

Solar Water Heater

EUROSTAR
ECO (Tube In Tank Heat Exchanger)

Durable

withstanding **22,5 bar** pressure!!!

Discrete

with a low version (hidden tank) for
preserving architectural designs.

The new series of thermosiphon systems EUROSTAR ECO, have been designed in order to cope with the demands of any market all over the world specializing in very hot climates without the need for refilling the solar circuit.



The EUROSTAR ECO solar water heater is manufactured in compliance with the International Standards for Quality Assurance ISO 9001:2008, is tested according to international standards EN12976-1-2.

The collector's performance and reliability is tested according to EN 12975-2. The system has been granted with the Solar Keymark Certificate.



Eurostar **EcoCollector**

The EUROSTAR ECO collector casing is made of specially designed extruded aluminum profile, without any external connections, screws, nuts or rivets. The Rockwool insulation will maintain very high temperatures achieving an incredibly high efficiency.

The absorber is composed of Blue Selective Aluminum fins 0,50mm thickness, welded to copper pipes with laser welding.

The thermal liquid achieves maximum transfer of heat to the water while protecting the system against scaling, rusting, freezing and overheating.

Eurostar **EcoTank**

The EUROSTAR ECO tank has a mild steel external casing, with high temperature oven powder coating for maximum protection from rain, sun and salty environment, ensuring durability and an elegant appearance.

The FREON FREE polyurethane insulation is casted under pressure in the tank, surrounding the cylinder and maintaining hot water for up to 48 hours.

The new revolutionary heat exchanger of the closed circuit assures instant hot water at very high temperature. The tank is made of low carbon steel with a double "enameling" coating (glass), oven-treated at 860°C.

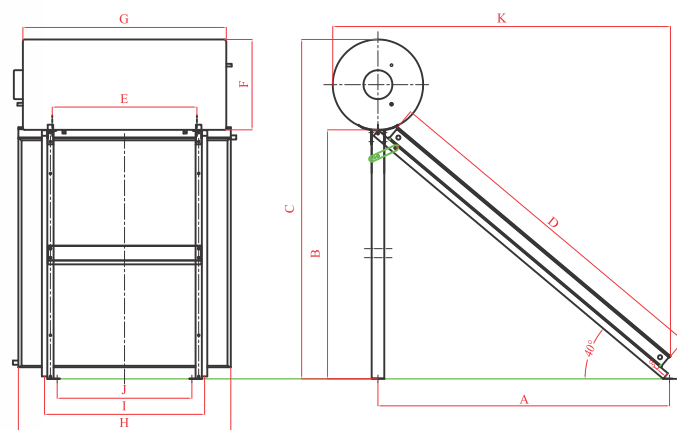
The magnesium anode effectively protects the cylinder from electrolysis. The backup electric heater ensures hot water even in very cloudy days.

The eurostar eco is eco-friendly solar water heater component that can be recycled.

THERMOSIPHON SYSTEMS

EUROSTAR ECO SPECIFICATIONS

TYPE	150-1-S200	150-1-S230	200-1-S200	200-1-S230	250-1-S260	300-2-S200	300-2-S230	350-2-S230	400-2-S260	
SOLAR COLLECTORS										
NUMBER OF COLLECTORS	1	1	1	1	1	2	2	2	2	
AREA OF COLLECTORS m²	1.88	2.28	1.88	2.28	2.64	3.76	4.56	4.56	4.56	
DIMENSIONS mm	1960x960x81	1960x1165x81	1960x960x81	1960x1165x81	1960x1165x81	1960x960x81	1960x1165x81	1960x1165x81	1960x1165x81	
WEIGHT kg	29,50	35,50	29.50	35.50	40.00	59.00	71.00	71.00	71.00	
FRAME	Aluminum profile. Free of screws and rivets.									
COVER	Tempered low iron prismatic glass 3.2 mm. 90,5% transmission.									
SEALING	Acrylic foam - Structural Silicon									
INSULATION	Rockwool 40mm (50kg/m³) back and Glass wool 20 mm (30kg/m³) sides									
ABSORBER MATERIAL	Blue Selective Aluminum fins 0,50mm thickness, welded to copper pipes with laser welding.									
ABSORPTION (α)	95% (± 0.02)									
EMISSION (ε)	5% (± 0.02)									
EFFICIENCY (η ₀)	0.763									
MAX. WORKING PRESSURE	1000kPa									
MAX. WORKING TEMPERATURE	150°C									
TANK										
NOMINAL CAPACITY (lt)	80	100	125	150	150	200	200	200	300	300
WEIGHT EMPTY (kg)	32	41	49	55	55	61	61	61	95	95
BOILER BODY	The boiler "body" is made from USD 37.2 steel plate. The boiler is (glass) enameled with the advanced double "direct" method "fired" at 860°C									
HEAT EXCHANGER	Internal heat exchanger made from 3.0 mm EN-10219 steel certified for testing pressure at 22,5 bar & operating pressure of 15 bar									
INSULATION	Freon free Polyurethane 40-50mm (40kg/m3) casted under pressure.									
EXTERNAL COVER	Steel sheet galvanized, powder coated, oven treated RAL 9006.									
ANODE PROTECTION	Magnesium rod									
MAX. WORKING PRESSURE	10 bar									
MAX. WORKING TEMP. OF SOLAR CIRCUIT	150°C									
MAX. WORKING PRESS. OF SOLAR CIRCUIT	15 bar									
TEST PRESSURE OF SOLAR CIRCUIT	22.5 bar									



TYPE	A	B	C	D	E	F	G	H	I	J	K
150-1-S200	2100	1377	1877	1960	800	500	1100	960	895	745	1868
150-1-S230	2100	1377	1877	1960	800	500	1100	1165	895	745	1868
200-1-S200	2100	1377	1907	1960	980	500	1150	960	895	745	1883
200-1-S230	2100	1377	1907	1960	980	500	1150	1165	895	745	1883
250-1-S230	2100	1489	2019	2135	980	500	1550	1238	895	745	2017
300-2-S200	2100	1377	1907	1960	980	500	1855	1980	1439	1289	1883
300-2-S230	2100	1377	1907	1960	980	500	1855	2390	1439	1289	1883
350-2-S230	2100	1377	1907	1960	1345	530	2100	2390	1439	1289	1883
400-2-S260	2100	1377	1907	1960	1345	530	2400	2450	1439	1289	1883

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SOLE S.A. is the inventor of the closed circuit Solar Water Heater.



Advantages

- Maximizes efficiency
- No need for refilling the solar loop
- Best aesthetic results. Low version with hidden tank available
- Easy to install
- Minimum maintenance needed
- Anode protection

Commitment to the Environment

Since its foundation in 1974 SOLE S.A. has been committed to the protection of the environment and the reduction of CO₂ emission.

SOLE S.A. holds numerous prizes and environmental distinctions, contributing with its products to the improvement of environment in all 5 continents.

SOLE S.A.

SOLAR APPLIANCES MANUFACTURER

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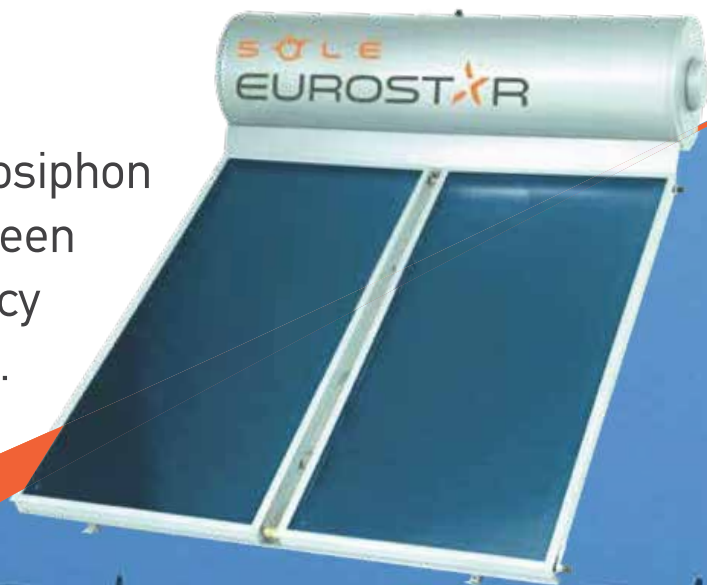
Quality Solar Systems



Solar Water Heater

SOLE
EUROSTAR
(Double Jacket Heat Exchangers)

The market pioneer thermosiphon system EUROSTAR, has been designed to maximize efficiency with the best aesthetic results.



The EUROSTAR solar water heater is manufactured in compliance with the International Standards for Quality Assurance ISO 9001:2015, is tested according to international standards EN 12976-1-2 and it is certified by the Solar Keymark scheme.

The collector's performance and reliability is tested according to ISO 9806:2013 EN 12975-2.



www.eurostar-solar.com

Thermosiphon systems

Eurostar

EUROSTAR an innovation among solar water heaters, created with high tech engineering and respect for the environment. The concept of EUROSTAR's design has always been to create an environmentally safe, super-efficient and reliable solar water heater that is durable and easy to install. The EUROSTAR, a pioneer in the international market, is a solar water heater that has been designed in an aesthetic manner, in order to produce hot water for many years.

Collector



The EUROSTAR's collector casing is made of specially designed extruded aluminum profile powder coated, without any external connections, screws, nuts or rivets. Its unique design of rubber sealing makes it 100% watertight. At the same time the powerful support system will resist any weather conditions even typhoons. The rockwool 40mm (50kg/m³) insulation of the collector back and sides, will maintain very high temperatures, which along with the other technical

characteristics, achieve an incredible high efficiency. The absorber is composed of an aluminum sheet with blue super selective coating of 0.50mm thickness and is welded to the copper pipes by laser welding. The primary thermal liquid achieves maximum transfer of heat to the water in the tank and at the same time protects the collector from scaling, rusting, freezing and overheating. The EUROSTAR's "heliothermic liquid" will last for many years without needing to be replaced. The collector's glazing is 3.2 mm low iron solar prismatic tempered glass, having more than 91% transmittance which ensures maximum penetration of irradiation.

Solar Water Heaters

EUROSTAR's tank has a mild steel external casing, with high temperature oven coating for maximum protection from rain, sun and sea air, ensuring durability and an elegant appearance.

FREON FREE polyurethane insulation is casted under pressure in the tank, surrounding the cylinder and maintaining hot water for up to 48 hours. The EUROSTAR is the ECO-FRIENDLY thermosiphon solar water heater completely made from material that can be recycled. SOLE's respect for the environment starts at the production stage.

The closed circuit double jacket is made of mild steel; the large area where heat is exchanged makes the EUROSTAR an instant solar water heater. At the same time this protects the product from corrosion, scale and frost.

Due to its design the EUROSTAR is operating in very hot climates, extremely cold areas with temperatures below zero or even in areas with poor water quality. In all cases it will be as efficient and reliable.

The tank is made of low carbon steel with a double "enameling" coating (glass), oven-treated at 860°C. EUROSTAR solar water heaters can withstand water pressure of up to 3,000 Kpa (30At or 440psi), ensuring a trouble free operation for many years.

The pure magnesium anode effectively protects the cylinder from electrolysis. Very cloudy days are no problem for the EUROSTAR. Plenty of hot water thanks to the backup electric heater.

The thermostat with thermal cut out safety feature regulates the desired temperature of the hot water, with precision.

Support



Special blind rivet nuts on the back of the aluminum profile allow easy installation. Tiled roofs: the EUROSTAR's special accessories eliminate the necessity to break or drill holes into the roof. Flat roofs: the complete set of supports makes installation on flat roofs just as simple. This aesthetic feature once more proves the superiority of the EUROSTAR's design.

SPECIFICATIONS

THERMOSIPHON SYSTEMS EUROSTAR

TYPE	120-1-200	150-1-200	150-1-250	200-1-250	200-1-270	200-2-175	200-2-200	300-2-200	300-2-250
COLLECTOR									
Number of Collectors	1	1	1	1	1	2	2	2	2
Area of Collectors m ²	1.91	1.91	2.31	2.31	2.68	2x1.76	2x1.91	2x1.91	2x2.31
Dimensions mm	1970x970x86	1970x970x86	1970x1175x86	1970x1175x86	2145x1248x86	1760x1000x86	1970x970x86	1970x970x86	1970x1175x86
Weight Kg	41	41	49	49	55	2x38	2x41	2x41	2x49

TECHNICAL CHARACTERISTICS

FRAME	Aluminum profile. Free of screws and rivets.
COVER	Tempered low iron prismatic glass 3.2 mm. 96.1% transmission.
INSULATION	Rockwool 40mm (50kg/m ³) back and Glass wool 20 mm (30kg/m ³) sides
ABSORBER MATERIAL	Blue Selective Aluminum fins 0.40mm thickness, welded to copper pipes with laser welding.
ABSORPTION (α)	95% (± 0.02)
EMISSION (ε)	5% (± 0.02)
MAX. WORKING TEMPERATURE	150°C

TYPE	120	150	150	200	200	200	200	300	300
TANK									
Nominal Capacity (Lt)	120ltr	150ltr	150ltr	200ltr	200ltr	200ltr	200ltr	300ltr	300ltr
Dimensions	1070mm x Ø500	1320mm x Ø500	1320mm x Ø500	1320mm x Ø530	1320mm x Ø530	1320mm x Ø530	1320mm x Ø530	2080mm x Ø530	2080mm x Ø530
Weight Empty (Kg)	53	59	59	67	67	67	67	106	106

TECHNICAL CHARACTERISTICS

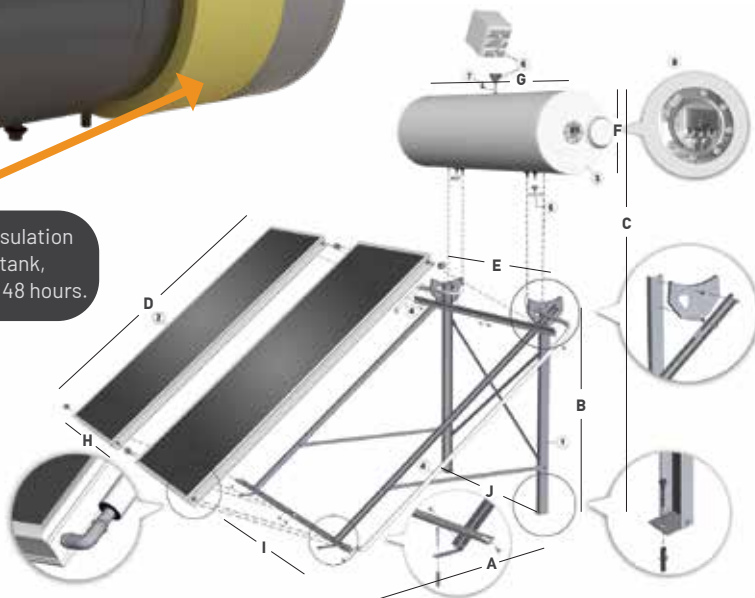
BOILER BODY	The boiler "body" is made from USD 37.2 steel plate. The boiler is (glass) enameled with the advanced double "direct" method "fired" at 860°C
HEAT EXCHANGER	Double jacket made of mild steel.
INSULATION	Freon free Polyurethane 40-50mm (48kg/m ³) casted under pressure
EXTERNAL COVER	Steel sheet galvanized, powder coated, oven treated RAL 9006
ANODE PROTECTION	Magnesium rod
SAFETY VALVE	2.5bar
MAX. WORKING PRESSURE	10bar
MAX. WORKING TEMP. OF SOLAR CIRCUIT	150°C

Low carbon steel tank with double "enameling" coating (glass). Oven treated at 860C.

Closed circuit double jacket made of mild steel. Large area heat exchanger providing **instant solar water heating**.

Mild steel external casing, with high temperature oven coating for maximum protection from rain, sun & sea air.

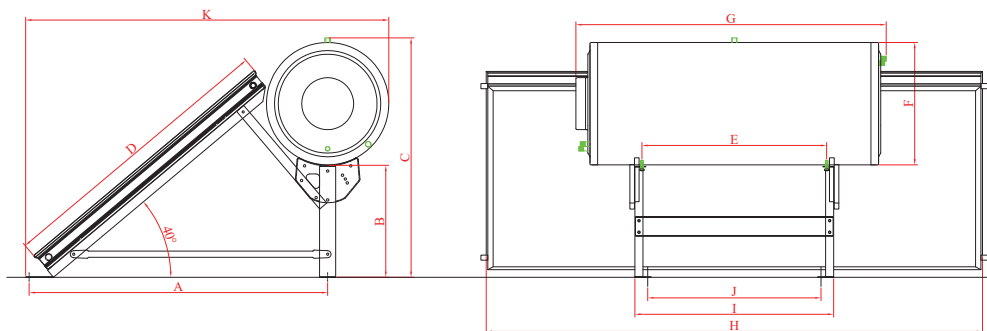
FREON FREE polyurethane insulation casted under pressure in the tank, maintains hot water for up to 48 hours.



EUROSTAR DIMENSIONS (mm)

	A	B	C	D	E	F	G	H	I	J
EUROSTAR 120-1-200	1680	1465	1985	1970	800	500	1080	970	890	755
EUROSTAR 150-1-200	1680	1465	1985	1970	800	500	1210	970	890	755
EUROSTAR 150-1-250	1680	1465	1985	1970	800	500	1210	1175	890	755
EUROSTAR 200-1-250	1680	1465	2015	1970	800	550	1270	1175	890	755
EUROSTAR 200-1-270	1840	1570	2120	2145	800	550	1270	1248	890	755
EUROSTAR 200-2-175	1680	1320	1870	1760	800	550	1270	2070	890	755
EUROSTAR 200-2-200	1680	1465	2015	1970	800	550	1270	2010	890	755
EUROSTAR 300-2-200	1680	1465	2015	1970	1345	550	1870	2010	1440	1300
EUROSTAR 300-2-250	1680	1465	2015	1970	1345	550	1870	2420	1440	1300

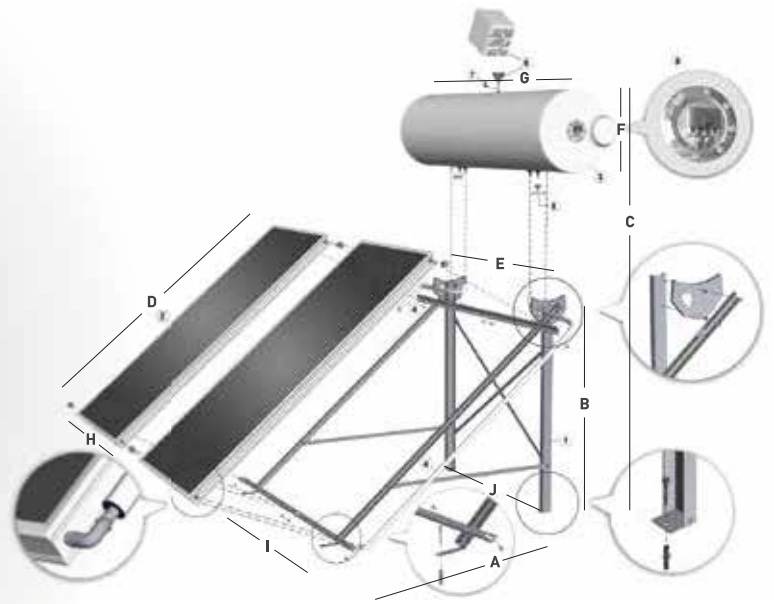
EUROSTAR FINO Solar Low Height Kits



EUROSTAR FINO DIMENSIONS (mm)

TYPE	A	B	C	D	E	F	G	H	I	J	K
150-1-250	1310	480	1005	1175	800	500	1344	1970	861	751	1558
200-1-270	1310	480	1037	1248	800	550	1210	2145	861	751	1573
300-2-200 (30°)	2082	708	1266	1970	1345	550	1870	2010	1404	1294	2362
300-2-200 (40°)	1885	878	1436	1970	1345	550	1870	2010	1404	1294	2165

The discrete thermosiphon system of SOLE, Eurostar Fino pioneering solar water heaters with high efficiency and long durability. Available in 150, 200 and 300 liters is the only thermosiphon system that does not exceed



EUROSTAR DIMENSIONS (mm)

	A	B	C	D	E	F	G	H	I	J
EUROSTAR 120-1-200	1680	1465	1985	1970	800	500	1010	970	890	755
EUROSTAR 150-1-200	1680	1465	1985	1970	800	500	1260	970	890	755
EUROSTAR 150-1-250	1680	1465	1985	1970	800	500	1260	1175	890	755
EUROSTAR 200-1-250	1680	1465	2015	1970	800	530	1260	1175	890	755
EUROSTAR 200-1-270	1840	1570	2120	2145	800	530	1260	1248	890	755
EUROSTAR 200-2-175	1680	1320	1870	1760	800	530	1260	2070	890	755
EUROSTAR 200-2-200	1680	1465	2015	1970	800	530	1260	2010	890	755
EUROSTAR 300-2-200	1680	1465	2015	1970	1345	530	2010	2010	1440	1300
EUROSTAR 300-2-250	1680	1465	2015	1970	1345	530	2010	2420	1440	1300



Commitment to the environment
since 1974.



Advantages

- Maximizes efficiency
- Best aesthetic results
- Fast and easy installation in flat and tile roofs
- Minimum maintenance needed
- Long durability

Commitment to the environment

Since its foundation in 1974 SOLE S.A. has been committed to the protection of the environment and the reduction of CO2 emission.

SOLE S.A. holds numerous prizes and environmental distinctions, contributing with its products to the improvement of environment in all 5 continents.





SOLE S.A. is a pioneer in large centralized systems since 1974



Advantages

- Maximizes efficiency
- Rapid Heating
- Best aesthetic results
- Easy to install
- Compatible with all types of auxiliary heating
- Minimum maintenance needed
- Long durability

Commitment to the environment

Since its foundation in 1974 SOLE S.A. has been committed to the protection of the environment and the reduction of CO2 emission.

SOLE S.A. holds numerous prizes and environmental distinctions, contributing with its products to the environment in all 5 continents.

Quality Solar Systems

SOLE
SOLAR SYSTEMS MANUFACTURER

Solar Water Heating Systems

FCK
FORCED CIRCULATION KITS

FOR HOT WATER PRODUCTION BY SOLAR ENERGY

The new series of Forced Circulation Kits, have been designed in order to cope with the demands of any market all over the world, specializing in any application where hot water is demanded.

Durable
Withstanding 22,5 bar pressure!!!



SOLE S.A.

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www.eurostar-solar.com



SOLAR SYSTEM AT BURJ KHALIFA

www.eurostar-solar.com

EcoCollector



The EUROSTAR ECO collector casing is made of specially designed extruded aluminum profile, without any external connections, screws, nuts or rivets. The high density rockwool insulation will maintain very high temperatures achieving an incredibly high efficiency.

The absorber is composed of Blue Selective Aluminum fins of 0.50mm thickness, welded to copper pipes with laser welding.

The thermal liquid achieves maximum transfer of heat to the water while protecting the system against scaling, rusting, freezing and overheating.

Eurostar Floor Standing Tank



The EUROSTAR Floor Standing tank is made of low carbon steel with a double "enamelling" coating (glass), oven treated at 860°C.

The FREON FREE high density polyurethane insulation maintains hot water for many days.

The magnesium anode effectively protects the cylinder from electrolysis. The backup electric heater ensures hot water even in very cloudy days.

SOLE's Solar Systems are manufactured in compliance with the International Standards for Quality Assurance ISO 9001:2015.

The collector's performance and reliability is tested according to EN 12975-2 and has been granted with the Solar Keymark Certificate and TÜV Certificate for max pressure of 22,5 bar.

SYSTEM SPECIFICATIONS

SOLAR COLLECTORS							
TYPE	S100	S125	S150	S200	S230	S260	
AREA OF COLLECTOR m²	0.99	1.23	1.48	1.88	2.28	2.64	
DIMENSIONS mm	1026x960x81	1280x960x81	1540x960x81	1960x960x81	1960x1165x81	2135x1238x81	
WEIGHT kg	20,00	22,00	24,00	29,50	35,50	40,00	
FRAME	Aluminum profile. Free of screws and rivets.						
COVER	Tempered low iron prismatic glass 3.2 mm. 90,5% transmission.						
SEALING	Acrylic foam – Structural Silicon						
INSULATION	Rockwool 40mm (50kg/m³) back and Glass wool 20 mm (30kg/m³) sides						
ABSORBER MATERIAL	Blue Selective Aluminum fins 0.50mm thickness, welded to copper pipes with laser welding.						
ABSORPTION (α)	95% (± 0.02)						
EMISSION (ε)	5% (± 0.02)						
EFFICIENCY (η)	0.763						
MAX. TEST PRESSURE	2250kPa (22.5 bar)						
MAX. WORKING PRESSURE	1500kPa (15 bar)						
STAGNATION TEMPERATURE	164°C						

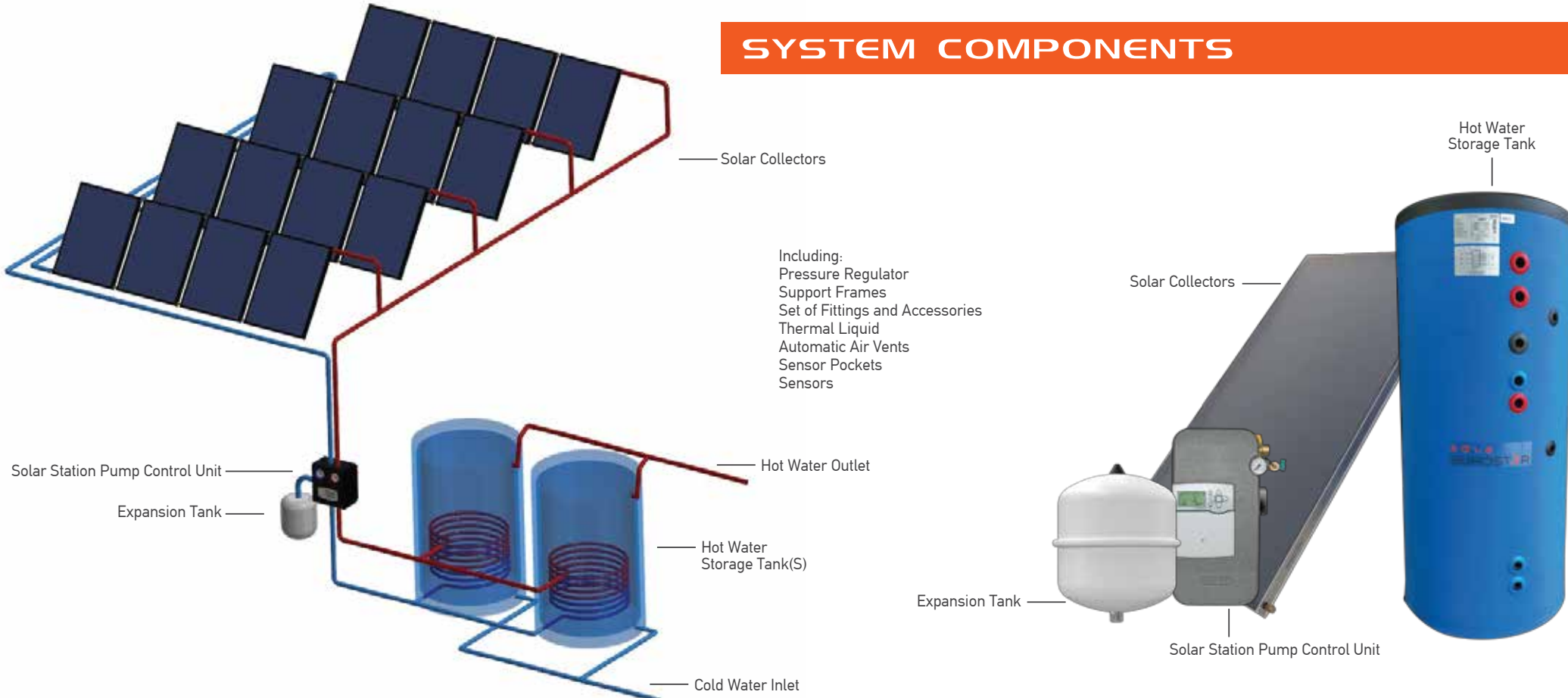
FLOOR STANDING TANKS BL1 / BL2 / CBL1 / CBL2													
TYPE BL1/BL2/CBL1/CBL2	160	200	300	400	500	800	1000	1500	2000	2500	3000	4000	5000
NOMINAL CAPACITY (lt)	160	200	300	400	500	800	1000	1500	2000	2500	3000	4000	5000
WEIGHT EMPTY (kg) BL1	54	65	92	137	145	215	233	325	442	-	552	576	699
WEIGHT EMPTY (kg) BL2	66	70	100	146	158	220	279	365	486	-	567	593	720
BOILER BODY	The boiler "body" is made from steel plate S235JR. The boiler is (glass) enamelled with the advanced double "direct" method "fired" at 860°C for tanks up to 2000ltr and epoxy resins for tanks larger than 2000ltr												
HEAT EXCHANGER	Internal heat exchanger made from Enamelled Steel or copper (depending on the size). Stainless steel heat exchanger also available.												
INSULATION	Freon free Polyurethane 50-100mm (40kg/m3) casted under pressure or flexible (tanks larger than 500ltr).												
EXTERNAL COVER	Coloured PVC flexible jacket with zipper.												
ANODE PROTECTION	Magnesium rod.												
MAX. WORKING PRESSURE	6-10 bar upon request.												

BL1= Storage tank with 1 heat exchanger
BL2 = Storage tank with 2 heat exchangers
Optional electric element 2-24kW

CBL1 = Storage tanks with 1 removable heat exchanger
CBL2 = Storage tanks with 2 removable heat exchangers

DATA, DESCRIPTIONS, TECHNICAL CHARACTERISTICS AND ACCESSORIES ARE ONLY INDICATIVE. NOT BINDING AND CAN BE SUBJECTED TO VARIATIONS

SYSTEM COMPONENTS



FORCED CIRCULATION KITS

MODEL	STORAGE TANK	COLLECTOR	PRESSURE REGULATOR	SOLAR STATION (PUMP CONTROL UNIT)	EXPANSION TANK	SUPPORT FRAME	SET OF FITTING ACCESSORIES	THERMAL LIQUID
FCK 200	FCK 200	2 x ECO S260	1	1	1	1	1	2
FCK 300	FCK 300	3 x ECO S260	1	1	1	2	1	2
FCK 500	FCK 500	4 x ECO S260	1	1	1	2	1	3
FCK 800	FCK 800	5 x ECO S260	1	1	1	3	1	4
FCK 1000	FCK 1000	6 x ECO S260	1	1	1	3	1	4

Systems with tanks including two heat exchangers are available. Larger projects are designed upon request.



BURJ KHALIFA, DUBAI



KOLYMPARI BEACH HOTEL, GREECE



PHOTONIO, GREECE



HAMDAN SPORTS COMPLEX, DUBAI