



CASE STUDY:

Solar thermal company prints imagery that stays crisp and clear despite 24/7 exposure to the elements



Thermic has enhanced its image with bold, bright, and fade resistant branding on its products, enabled by the RICOH Pro™ T7210 UV flatbed printer with highly adhesive Ricoh industrial inks.

COMPANY & CHALLENGE

Founded in 1977, Thermic Ltd. designs, manufactures, and installs solar thermal systems that convert sunlight into clean energy. The company's products include thermosiphonic solar water heaters, solar thermal collectors, electric water heaters, and domestic hot water tanks. Operating a production facility just outside Athens in Greece, Thermic works with clients in southern Europe, the Middle East, Africa, and South America.

Maximising energy yields from renewable sources is vital to tackle climate change and create a cleaner, greener planet for future generations. For more than forty years, Thermic has been at the forefront of this effort, developing systems that harvest solar energy to heat water for domestic, industrial, and commercial use.

For example, thermosiphonic solar water heaters, one of the company's main product lines, consist of metal panels that absorb sunlight combined with a cylindrical steel water storage tank. On the outside of each storage tank, Thermic prints its brand name and logo, plus a series of certification symbols that signify compliance with international quality standards and best practices.

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Elias Kastrisios, CEO of Thermic, explains: “We want the branding and information to remain clear and sharp throughout the lifespan of the system. But that’s challenging when tanks are exposed to solar radiation and other elements 365 days a year on the roof or exterior of a building. We therefore require inks and other print solutions that deliver the highest levels of adhesion and durability to minimise fading and other image degradation.”

For some time, Thermic had been using a large format digital printer to add designs to the metal components in its solar thermal systems. When the printer neared end of service life, the company looked for ways to improve quality and robustness of output, and enhance process efficiency.

Elias Kastrisios adds: “Demand for solar thermal systems is rising rapidly and we expect this to continue in the coming years. To capitalise on the trend, we wanted to support higher production speeds and improve print durability and quality, ensuring that we could satisfy increasing customer orders.”

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SOLUTION

To identify the right solution, Thermic engaged Ricoh business partner Daltec. As the company had detailed specifications for colour gamut, ink adhesion, and lightfastness, Ricoh Europe arranged a test of Ricoh's large format flatbed devices printing onto metal substrates at the Ricoh Customer Experience Centre based in Telford in the UK. Impressed with the results, Thermic selected the RICOH Pro T7210 UV, with ColorGATE software.

Elias Kastrisios explains: "We were very pleased with the performance of the Pro T7210 UV. The results of the Ricoh ink testing showed minimal colour modification and excellent resistance to abrasion. The consultancy and guidance from Daltec was very useful, helping us meet our space, power, and environmental objectives."

Thermic worked with Ricoh and Daltec to install the new printer and install the ColorGATE software, including the setup of ICC colour profiles. Daltec ran operator training sessions with the Thermic team and monitored the early production workflows to ensure things ran smoothly. Whenever Thermic needs support or resupplies of inks and other consumables, Daltec is on hand to assist.

The company uses the Pro T7210 UV to print in six colour mode, with CMYK plus white ink and primer. This approach enables printing of white backgrounds on water tanks and solar collector panels before the addition of logos, graphics, and text, helping to enhance image clarity. All of the inks are RICOH Pro UV Ink DG130 formulations, purpose built for demanding industrial print applications.

Elias Kastrisios comments: "We have developed a strong collaboration with Ricoh and Daltec. Their technical support is very reliable and proactive, and we always receive a fast response when we have questions. For example, they helped our operators achieve a very quick and dynamic start on the new printer."

BENEFITS

Working with Ricoh and Daltec, Thermic has developed a faster and more efficient workflow for printing brand logos, text, and certifications. For example, the expansive 3.2 x 2.1 metre table of the Pro T7210 UV enables Thermic to print on multiple panels simultaneously, improving production efficiency. Additionally, Ricoh's fast curing UV ink formulations contribute to much higher throughput, and the Pro T7210 UV uses energy efficient LED lamps to cure the inks, helping Thermic to reduce power



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consumption and to cut production costs. The Ricoh inks also provide exceptional reliability and toughness, helping to keep the company's graphics and logos crisp and clear despite long exposure to the elements. Furthermore, Ricoh's inks hold a Greenguard certification for low chemical emissions, and will ensure Thermic meets high sustainability standards.

Elias Kastrisios comments: "Ricoh's industrial UV inks offer great adhesion on what is typically a very challenging metal substrate. They also provide excellent levels of durability to withstand mechanical stress and harsh solar radiation, preventing fading and other damage."

The combination of Ricoh's leading edge fifth generation printheads, ColorGATE colour calibration software, and white inks have greatly improved the quality of printed output, as Elias Kastrisios confirms: "We are very pleased with the white inks, which allow us to create a sharper image and a more impressive product for customers."

He concludes: "Our collaboration with Ricoh and Daltec will help us to thrive in the expanding solar thermal market in the years ahead. We now possess highly sophisticated large format industrial printing capabilities, and we are confident that the reliable and robust Ricoh solutions will meet our production needs and contribute to our long term development and growth."



ABOUT RICOH

Ricoh is empowering digital workplaces using innovative technologies and services that enable individuals to work smarter from anywhere. With cultivated knowledge and organisational capabilities nurtured over its 85 year history, Ricoh is a leading provider of digital services, information management, and print and imaging solutions designed to support digital transformation and optimise business performance.

Headquartered in Tokyo, Ricoh Group has major operations throughout the world and its products and services now reach customers in approximately 200 countries and regions. In the financial year ended March 2022, Ricoh Group had worldwide sales of 1,758 billion yen (approx. 14.5 billion USD).

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