

Producing a revolutionary and high-performance laminator for photovoltaic panels. This is the main goal that Teknisolar has set for itself and is about to achieve thanks to its research and development team. The company, founded in 2009, is now growing rapidly and specializes in creating lines for the production of photovoltaic modules. Teknisolar brand lamination technology is one of a kind on the market. The systems ensure greater productivity, reduced operating costs and a higher quality finished product. Recently, the company was chosen to become a partner of the Pepperoni project, a four-year research and innovation project co-funded under Horizon Europe. "The project aims to support Europe in achieving its goal of climate neutrality by 2050 and will also foster perovskite and silicon tandem photovoltaics market introduction and mass production" specifies Vittore De Leonibus, CEO.

Can you tell us something more about project Pepperoni?

"As part of this program, we will design a pilot lamination line through a series of in-house tests on perovskite solar panels and then improve the design implemen-

# The future is in the sun

Increasingly advanced technologies now make it possible to develop innovative solutions for the production of photovoltaic modules that ensure lower operating costs and higher productivity. The analysis of Vittore De Leonibus, managing director of Teknisolar



the company's advanced technology and customer-oriented approach. All products are highly customizable to satisfy every specific need. This includes the possibility of adapting production lines according to specific needs, even particular ones. In summary, as a company we are committed to providing highly customizable products which, combined with advanced technology and a customer-focused approach, have made us a leader in the photovoltaic panel manufacturing industry."

What are the technologies that make the products unique on the market?

"Without a doubt, the membrane-free technology offers countless advantages. First of all, it prevents sudden breakages

## TEKNISOLAR IS A KEY PLAYER IN THE BIPV INDUSTRY, OFFERING INNOVATIVE TECHNOLOGIES AND EFFICIENT SOLUTIONS TO MEET EVER-EVOLVING MARKET NEEDS

ting the pilot line. The ultimate goal is to extend lamination technology from the pilot line to the gigawatt (mass production) scale. Our laminating technology is currently unique on the market. For example, the Robostak™ laminator has the fastest cycle time in the world and is able to solve the problems that conventional

laminators cause on PV panels. This translates into a productivity increase of more than 300 percent."

What are the company's interests and future prospects?

"The company has significant interest in the building-integrated photovoltaics (BIPV) market and has also attracted the attention of BIPV module manufacturers. Currently, the main trends point toward rooftop application for general distribution and bifacial modules for the utility market segment. The global BIPV market is expanding rapidly, with an expected average annual growth rate of 21 percent between 2023 and 2030. This growth is fueled by increased demand for renewa-

ble energy sources and the expansion of photovoltaic installation capacity in several countries. In addition, increasing awareness for energy security and self-sufficiency, along with favorable government legislations, are promoting market growth. Within these trends, Teknisolar is positioned as a key player in the BIPV industry, offering innovative technologies and efficient solutions to meet the changing market needs."

What are the main features that set you apart in the market?

"First of all, our company offers considerable flexibility in the customization of products and, in particular, of the Robostak™ laminator. This is made possible by



Vittore De Leonibus, managing director of Teknisolar in Vasto, Ch - [www.teknisolar.com](http://www.teknisolar.com)



of the membrane and of discarded modules, subsequently reducing maintenance times and costs. Its rapid vacuum and uniform heating system works without "pins", reducing maintenance times and costs again.

Speaking about costs, we also offer a decrease in operating expenses: there is no downtime to change the silicone membrane, there is no need to clean the mat, energy consumption is low, and manual labor costs are reduced. We combine this with increased productivity, since the cycle time of the Robostak laminator is two minutes for G2F (Glass to Foil) modules and three minutes for G2G (Glass to Glass) modules. The cycle time for competitors is six to 10 minutes. This translates into a productivity increase of more than 300 percent." •Luana Costa



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## TARGETS AND PARTNERSHIPS

Teknisolar is an equipment manufacturer based in Italy and partner of the Pepperoni project. It plays a crucial role by contributing to the research and development of innovative technologies for the production of perovskite solar panels. This aligns with the project's overall goal of advancing perovskite/silicon tandem photovoltaics. The company has more than 170 years of cumulative experience in the glass industry and works with more than 100 people, including 50 employees and 60 external consultants. Teknisolar's customers include some of the biggest companies in the solar industry.