

PERSONS



TECHNICAL SPECIFICATIONS

Compact 110

Compact 150

Panel Area	1.94 m <sup>2</sup>	2.38 m <sup>2</sup>
Absorber Area	1.72 m <sup>2</sup>	2.13 m <sup>2</sup>
Panel Dimensions	1.98 x 0.98 x 0.12m	1.98 x 1.20 x 0.12 m
Height at 45° angle	1.53 m	1.53 m
Hot water capacity	97 lit	141 lit
Electric Resistance	4 kw	4 kw
Weight when Empty	70 kg	85 kg
Weight when Full	167 kg	226 kg

Heat Conveyor	Ethanol
Frost Resistance	-60°C
Water Reservoir Material	Stainless Steel
Insulation Material	Polyurethane and Mineral Wool
Max. Pressure in the Reservoir	10 bar
Cold - Hot Water Connection	1/2"
System's Installation Angle	35° 45°

AST's Solar Panels water heaters are certified by **National Center of Scientific Research "Demokritus"**.  
EN12976-2 (ISO 9459-2) и EN12975-2 (ISO 9806-1)



Ecologic  
Efficient & Stylish  
Solar Energy

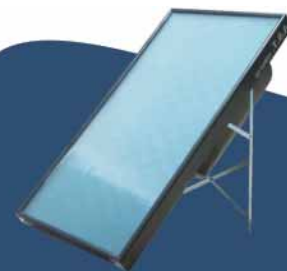
Extreme frost resistance  
(up to -60°C)

Doesn't require additional antifreeze  
or replacement



10 YEARS  
GUARANTY

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**COMPACT 110-150**

A.S.T. presents the Compact Solar Panel System with its unique Quality and Performance features.

Compact is the result of years of research by A.S.T.'s research staff, working closely with international centers, in order to incorporate the following latest technologies:

- A) Air Vacuum
- B) LASER welding and
- C) Compact Natural Circulation Solar Systems, which means that the Solar Panel and the Boiler form a single unit.

**ADVANTAGES**

1. Stainless Steel Boiler (INOX316L.)
2. Selective High-Performance Panels.
3. Copper Absorber & Tubing.
4. Unit operation in an Air Vacuum.
5. LASER Welding of the Absorber's Copper Tubing.
6. Heat transfer with Ethyl Alcohol, which evaporates quickly due to its low boiling point.
7. Unbreakable Crystal (SECURIT).
8. Very fast performance, even in low sunlight, due to the system's low control inertia.
9. Heat exchanger built into the Boiler, which immediately returns the steam energy from the Ethyl Alcohol.
10. Maximum productivity in warm water in the same amount of time.
11. Minimal heat loss due to the system's compact design.
12. Pioneering Construction and Stylish Design.
13. Space & piping efficiency
14. Excellent Energy Characteristics and Uninterrupted Performance throughout the years.
15. Extreme frost resistance (up to -60°C)
16. Doesn't require additional antifreeze or replacement.
17. Installation can be expanded, depending on the requirements.
18. Easy installation.

19. Guaranteed Return of Investment
20. High Thermal Capacity
21. Prevents Nighttime Flow Reversal

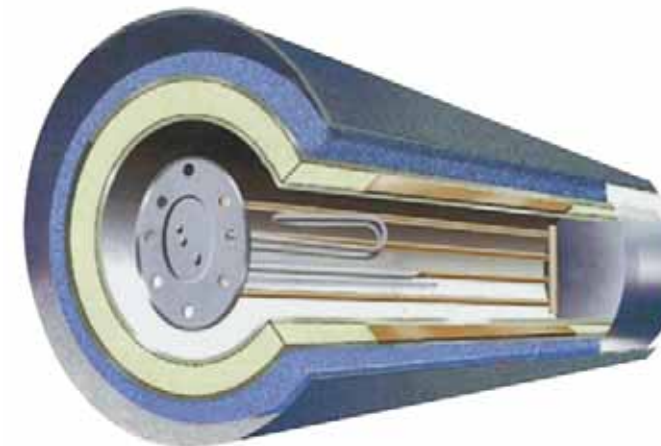
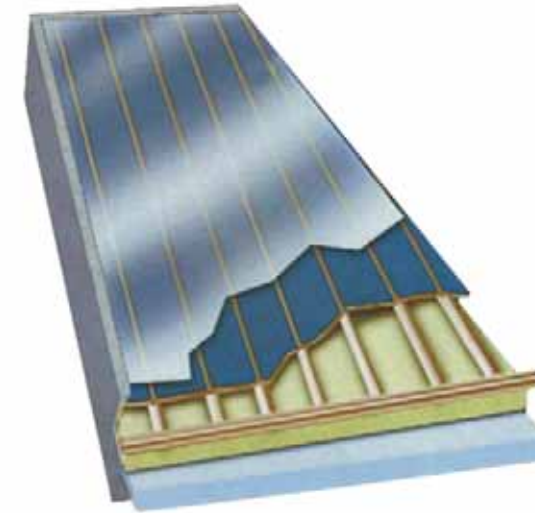


**10 YEARS GUARANTY**

**MODE OF OPERATION**

The COMPACT Thermal System's copper tubing is welded using LASER technology, which dramatically increases the thermal capacity of the entire system. Next, Ethyl Alcohol is injected into the Copper Tubing, which is sealed in an Air Vacuum. Solar energy heats the Ethyl Alcohol, which in turn evaporates easily due to its low boiling point.

The steam which is produced (through the Air Vacuum Piping), is channeled directly into the Exchanger in the Boiler, transferring the heat that it conveys. This way, the steam is vaporized and then returns to the Panels due to its gravity



**ECONOMY - ENVIRONMENT**

- Savings of 1,200 - 1,800 KWh annually.
- The perfect solution for a family's hot water needs.
- Emissions reduction of at least 2 tons Co2 annually

**RESULTS**

High Water Temperatures (Stagnation temperature 180°C) even in difficult weather conditions

World-wide Leading Performance Curve (according to measurements).

**STAINLESS STEEL BOILER**

1. Stainless Steel Boiler (INOX316L).
2. Copper Heat Exchanger
3. The Boiler's insulation is a combination of 30mm thick Polyurethane (environment-friendly) with a density of 40Kg/m3 and 30mm thick fiberglass.
4. Reinforced Propylene Boiler Casing.
5. 4KW Special Alloy INCOLOY 825 Electric Resistance (resistant to water with a high chlorine concentration).
6. Sacrificial Protection.

**SELECTIVE PANELS**

1. Specially designed Aluminum Profile Frame.
2. Special Unbreakable Glass (SECURIT) with 92% Permeability (LOW IRON, TEMPERED) and Resistance to temperatures and Pressures up to Six (6) times greater than common crystal (which has a permeability of only 85%).
3. Absorber with a Selective Aluminum Plate, welded to Copper Tubing using LASER technology, for optimal Heat Conductivity.
4. Copper Tubing Φ22x0, 8mm and Φ8x0, 5mm.
5. Free of Freon Polyurethane Insulation.
6. Mineral Wool Insulation.

Panel Sealing is accomplished through the use of Special Elastic Type EPDMs, which are highly resistant to Ultraviolet Radiation and High temperatures

