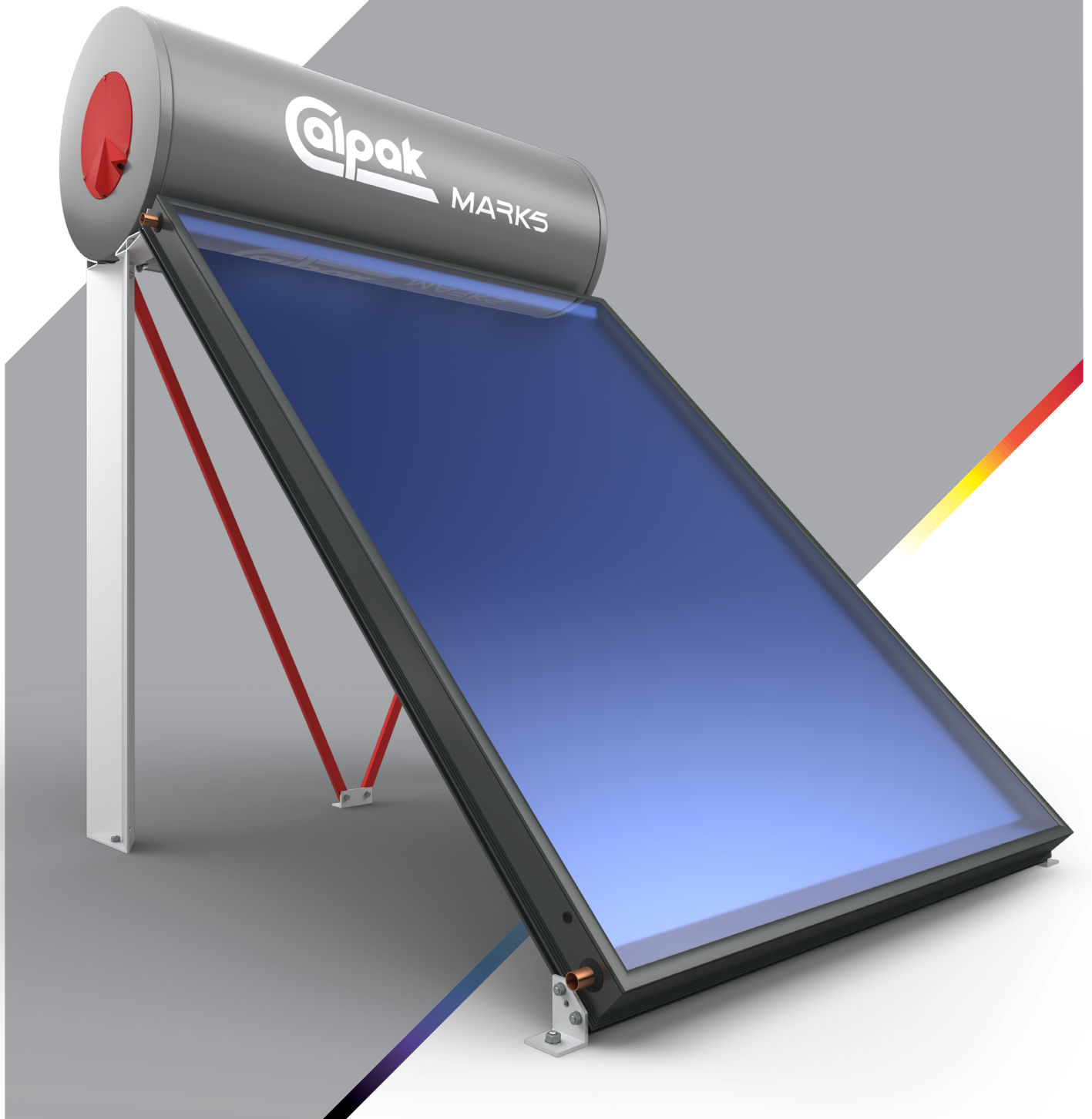




MARK5

POWER
ROBUSTNESS
DESIGN



MARK5

POWER

A solar water heater must be very powerful to fully meet your hot water needs.

Mark5, based on certified tests, has one of the most powerful collectors in Europe (80% efficiency and minimal thermal losses), as well as a well designed heat exchanger that ensures efficient energy transfer from the collector to the tank.




80% CERTIFIED PERFORMANCE

HIGH TECHNOLOGY PRODUCTION

Mark5 is entirely produced in the new **smart factory** of Calpak that has been recognized as the most advanced in Greece in terms of **robotic technology** and **artificial intelligence** application that make possible the automatic optimization of mechanical processes.



ROBUSTNESS

It must also be robust so that you can enjoy free solar energy for as many years as possible.

Mark5 is made with the best materials, following the strictest quality standards. The tank is made of DC-03 steel according to DIN 10130, it is robotic welded with pulse tig technology and enameled according to DIN 4753/3. The collector's frame is made of a 2.4 mm double-wall aluminum profile and has an aluminum back. The flat roof support is also made entirely out of aluminum.

DESIGN

Finally, it must be well designed to match your aesthetics.

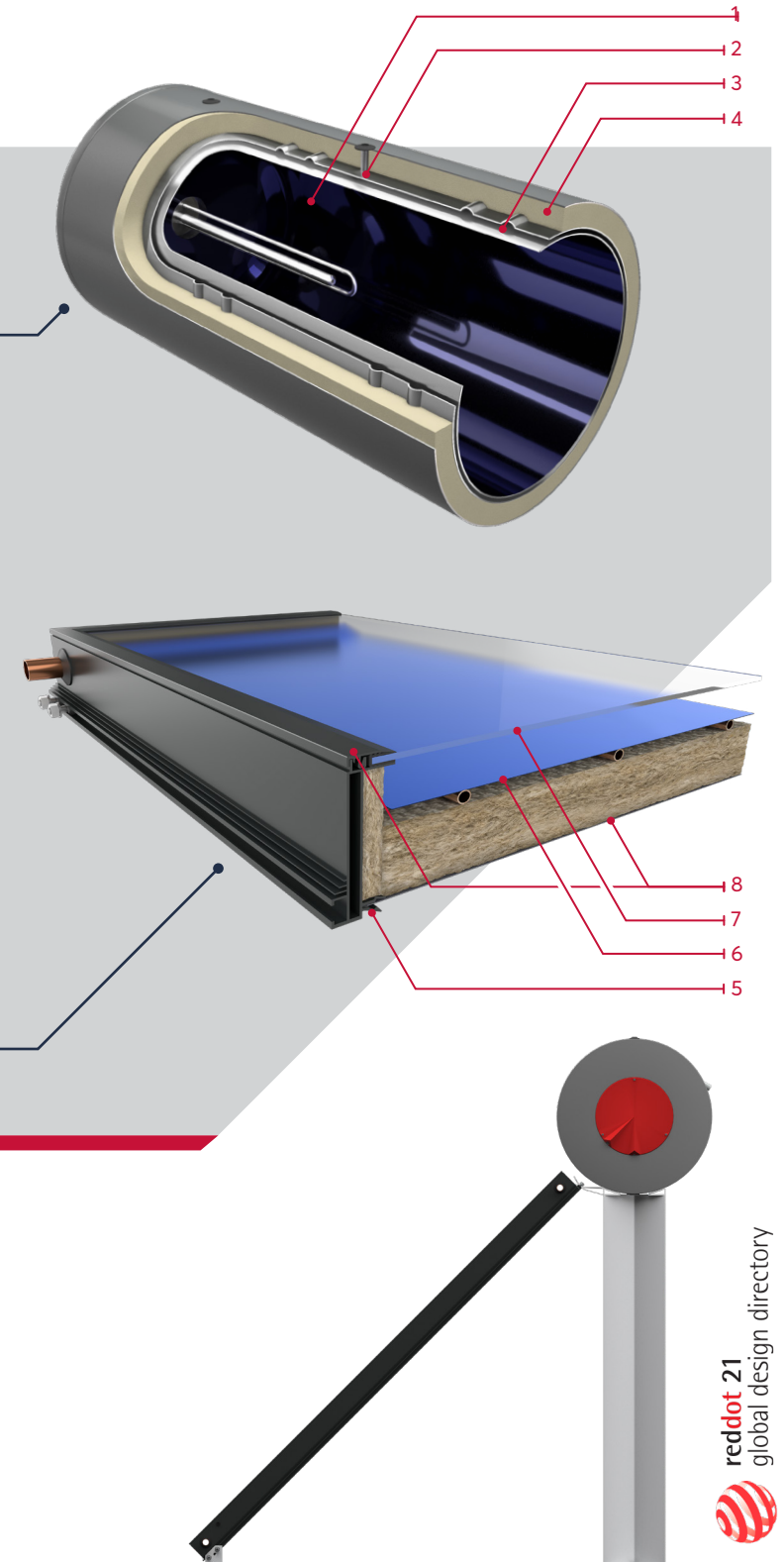
Mark5 is designed according to modern abstraction & ergonomics trends and has an honorary reference in the internationally recognized reddot directory.

TANK MARK5

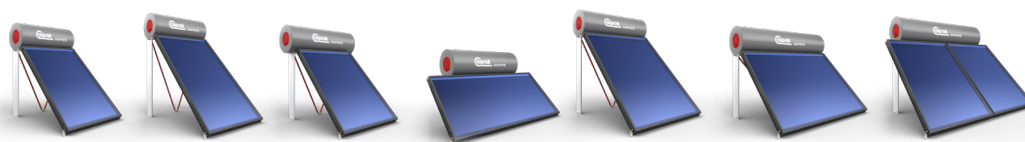
1. Inner cylinder according to DIN 10130 & direct enamelling according to DIN 4753/3
 - › Durability over time
 - › Clean water
2. All weldings are made with robotic pulse tig technology
 - › Durability over time
 - › Quality guaranteed
3. Thermodynamically designed closed circuit & special diffuser
 - › Hot water even faster
4. Insulation made of dense ecological polyurethane with a thickness of 50mm
 - › Hot water in the next morning

COLLECTOR M5

5. Double-wall aluminum profile, 2.4mm thick
 - › Durability over time
 - › More hot water
6. Absorber with 12 copper pipes & highly-selective Tinox surface 0.5mm
 - › More hot water
7. Low-Iron tempered glass with high transmittance ($T > 91.5\%$)
 - › More hot water
8. Compressed structure & aluminium back
 - › Durability over time
 - › Neat looks



MARK5



| | 160/2,1 | 160/2,6 | 200/2,1 | 200/2,6H | 200/3 | 300/3H | 300/4,2 |
|-------------------|---------|---------|---------|----------|-------|--------|---------|
| Number of persons | 3-4 | 4-5 | 4-5 | 4-5 | 5-6 | 6-7 | 7-8 |

COLLECTOR

| | | | | | | | |
|-------------------------------------|--|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| Gross area | 2,09 m ² | 2,60 m ² | 2,09m ² | 2,60 m ² | 3,00 m ² | 3,00 m ² | 4,18 m ² |
| Absorber's copper risers | 12 | 12 | 12 | 18 | 15 | 15 | 24 |
| Absorber surface treatment | high selective (Tinox) 0,5mm (a > 95% , e < 3,5%) | | | | | | |
| Absorber welding | laser | | | | | | |
| Casing material | 2.4mm double-wall aluminum profile | | | | | | |
| Glass | tempered glass 3.2mm , low-iron (transparency>91,5%) | | | | | | |
| Insulation | rock wool with density 50 kg/m ³ and thickness 40mm | | | | | | |
| Collector production method | Compressed glass, aluminium frame and back | | | | | | |
| Optical efficiency | $\eta_0 = 79,5\%$ | $\eta_0 = 79,5\%$ | $\eta_0 = 79,5\%$ | $\eta_0 = 79,5\%$ | $\eta_0 = 80\%$ | $\eta_0 = 80\%$ | $\eta_0 = 79,5\%$ |
| Thermal loss coefficient | $\alpha_1 = 3,75$ | $\alpha_1 = 3,75$ | $\alpha_1 = 3,75$ | $\alpha_1 = 3,75$ | $\alpha_1 = 3,27$ | $\alpha_1 = 3,27$ | $\alpha_1 = 3,75$ |
| Annual output power (Athens 50°C) | 1867 kWh | 2323 kWh | 1867 kWh | 2323 kWh | 2792 kWh | 2792 kWh | 3734 kWh |
| Annual output power (Würzburg 50°C) | 1026 kWh | 1277 kWh | 1026 kWh | 1277 kWh | 1552 kWh | 1552 kWh | 2052 kWh |
| Certifications | Solar-Keymark, DCL | | | | | | |

TANK

| | | | | | | | |
|---------------------------------------|---|--------|--------|--------|--------|--------|--------|
| Volume | 151 lt | 151 lt | 192 lt | 192 lt | 192 lt | 295 lt | 295 lt |
| Inner tank design | By Interdomo (with deep side cups and internal welding that ensure perfect enameling) | | | | | | |
| Tank / jacket heat exchanger material | DC-03 2,5mm steel / DC-03 1,5mm steel (DIN 10130) | | | | | | |
| Welding method / Quality control | Robotized pulse tig with double quality control (before and after enameling) at 15 bar | | | | | | |
| Corrosion protection | Direct enameling in accordance to DIN 4753/3, raw material from Wendel | | | | | | |
| Cathodic protection | Magnesium bar (DIN 4753/6) | | | | | | |
| Anti-freezing protection | Anti-freezing & anti-corrosive Calpak fluid (propylene glycol) | | | | | | |
| Insulation | Injected PU foam without CFC (43 kg/m ³ density and 50mm thickness) | | | | | | |
| Accessories included | Inox flange with electric immersion heater 3,5 Kw, safety and non-return valve, venting valve | | | | | | |
| Connecting pipes | Insulated inox flexible pipes 316L, 21mm (threads of 3/4" at 30° inclination for optimal jet) | | | | | | |
| Connection with diesel / gas burner | With an additional integrated heat exchanger (Trien models) | | | | | | |
| Flat / inclined roof support material | Aluminium / galvanised steel | | | | | | |
| Certifications | Solar-Keymark, email (enamel quality mark), ROHS (hygienic DHW), CE | | | | | | |

DIMENSIONS

| | | | | | | | |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Installation at 45° (Height, Width, Length - mm) | 1700, 1684, 1230 | 1989, 1973, 1230 | 1700, 1684, 1525 | 1370, 1324, 2107 | 1904, 1867, 1525 | 1552, 1515, 2310 | 1700, 1684, 2553 |
| Installation at 30° (Height, Width, Length - mm) | 1326, 1892, 1230 | 1531, 2247, 1230 | 1326, 1892, 1525 | 1093, 1488, 2107 | 1476, 2152, 1525 | 1228, 1772, 2310 | 1326, 1892, 2553 |

Quality Marks:



Laboratories:



Certification bodies:



Industry Federations:

