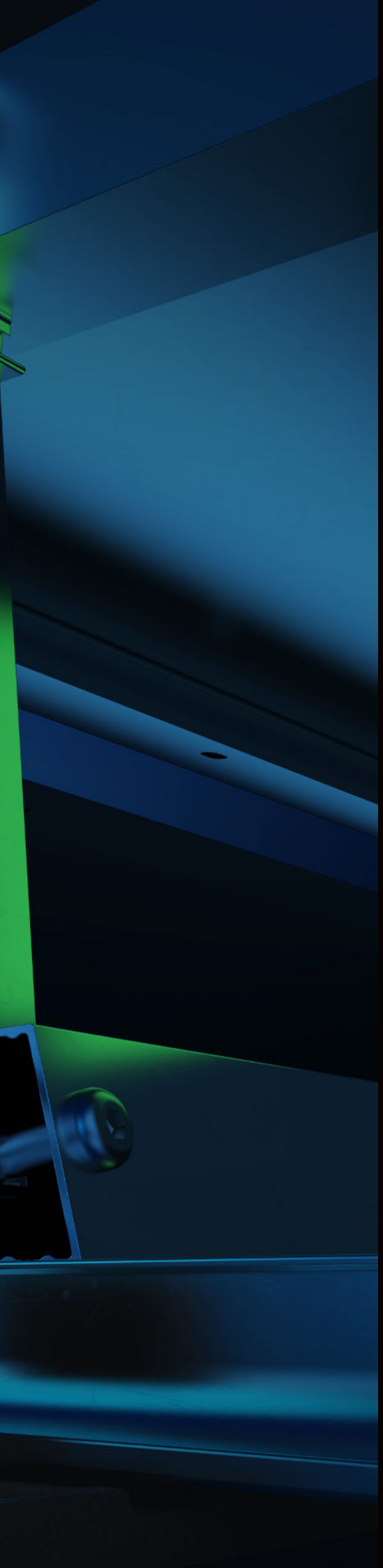
Next level mounting: the safe solution for every roof



Sophisticated load distribution, extensive tests in the wind tunnel and certified quality make Premium Mounting Technologies' mounting systems stand out from the crowd. With the further development of PMT EVO 2.1, the company from Stadtsteinach sets new standards for PV projects.

About one third of the energy consumed in Germany is used by its buildings. Residential premises, company headquarters, car parks, public properties; they all need electricity and heat. By 2035, Germany's entire electricity needs are to be met from renewable sources. This is the German government's ambitious goal for the energy transition. Developing unused roof areas is one way of taking big steps towards this goal.

Roofs are as individual as the people who live and work under them. There are virtually no standard solutions for PV systems that fit on every roof. Each system must be considered individually and adapted to the circumstances. Factors such as the maximum load of the roof, which affects the potential solar energy yield, determine the efficiency of the project.

Those who hastily upgrade existing buildings face the risk of damaging the roof. Excessive loads, improper installation of PV panels, and destruction of roof insulation cause damage that angers roof owners, shakes confidence in renewable energy sources, and is completely unnecessary.

With the flat roof solution PMT EVO 2.1 for pitch angles up to 10° and the PMT FLAT DIRECT pitched-roof system, Premium Mounting Technologies, or PMT for short, addresses these risks and offers solutions with maximum safety.

A vision transforms into a solution

The innovations of the German manufacturer from Stadtsteinach take PV substructures to the next level. As a pioneer in the industry, PMT builds aerodynamic and lightly ballasted mounting systems for flat and pitched roofs. Its strength are innovative solutions that offer high ease of installation and maximum reliability. Its customers are companies throughout Europe. In 2022, the Upper Franconians implemented PV systems with a total output of 630 MWp.

'We want to build mounting systems for PV power plants that our customers can rely on,' says PMT CEO Michael Jakal. Uncompromising safety and sustainable quality combined with high practicality and efficiency are the company promises he and his team make. Module-independent, quick to install, durable.

In order to test the loads that a substructure must withstand as realistically as possible, PMT undertakes comprehensive component tests and thoroughly examines every development. This includes testing in a wind tunnel, digital simulations, and on a variety of testing equipment including tensile testing machines and friction test rigs. Using compatibility tests for foils and roofing membranes, as well as heat and cold tests, the engineers fine-tune their solutions to potential external influences and challenges beyond the standard.

Weather conditions like extreme temperatures and influencing factors like UV radiation therefore do not cause any negative surprises once the system is on the roof. An up to the task lightning current carrying capacity is included, together with the grounding of the system via a low-impedance connection. The know-how gained from ten years of project experience and customer feedback is incorporated into the tests in order to continually optimise the substructures and develop them based on market requirements. This high level of commitment enables PMT to guarantee a maximum of safety for its solutions.

Certified solutions

A safety guarantee is officially confirmed and certified by the German Institute for Building Technology (DIBT). PMT was one of the first companies in Germany to receive general building authority approval for its aerodynamic assembly solution for the entire system. This means that the company can guarantee legal certainty for the aerodynamic flat roof system, and shows what the future of secure PV roofs looks like. Customers can rest assured that all components will perform as promised.

Innovations against stagnation

Because the PMT team went digital early on, adapted workflows and consistently developed them further, it can now react flexibly and quickly to market developments. 'Our processes are digitalised, our employees work together collaboratively, and our resource management is accessible and maintained for everyone,' describes COO Jörg Weber-Schorsch. 'All of us work on the basis of the same project status. All the time. This saves us valuable time.' This way of working enables manufacturers to react

quickly to market developments and to implement their own ideas in the market faster and more cost-effectively.

What difference does PMT EVO 2.1 make?

For the PMT EVO 2.1 system, the Upper Franconian engineers have developed the ProPlates. These plates for the mounting system increase the load distribution on the roof. 'Our previous solution for the roof protection was good, but we knew that we could offer an even better solution to our customers,' explains Weber-Schorsch. The company's maxim of scrutinising every solution and constantly improving both the system and the accessories is what sets PMT apart from the competition.

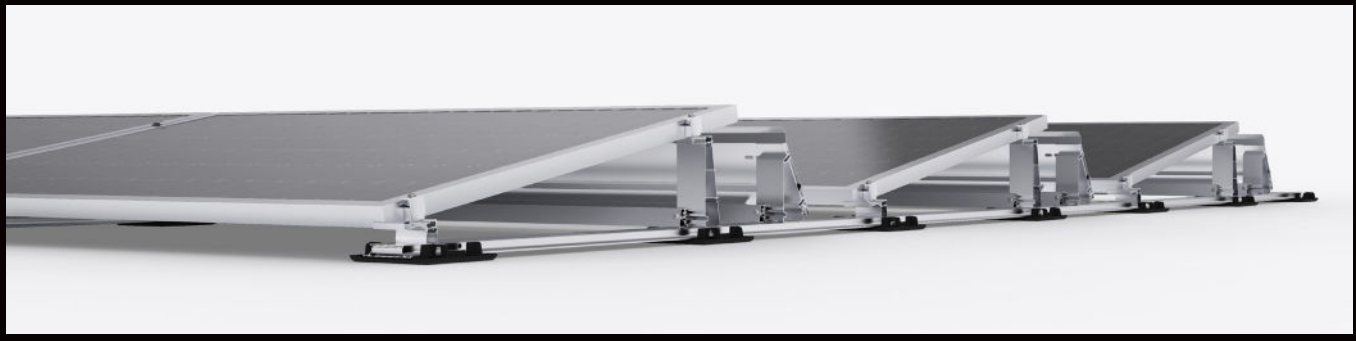
It is a simple calculation: the larger the bearing surface, the higher the load distribution per square metre and the lower the point load the roof has to bear. This protects the roof and, in good conditions, also reduces project costs by eliminating the need for additional weight distribution measures. Without excessive effort.

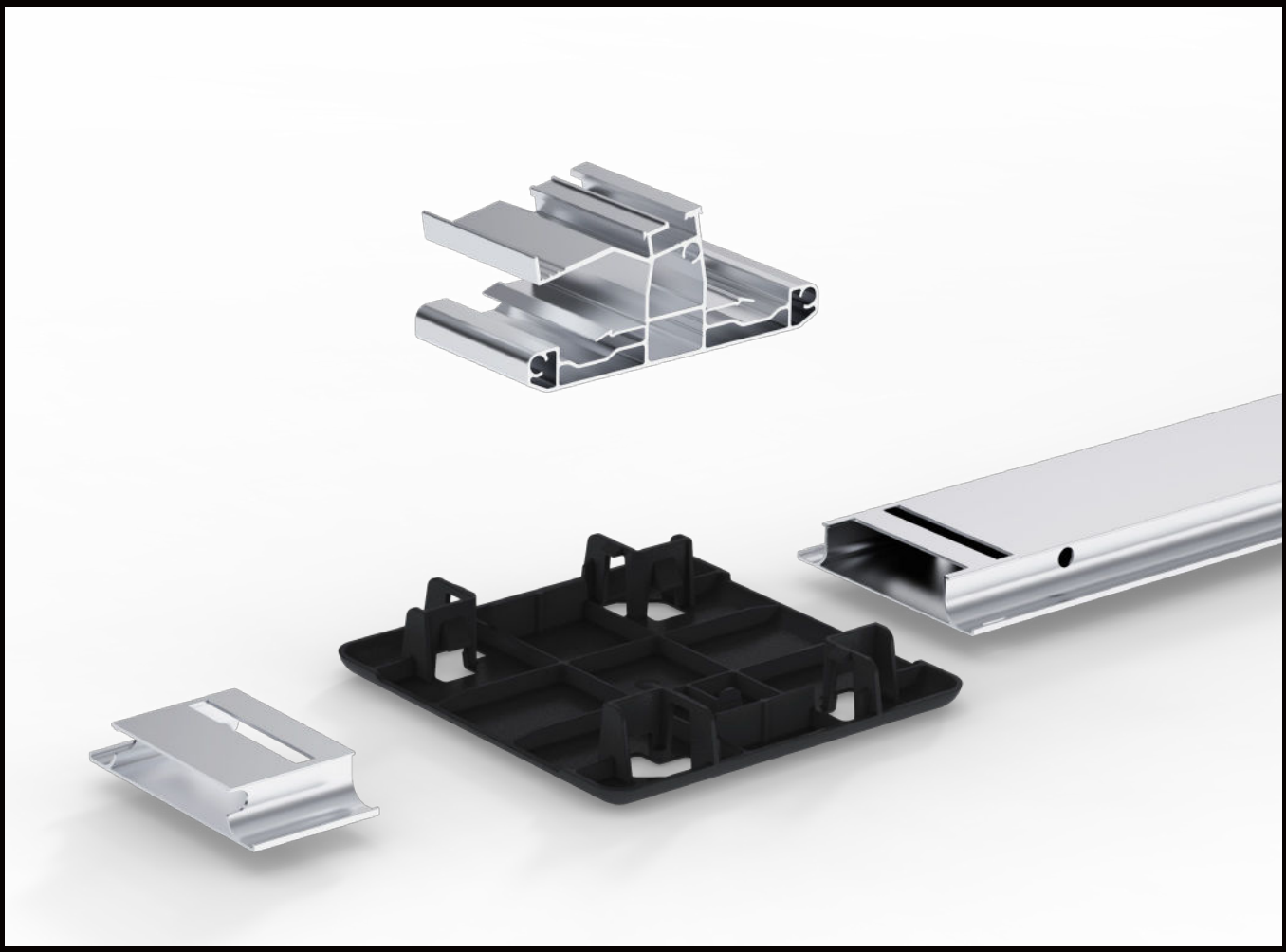
Compared to the predecessor system PMT EVO 2.0, PMT EVO 2.1 with the ProPlates offers on average 40 percent more support surface for the system on the roof. The weight of the modules and additional influences such as snow load and wind can thus be optimally absorbed. This is a well-thought-out load distribution system from which roof owners and system operators benefit in the long term.

This safety of the systems will become increasingly important in the years to come and are going to play a decisive role in the awarding of contracts. The current PV boom and the associated high number of projects means that system operators are more dependent than ever on safe installation solutions. A forward-looking approach that minimises the risk of damage caused by extreme weather conditions or damage to the insulation, for example. PMT's 15-year product warranty underlines the high quality of its products and provides a strong basis for their customers' trust.

Focus on efficiency

'Sustainability and efficiency come at just the right time. After the terawatt year in 2022, the PV industry is pushing for faster progress in renewable energies,' says Jörg Weber-Schorsch. No-one who wants to use a property for PV wants to wait for a long time for it to be delivered and installed. PMT has a convincing answer: with the help of innovative click technology and intelligent cable routing, the PMT EVO 2.1 mounting system can be installed in record time.
A time-saving solution with reliable safety.





A solution for all modules and roof types

PMT systems are compatible with all common pv-modules on the market. PMT EVO 2.1 is no exception. The substructure for all flat roof surfaces is designed for module widths from 985 to 1,300 millimetres and module lengths from 1,550 to 2,407 millimetres. Accessories such as the universal module and ballast clamp cover clamping ranges between 30 and 50 millimetres. This applies to both east-west and south orientations.

Identify sources of error, minimising assembly time

Better safe than sorry. 'In order to prevent errors in the installation of PV roofs from occurring in the first place, PMT has thoroughly analysed and evaluated possible sources of error. The result is our interchangeable-secure design,' describes Michael Jakal. The components of the PMT EVO 2.1 system are designed in such a way that each element can be assigned without any doubt. This prevents incorrect installation. No additional measurements are required to set up the substructure. Special tools can remain in the toolbox. Details in the design of the components, such as the audible sound when the click connection is engaged, make the installation solutions so simple and ingenious.

This makes installation a breeze and safer for everyone involved. The interactive installation instructions also contribute to this, which is part of the customer service for a modern company like PMT, but by no means a matter of course in the industry. PMT will continue to expand this service. In the course of 2023, PMT plans to launch the PMT Academy, a far-reaching training concept that offers mobile training and digital learning content on assembly solutions to all interested parties.

Sustainability every step of the way

For PMT, sustainability is not just about the PV energy that can be harnessed through its assembly solutions. The focus on sustainability is integrated into every step along the way to a high-quality installation. The products from Stadtsteinach are made in Europe. Short transport routes, transparency in materials and processing are emphasised and are an integral part of the PMT standard. The fact that the company has focused on manufacturing in Europe from the very beginning, wherever possible, pays off in the form of high delivery capacity, for PMT and for its customers.

www.pmt.solutions

About PMT

Premium Mounting Technologies GmbH & Co. KG develops and produces aerodynamic PV substructures for all types of roofs. Headquartered in Stadtsteinach, Germany, PMT was founded in 2012 as a supplier of flat-roof constructions for conventional PV systems.

Today, with more than 90 employees, the company develops individual and tailor-made solutions for flat and pitched roofs in accordance with the highest safety and quality requirements for the global market.

PMT's customer base includes a wide range of EPCs, distributors, installers, and sales partners.

With CLIP Logistics in Poland, PMT has achieved its largest PV system to date with EVO 2.0 in a southern-facing orientation, at the project site in Jasin in 2019.

An impressive 22,947 modules provide a total output of 7 MWP on five roofs of the logistics group, an area of over 3,000 square metres.