

# STEAMING HOT



**MELCO**  
makes life easier





## corrosion-proof storage tank

Complete and uniform protection of the steel tank is attained by the high quality DURO GLASS® special glass coating, but also thanks to the enameling method with the use of a vacuum technology process, applied exclusively by ELCO.

**Result:** Full protection of the tank against corrosion.

## ELCO SOL-TECH solar water heater storage tank features

- ▶ Storage tank made of special steel, pressure tested at 16 bar
- ▶ Storage tank internally protected by DURO GLASS® special enamel coating
- ▶ Steel jacket closed circuit heat exchanger
- ▶ Storage tank protected against electrolysis by two extra large magnesium anodes, produced by ELCO, so the total magnesium quantity is much larger than the one commonly used, and double than the requirement of the European Norms **2**
- ▶ High quality stainless steel 316L alloy heating element of low surface load charge, that guarantees the longest life expectancy as well as immediate flow of large quantity of hot water **3**
- ▶ Safety thermostat with integrated bipolar thermo-electric fuse **5**
- ▶ Safety valve with membrane and drainage (8 bar)
- ▶ Expansion tank built-in the storage tank **1**
- ▶ HCFC free, closed-cell, rigid polyurethane foam insulation, of at least 40mm thickness and 40kg/m<sup>3</sup> density, uniformly covering every part of the tank, keeping the contained water hot for a longer period of time
- ▶ Outer shell made of either 304 stainless steel or galvanized steel coated with architectural polyester paint combined with stainless steel end covers
- ▶ For low cost hot water, even in the winter, individual models with integrated large surface area heat exchangers (G3/4"), made from enameled DN20 tubing, are available to connect to the central heating system **4**

## ELCO THERMOSTORE & ELCO SOL-TECH an ideal combination with multiple benefits



Installing the boiler on a flat terrace or inclined tile roof is neither the most efficient nor the most attractive choice. Fortunately, it's not the only one for the solar water heater application: The new ELCO THERMOSTORE boilers are the answer to the need for absolute efficiency and aesthetics. The ELCO THERMOSTORE Boilers 150, 175, 200 & 300 L can ideally be combined with the new ELCO selective solar collectors. Apart from the central heating and electrical power, the boilers can be connected to solar collectors and can be installed in the boiler room or in any other part of your home (storage room, attic, basement, etc.). This way, you get the best aesthetic result and you also save energy since the thermal losses during the night are minimized.

**If you wish to have the highest possible efficiency along with the most aesthetic application, the combination of SOL-TECH & THERMOSTORE is the ideal solution.**

# new high-efficiency selective solar collectors

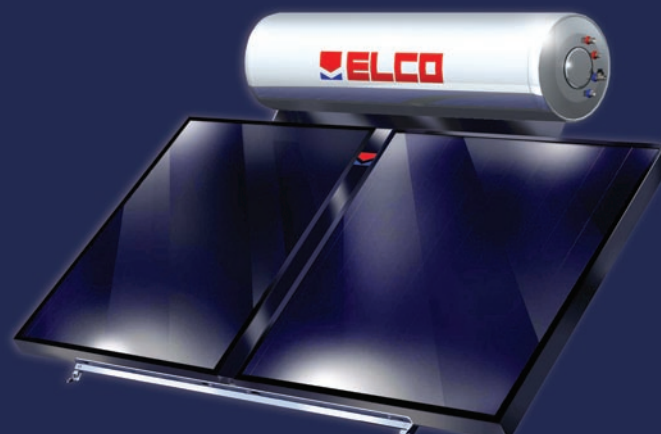
Thanks to the new selective solar collectors, the ELCO SOL-TECH solar water heaters can absorb even the weakest solar radiation due to:

- ▶ 95% solar energy absorption
- ▶ 10% higher average annual energy efficiency than regular flat-plate collectors
- ▶ 16% higher energy efficiency during winter and fall than regular flat-plate collectors
- ▶ Double temperature rise of the absorption surface than regular flat-plate collectors

**Result: Hot water even on... cloudy days.**

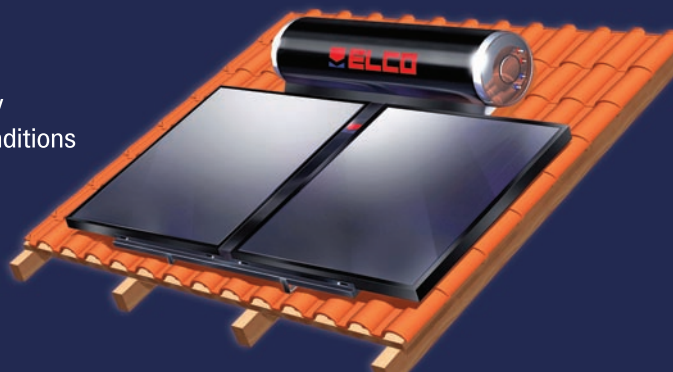
## solar collector features

- ▶ Unbreakable "Mistlite" Safety Tempered Glass of high solar transparency ( $\tau=92\%$ ) and low iron content
- ▶ Selective solar collector BLUE TITANIUM made of copper sheet absorber, welded with ultrasonic technology for perfect contact with the copper pipes
- ▶ Internal pipe work constructed from heavy duty copper pipes
- ▶ 40mm thick rock-wool blanket insulation, which minimizes the thermal losses of the collector due to its low thermal conductivity and stability at high temperatures
- ▶ Electrostatic powder coated aluminum frame without plastic joints or seams



## ELCO SOL-TECH solar water heater system features

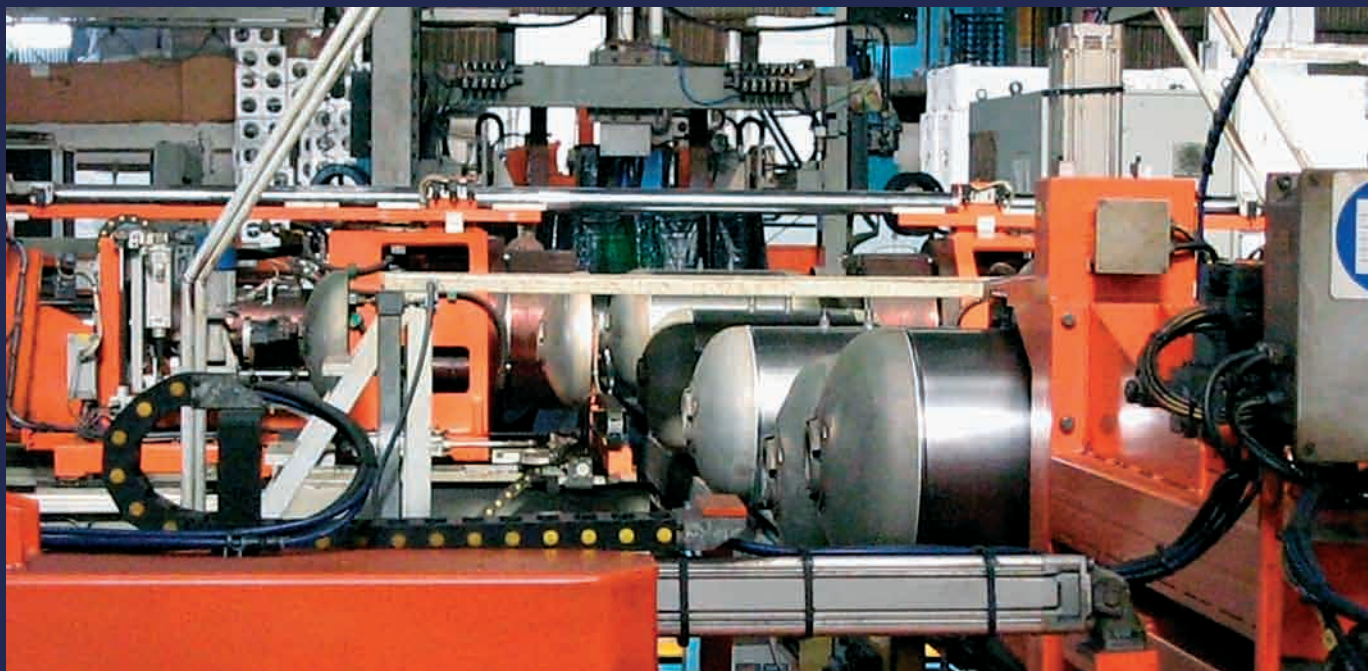
- ▶ The solar collectors and the heat exchanger form a closed circuit
- ▶ Special heat exchange liquid which protects the system from freezing, overheating as well as from salt depositions and corrosion, maintaining the highest efficiency of the system
- ▶ Hot-dip galvanized supports, specially designed for safe and easy installation as well as higher endurance to the worst weather conditions
- ▶ Special supports for installation on inclined roof that are hot-dip galvanized and:
  - Can be installed on roofs with a 22° to 47° inclination
  - Can be mounted either on woodwork or concrete roof
  - Can be adjusted according to the dimensions and distance of the vertical and horizontal roof beams
  - Can be installed without drilling holes or cutting, on any type of roof-tiles (roman, french, swedish, byzantine) ensuring the roof's water-tightness
  - Can be installed quickly and easily, close to the roof tiles for an exceptional aesthetic result



### SELECTION OF THE RIGHT SIZE SOLAR WATER HEATER

No. OF PEOPLE	2-3	3-4	3-5	4-6	4-7
MODELS	130 SOL-TECH	160 SOL-TECH	200 SOL-TECH	250 SOL-TECH	300 SOL-TECH





## The Ultimate Steaming Hot Combination ELCO BLUE TITANIUM solar collectors and ELCO DURO GLASS® enameled storage tank.

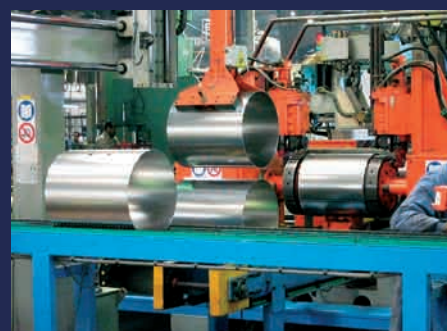
The ELCO SOL-TECH solar water heater combines the best storage tank with the new selective collectors, providing literally steaming hot performance while maximizing the output of even the weakest solar radiation.

ELCO has been the only industrial manufacturer of electrical water heaters in Greece over the last 60 years and, at the same time, the first that implemented and continues to improve its GLASS enameling method in its water heaters. Thanks to incomparable experience and know-how, ELCO invents and applies innovative technologies such as the new line of ELCO SOL-TECH solar water heaters.

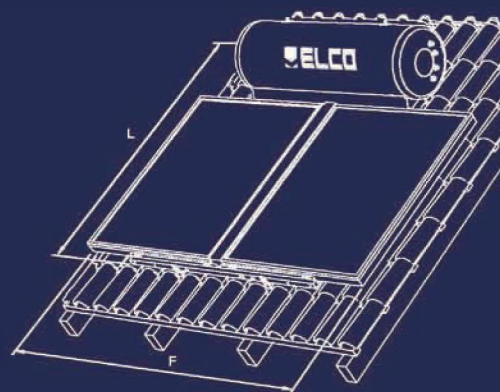
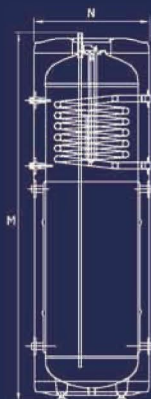
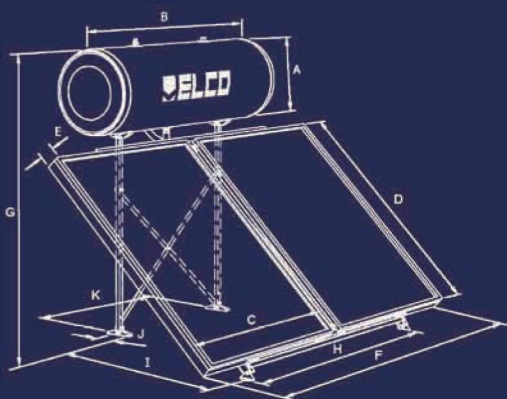
The solar collector is not the only vital part of a solar water heater. The quality of the storage tank is of immense importance as well, so that the maximum efficiency and longevity of the application is ensured.

For this reason, the tank has been completely designed with the use of CAD software, and the production process is fully automated. The superb product quality is obtained by the use of high specification materials, but also with the quality control of every appliance in three phases of the production process. The know-how, the quality control, the use of special materials and the certification of the company according to ISO 9001:2000, ensure the theoretically unlimited life span of the storage tank as well as its completely safe operation.

The new ELCO SOL-TECH solar water heaters, manufactured with the assurance, reliability and experience of the ELCO brand, will supply you with steaming hot water even when it's cloudy, for many years!







### TECHNICAL SPECIFICATIONS OF SOLAR WATER HEATERS ELCO SOL-TECH

MODEL	EL-130 SOL-TECH /1,8 EL-130 SOL-TECH 3/1,8	EL-160 SOL-TECH /2,4 EL-160 SOL-TECH 3/2,4	EL-160 SOL-TECH /3,0 EL-160 SOL-TECH 3/3,0	EL-200 SOL-TECH /3,6 EL-200 SOL-TECH 3/3,6	EL-250 SOL-TECH /4,0 EL-250 SOL-TECH 3 /4,0	EL-300 SOL-TECH /4,8 EL-300 SOL-TECH 3 /4,8
ELECTRIC POWER	kW 3,7					
STORAGE TANK INSULATION	HCFC FREE, CLOSED-CELL, RIGID POLYURETHANE FOAM, 40kg/m <sup>3</sup> , λ=0,021 W/m K, WITH AT LEAST 40mm THICKNESS					
CLOSED CIRCUIT	•	•	•	•	•	•
EXPANSION TANK	BUILT-IN THE STORAGE TANK					
AUXILIARY HEATING HEAT EXCHANGER CONNECTIONS	- / G3/4"	- / G3/4"	- / G3/4"	- / G3/4"	- / G3/4"	- / G3/4"
NET ABSORPTION SURFACE	m <sup>2</sup> 1 x 1,82	1 x 2,4	2 x 1,5	2 x 1,82	2 x 2,0	2 x 2,4
SOLAR COLLECTOR COVER	SPECIAL SAFETY GLASS 4mm THICK					
SOLAR COLLECTOR INSULATION	ROCK-WOOL 40mm					
ABSORBER MATERIAL	COPPER STRIPS COVERED WITH "BLUE TITANIUM" HIGHLY SELECTIVE COATING, ULTRASONICALLY WELDED TO COPPER TUBES					
SYSTEM WEIGHT (EMPTY) / EXTRA HEAT EXCHANGER	kg 98,1 / 103,1	119,2 / 121,9	130,4 / 136,0	155,6 / 161,2	197,6 / 208,6	232,4 / 243,4

### DIMENSIONS OF SOLAR WATER HEATERS ELCO SOL-TECH (mm)

MODEL	EL-130 SOL-TECH /1,8 EL-130 SOL-TECH 3/1,8	EL-160 SOL-TECH /2,4 EL-160 SOL-TECH 3/2,4	EL-160 SOL-TECH /3,0 EL-160 SOL-TECH 3/3,0	EL-200 SOL-TECH /3,6 EL-200 SOL-TECH 3/3,6	EL-250 SOL-TECH /4,0 EL-250 SOL-TECH 3 /4,0	EL-300 SOL-TECH /4,8 EL-300 SOL-TECH 3 /4,8
A	500	500	500	500	580	580
B	1165	1335	1335	1585	1670	1870
C	1230	1230	1010	1230	1010	1230
D	1480	1930	1480	1480	1980	1930
E	85	85	85	85	85	85
F	1230	1230	2130	2570	2130	2570
G	1708	2110	1708	1708	2150	2150
H	868	1038	1782	1782	1782	1782
I	1107	1420	1133	1133	1500	1500
J	130	130	130	130	130	130
K	850	1020	1020	1270	1270	1270
L	2000	2450	2000	2000	2650	2650

### TECHNICAL SPECIFICATIONS OF VERTICAL FLOOR STANDING BOILERS ELCO THERMOSTORE

CAPACITY	L	150	175	200	250	300	500	750	1000	1500
ELECTRIC POWER	kW	3,7								
INSULATION: HCFC FREE, CLOSED-CELL, RIGID POLYURETHANE FOAM, 40 kg/m <sup>3</sup> , λ=0,021W/mK THICKNESS AT LEAST:	mm	50	50	60	60	60	60	100	100	100
SOLAR CIRCUIT HEAT EXCHANGER SURFACE AREA	m <sup>2</sup>	0,6	0,93	0,99	0,99	1,55	1,55	2	2,7	3,2
AUXILIARY HEATING HEAT EXCHANGER SURFACE AREA	m <sup>2</sup>	0,5	0,5	0,78	0,78	0,99	0,99	1,4	1,9	3,2
SOLAR CIRCUIT HEAT EXCHANGER THERMAL POWER RATING*	kW	12,5	19,4	36	36	42,5	42,5	53	84	94
AUXILIARY HEATING HEAT EXCHANGER THERMAL POWER RATING*	kW	18	18	28,8	28,8	36	36	40,2	62	94
STORAGE TANK WEIGHT EMPTY (1 HEAT EXCH./2 HEAT EXCH.)	kg	64/69	73/78	86/104	93/107	128/152	162/175	190/215	230/300	540/590

### DIMENSIONS OF VERTICAL FLOOR STANDING BOILERS ELCO THERMOSTORE (mm)

MODEL	150	175	200	300
N	500	500	600	640
M	1430	1610	1400	1650

\*Table values correspond to the following data: Domestic hot water temperature increase ΔT 35°C, circulation flow 2m<sup>3</sup>/h at 80°C.



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