

CASE STUDY

Rixos Al Mairid Hotel,
Ras Al Khaimah, UAE

PROJECT OVERVIEW

SolarisKit installed a HelioPro™ solar water heating system on a beachfront villa at the prestigious Rixos Al Mairid Hotel in Ras Al Khaimah to demonstrate the system's performance under the demanding Gulf coast and hospitality conditions.

The installation was monitored against an identical neighbouring villa using a traditional solar water heater to provide controlled, comparative performance data.



*"Winner of the Best of Sustainable
Energy Product of the Year -
Energy Management"*



Photo of the SolarisKit HelioPro™ solar water heater installed on site.

PROVIDING SUBSTANTIAL ENERGY AND CARBON SAVINGS



**14,000 kWh Annual
Energy Savings**



**>60% Reduction
in Energy Use**



**5,800 kg
Annual Carbon
Savings**



4 Years ROI

THE CHALLENGE IN THE GULF

Beachfront hospitality properties in the UAE face unique water heating challenges:



High hot water demand from luxury amenities and guest expectations



Coastal salt spray and humidity impacting system durability



Need for minimal maintenance to avoid guest disruption



Extreme ambient temperatures causing conventional solar thermal systems to overheat in summer



High levels of Magnesium/Calcium in the water leading to pipe blockages



Photo of the solar water heater system installed at neighbouring control villa

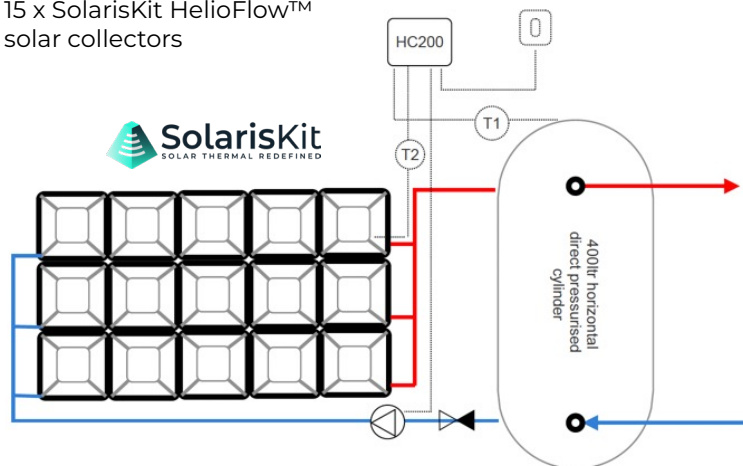
BENEFITS OF THE SOLARISKIT SOLUTION

The HelioPro™ system has demonstrated exceptional lifecycle economics for Gulf hospitality applications. With an estimated system payback period of 4 years and a 15+ year operational lifetime, the system delivers a Levelised Cost of Heat (LCOH) significantly below conventional electric water heating. The >60% reduction in backup heating energy translates to immediate operational cost savings while contributing to sustainability targets and green building certifications.

SYSTEM INSTALLATION DESCRIPTION

Location	Al Maareedh St, New Al Maireed, Ras Al Khaimah
Property Type	Luxury beachfront villa
Solution Installed	SolarisKit HelioPro™ with; • 15 x HelioFlow™ solar collectors • 400L horizontal stainless steel hot water storage tank • 12VDC Pump and HelioLogic Pump controller
Installation	Flat-roof installation supported by concrete breeze block and steel angle iron structure
Monitoring Method	Shelly EM type network connected energy monitors installed to measure energy consumed by backup heating element for 1) SolarisKit HelioPro™ system, and 2) neighboring villa

15 x SolarisKit HelioFlow™ solar collectors



System schematic of SolarisKit HelioPro™ solar water heater installed at the Rixos Al Mairid Hotel

KEY ADVANTAGES FOR GULF APPLICATIONS



Overheat Protection:

Engineered to avoid reaching excessive temperatures



Flat-Roof Optimised:

Unique prismatic geometry of HelioFlow™ is ideal for flat-roofs



Coastal Durability:

Polymer materials resist corrosion under saline conditions



Hard Water Compatibility:

System design minimises scaling in high-TDS water conditions



Minimal Maintenance:

Reduced service requirements compared to conventional system

DETAILED PERFORMANCE COMPARISON

	Control Villa	SolarisKit HelioPro™
Daily backup heating energy ¹	65 kWh	25 kWh
Annual electricity consumption ²	23,725 kWh	9,125 kWh
Annual CO ₂ emissions ³	9,585 kg	3,687 kg
Annual operating cost (AED 0.45/kWh)	10,676 AED	4,106 AED
ROI ⁴	-	4 Years

Certified



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