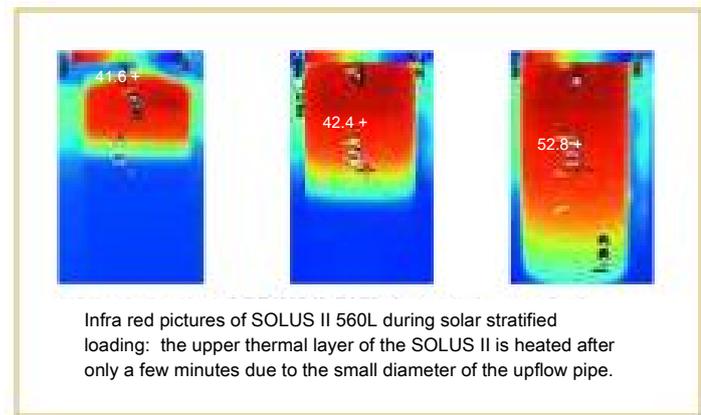
### Hygienic hot water generation

Hygiene problems can occur in conventional hot water storage systems as water remains in the reservoir at medium temperatures longer, which can lead to an accumulation of legionella. In the SOLUS II product range a volume of between 3 and 15 litres is contained in the heat-exchanger; hot water is heated quickly in a continuous flow and is therefore hygienically secure.



### Rapid availability of hot water through the top loading function

Both the thermo-syphon effect of the upflow pipe and the top loading function of the CONTROL regulator ensure that the reservoir water is heated to an immediately usable temperature and stored in the upper thermal layer of the unit. The small volume of less than 0.5 litres of the upflow pipe permits immediate usage in comparison with other significantly slower systems, which need to heat the entire volume in the stratification pipe first.

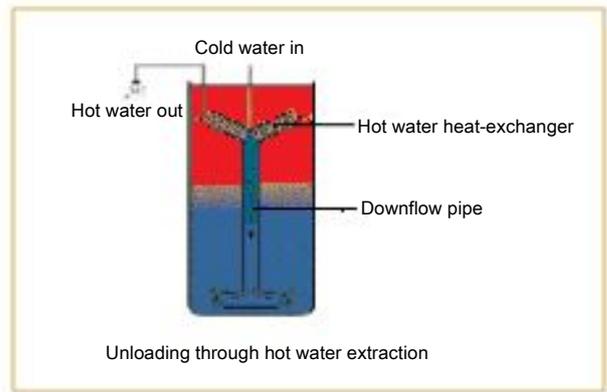


### High-grade materials

The ingenious design and high quality materials are chosen on account of their longevity, environmental friendliness and short embodied energy payback period. In the test by the independent German Foundation for Testing Products (Stiftung Warentest), the Consolar installation came top by far in this category.

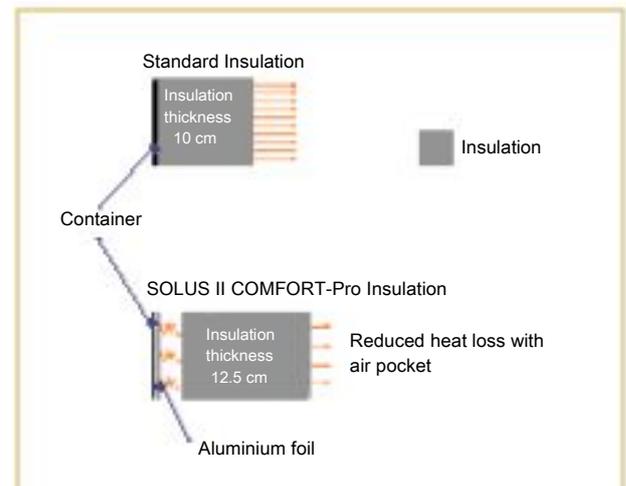
### High storage capacity through stratified unloading

The heat capacity of the SOLUS II increases above conventional thermal stores, on account of stratified unloading, which results in a less frequent need for additional heating and a greater availability of hot water. Due to the flat design of the solar heat-exchanger the full volume of the thermal store can be used, making it effectively equivalent to a much larger reservoir.



### Very low heat loss through the high-performance insulating system

Heat loss is kept at an absolute minimum through insulation. The mirror coating of the tank significantly reduces radiation loss and additional air pockets between the container wall and the insulation increase this effect further. The EPS foam employed has a good insulation value and is ecologically superior to soft and hard PU foams. The specially developed angled connections serve as heat retarders so that the micro circulation and the resulting heat loss at the connection is reduced to a fraction.



## Inspiring High Performance Technology

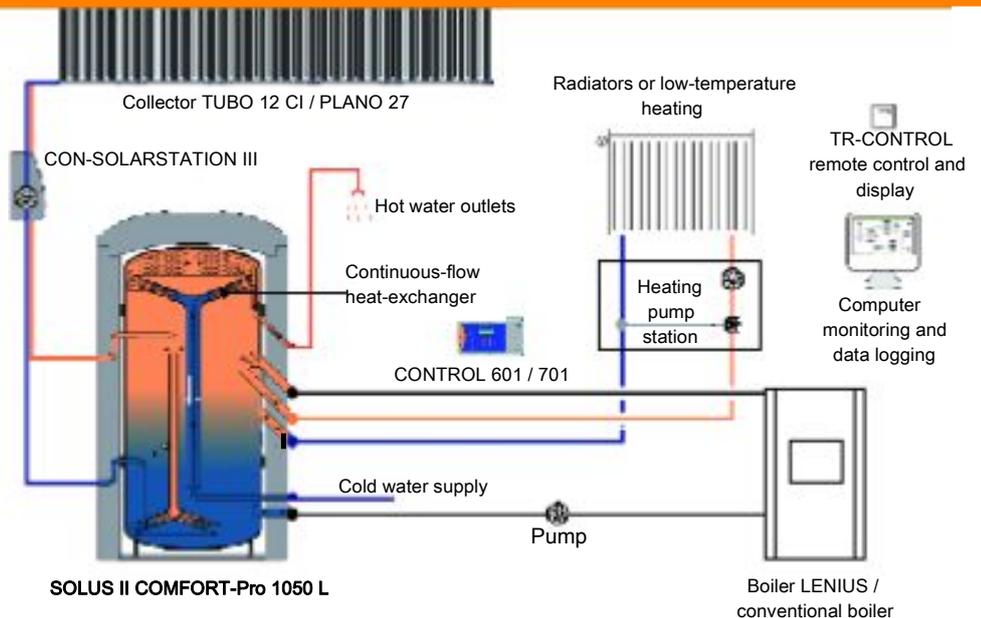


### Choose high performance technology by Consolar

- ◆ 20,000 tried-and-tested installations Europe-wide
- ◆ Over 20 patents and registered designs
- ◆ Collaboration with renowned institutes, universities and research facilities
- ◆ Ethically responsible with in-house development and environmentally in southern Germany. Ethics in Business Award 2005
- ◆ Longevity and safety due to high-grade raw materials and more than 20 years development Experience

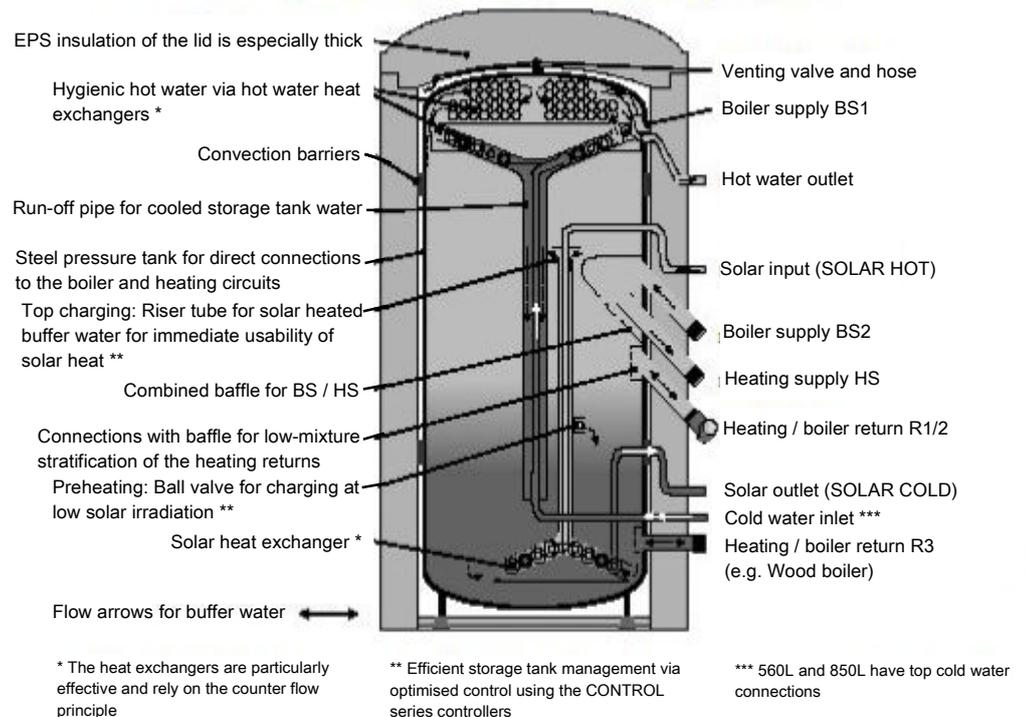
### Test results for solar systems employing SOLUS II

- ◆ In the test by Stiftung Warentest (German Foundation for Testing Products) the SOLUS II 560L combination thermal store together with 6 TUBO 11 CPC tube collectors - the smallest combined installation tested - achieved outstanding results in three categories. In the categories 'output factor' (installation efficiency), 'production, materials and packaging' and 'embodied energy payback' - the highest grade 'very good' was awarded
- ◆ February 2007: The same arrangement as the one tested by Stiftung Warentest was measured and simulated using the new TUBO 12 CPC by the Institut für Wärmetechnik und Thermodynamik (ITW) (Institute for Heat Technology and Thermodynamics in Stuttgart, Germany). This demonstrated that energy savings had increased by 16%; an outstanding result. The TUBO 12 CPC has since been superseded by the improved TUBO 12 CI



Typical arrangement of SOLUS II with boiler buffering

### COMFORT PRO Range SOLUS II 1050L/2200L\*\*\*



Cross sectional view of SOLUS II 1050L / 2200L

# SOLUS II

## Technical Data



	SOLUS II Comfort range			SOLUS II Comfort-Pro range			
Technical data	550	800	1000	560 L	850 L	1050 L	2200 L
Store volume litres	550	800	1000	550	800	1000	2200
Net weight kg	137	175	225	147	190	225	395
Diameter without insulation	70	80	85	70	80	85	130
Diameter with insulation	96	106	111	96	106	111	156
Height with insulation	175	198	206	175	198	206	206
Insulation	Lid: 15 cm Side: 10 cm	Lid: 15 cm Side: 10 cm	Lid: 15 cm Side: 10 cm	Lid: 15 cm Side: 12.5 cm	Lid: 15 cm Side: 12.5 cm	Lid: 15 cm Side: 12.5 cm	Lid: 15 cm Side: 12.5 cm
Max. allowable temperature °C	90	90	90	90	90	90	90
Max. draw off rate at 45 °C l/min <i>(reservoir top 60 °C) Higher rates are possible at higher temperatures</i>	16	20	20	18	25	30	30
No. of accommodation units served with hot water	1-2 Apartment	1-2 Apartment	1-2 Apartment	1-2 Apartment	1-2 Apartment	1-3 Apartment	1-3 Apartment
Collector surface area m <sup>2</sup>	5 - 10	8 - 16	8 - 16	5 - 10	8 - 16	11 - 22	11 - 22
Materials	Copper, PP, steel, EPS-foam, PS-cover with aluminium foil	Copper, PP, steel, EPS-foam, PS-cover with aluminium foil	Copper, PP, steel, EPS-foam, PS-cover with aluminium foil	Copper, PP, steel, EPS-foam, PS-cover with aluminium foil			

Additions to the above range are:-

SOLUS II 800 S, SOLUS II 1000 S - these do not have the hot water heat exchanger installed. They are suitable for operation with an existing water storage tank or transfer station, for example. Otherwise the storage tanks are the same as their respective Comfort range.

SOLUS II 800 PM, SOLUS II 1000 PM - these do not have any integrated heat exchangers installed and are solely for connection to an existing store, to increase the buffering storage capacity available.

SOLUS II 560 NFL - same as the 560 L but with an additional heat exchanger for community heating systems or for system separation for under floor heating systems.



Consolar UK,  
Greenshop Solar Ltd  
Bisley  
Stroud  
Gloucestershire  
GL6 7BX

Tel. No. 01452 772030  
Email. Consolar@greenshopgroup.co.uk  
www.consolar.co.uk

