

Solar System for Hot Water

ACS 200/300/500/1000



Hot Water

SONGUT delivers best european manufactures solar systems.
This systems are perfect for single-family houses.

You will produce about 90% of the engery demand of your house for hotwater.

- **Free Energy**
- **Unlimited Energy**
- **Save the environmet**
- **Short pay-back time**
- **High efficiency**

The result of our development are reliable and efficient systems.

- **Plug- and play, easy to install**
- **Fast shipment**
- **Exclusive use of high quality materials**





Hotwater Kit		1-4	4-6	6-10	10-20
Persons					
Hotwater Tank	Litres	200 l	300 l	500 l	1000 l
Solar panel SG23V	ud.	1	2	3	6
	m ²	2,3	4,5	7	14
Code		ACS 200	ACS 300	ACS 500	ACS 1000

Components

- Solar panels
- Solar tank
- Solar pump station

- Expansion vessel
- Antifreezing liquid





Solar Panel SG23V/ SG23H

	SG23V	SG23H
Collector type	Roof-mounted collector	
Gross surface area	2.25 m ²	
Absorber surface area	1.91 m ²	
Opening surface area	2.03 m ²	
H x W x D	2,108 x 1,069 x 93 mm	1,069 x 2,108 x 93 mm
Empty weight	36.3 kg	36.6 kg
Contents	1.44 l	
Absorber coating	Highly-selective	
Absorption quotient	95 %	
Emission	5 %	
Max. operating pressure	10 bar	
Type of heating medium	Propylene glycol/water mixture	
Absorber material	Aluminium 0.4 mm	
Connections	4 X 1"	
Collecting main	Cu 22 x 0.8 with screw pipe joint 1"	
Register pipe	8 mm	
Cover	3.2 mm toughened solar safety glass	
Transmission	91 %	
Glass seal	UV-resistant EPDM rubber seal	
Collector assembly	Aluminium basin 0.8 mm	
Mineral wool heat insulation	50 mm	
Leaning angle min./max.	20° / 80°	

Wind and snow tolerance 120 km/h / Tile roof: 460 kg/ Universal: 345 kg



The collectors in this series consist of a deep-drawn aluminium basin, a laser-welded aluminium full surface absorber, a 50 mm thick mineral wool plate and a piece of highly translucent, hail-proof solar glass. The collectors are available in both vertical and horizontal formats.

Absorber:

These aluminium full surface absorbers, with highly-selective coating, copper register and collecting main, are hard soldered and attached to the absorber plate using laser welding technology.

This collector has 4 connections. This makes it possible to connect any number of different combinations while reducing the need for piping to the extent permitted by the laws of hydraulics.

Mounting- Systems



Mounting at 45° angle, flexible positioning possible. Attached through the roof cladding using screws.



Universal and Tile roof 20°
Bench screw and roof rack connection.

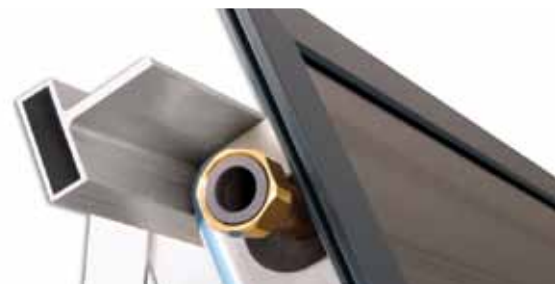


Universal and Tile roof 0°
Mounting rails are attached through the roof cladding using screws or roof anchors.



Roofintegration

More options on request



Hot Water Tank

DACS200 - DACS1000

Type	DACS200	DACS300	DACS500	DACS1000
Content of hot-water	200 l	295 l	471 l	958 l
Surface upper heat-exchanger	0,7 m ²	0,8 m ²	1,27 m ²	1,12 m ²
Content upper heat-exchanger	4,9l	5,7 l	8,9 l	7,9l
Rating upper heat-exchanger	24kW	26 kW	40 kW	32kW
Surface solar-heat-exchanger	0,95 m ²	1,53 m ²	1,95 m ²	2,45 m ²
Content solar-heat-exchanger	6,4l	10,8l	13,6l	17,1l
Rating solar-heat-exchanger	31kw	48kw	65kw	76kw
Diameter without insulation	-	-	-	850 mm
Diameter with insulation	540 mm	600 mm	700 mm	1010 mm
Height (incl. insulation)	1473 mm	1794 mm	1920 mm	2025 mm
Tilted height	1530 mm	1892 mm	2044 mm	-
Tilted height without insulation	-	-	-	2135 mm
Weight	85 kg	116 kg	149 kg	275 kg
Insulation thickness	45mm	50 mm	50 mm	80 mm
Coefficient for conductivity of insulation			0,041 W/(mK)	
Max. operating pressure			10 bars	
Max. operating pressure solar circuit			10 bars	
Max. operating temperature			95°C	
Max. temperature of the solar circuit			110°C	
Protection against corrosion			Emailliert nach DIN4753 (Register inkludiert)	

Function:

The compact hot water tank is used for production and storing of hot water. It offers the possibility to combine it with solar systems or other alternative heating systems.

Advantages:

Comfort:

- rapid and simple mounting and commissioning
- schnelle und einfache Montage und Inbetriebnahme
- Reduktion der Leitungen

Technik:

- high quality and durability
- integrated heat exchanger to connect to a solar or heating system
- simple connection of the electrical cartridge
- Perfect stratification
- Elegant design

Ideal combination with:

- solar thermal systems
- oil burners
- wood burners
- pellets burners
- gas burners





Solar Pumpstation ESTSOL

Function:

The Solarstation ESTSOL connects up to 25 m² solar collectors to the DIR or hot water tank DACS. The integrated dual-circuit controller works with three Pt1000 sensors, which control the collector and tank temperatures, and regulates the charge pump.



Technical Data

Model	ESTSOL	ESTSOLFV
Dimensions		
Width	330 mm	
Height	570 mm	
Depth	230 mm	
Insulation	EPP	
Weight	7 kg	6 kg
Controller	SONGUT REG2C Dual-circuit controller with 3 x Pt1000- sensors	No controller necessary
Connections		
Collector	Rp ³ / ₄ IT	G1 ET
Tank	Rp ³ / ₄ IT	G1 ET
Expansion vessel	G ³ / ₄ IT (swivel nut)	G ³ / ₄ ET
Medium	water with max. 50 % propylene-glycol	
Nominal width	DN 15	
Operating temperature flow	140°C	160°C
Operating temperature return	120°C	95°C
Operating pressure	max. 6 bar	max. 8 bar
Charge pump	230 V / 50 Hz	8 – 24 V (DC)
Power input	min. 34 W (level 1)	16 W
	max. 82 W (level 3)	

Advantages:

Required space:

- compact construction
- minimal external piping – directly attached to tank

Comfort:

- plug-in delivery
- easy installation on fwss tank
- maintenance free
- no wear parts
- twice the safety due to two gravitational brakes
- wall fastening feasible
- impressive and clean design with hidden piping

Technology:

- for up to 25 m² solar collectors
- thermally insulated model
- multi-functional ball valves with integrated gravitational brakes
- flow rate adjustable from 1 to 10 l/min
- flow and return temperature indicator
- manometer (range 10 bar)
- solar safety valve (reaction pressure 6 bar)
- flow indicator with rinse and stop function
- kfe-valve for easy filling, rinsing and draining

Specific advantages ESTSOL:

- dual-circuit solar controller with system status display
- air-jet with manual deaeration-nipple

Specific advantages ESTSOLFV:

- self-sustaining operating is possible
- no solar-controller necessary
- high-efficient DC pump

Recommended: Special solar tubes TUSO



This special tubes will garantize the perfect funcion of your system. Perfect aislation, no extra pieces, protected for outdoor use.

Standard Systems:

The systems had beed developed in the last decade and you can adapt then to any house ant for any backup-system.

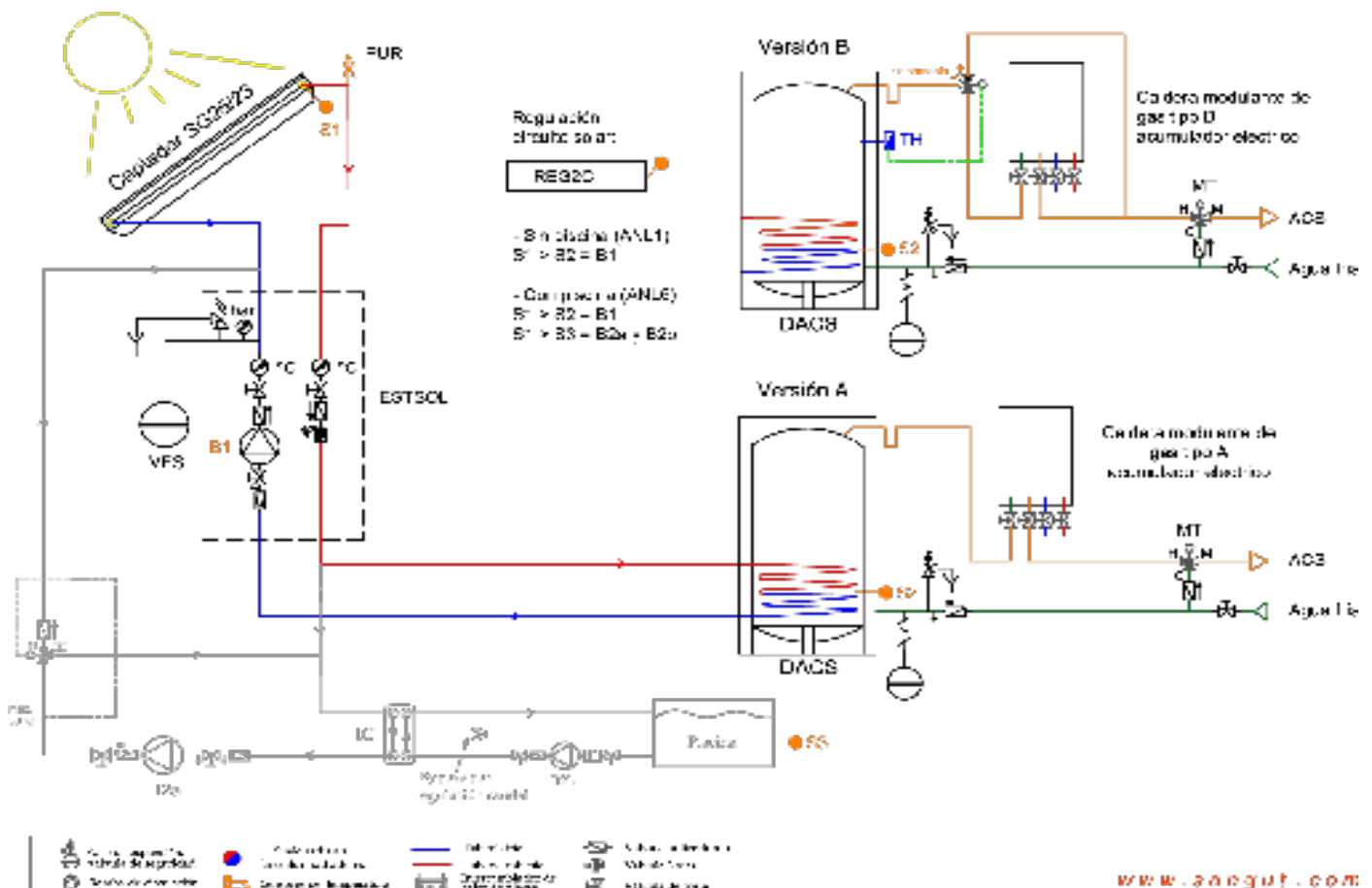
The systems is delivered pre-adjusted so that you only have to conect, plug in and it works.

We recommend to use a Standard- Setup from Songut because this setups had been proven for a lot of years. If you want, songut provides you manuals for the installation for free and also manuals with different options for hidrualic schemes.

Standard-scheme for hotwater

Esquema ACS

Producción de Agua Caliente Sanitaria (ACS) (climatización de piscina opcional)





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