

E-Port Line

Smart, reliable, robust and cost effective

‘Noticing the lack of EV- charging stations around Europe kick-started the development of carport systems at Mounting Systems. The process of finding the perfect equilibrium between strength, design, cost and function led to the making of over 30 different designs. After close collaboration with customers and building multiple prototypes, we developed safe and reliable carport systems, while keeping cost low.’ reports Dawid Janczewski, engineer in the product & innovation team.

In Rangsdorf, 30 min outside Berlin, surrounded by beautiful fields and lakes, an impressive building appears. This is the location of Germany’s only mounting systems manufacturer today, recently also certified as a Made in Germany brand. The company specializes in solar rooftop systems, in addition to solutions for solar carports and ground mount systems.

For the past decade, the company has mainly been selling their products as white label, resulting in low recognition of one of the most sold racking systems in Europe. Mounting Systems have been producing quality solar racking systems for the past 27 years but has only recently had a spiking increase in brand awareness as a result of selling their products with their own brand

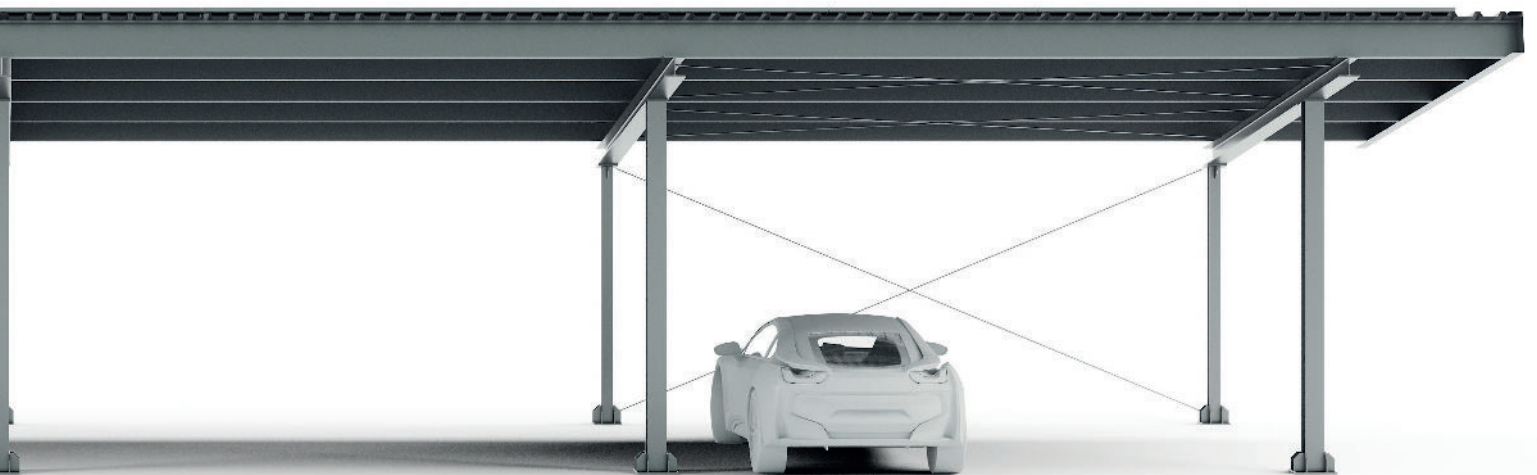
Mounting Systems. Part of the recent growth is also a result of Mounting systems ability to constantly place new, innovative and industry relevant products on the market.

The product, innovation and engineering department is behind the development of new products, just like in most other companies. The difference with the Mounting Systems R&D department, is the freedom and involvement the engineers have with the customers on one hand and the production on the other. This means they are involved from gathering requirements from customers, to seeing the very first product being produced. Dawid, who previously in his career has worked for the auto-industry, mentions that it makes his job at Mounting Systems exciting since he can accompany

the whole process of developing a product from beginning to start.

Finding the perfect equilibrium between strength, design, cost, and function

It has been decided that a new product should be developed. Sales have had multiple requests for solar carports, and as Europe needs to electrify most of the transport sector to reach the 2050 targets, it is clear that there is a need for solar carports for residential use as well as solar carports for commercial areas such as universities, airports and office parking. The residential solar carport E-Port Home was already commercialized earlier this year. Now, Mounting Systems has launched the solar carport for commercial use.



In the planning phase of the development of the new solar carports E-Port Wings and Line, Dawid together with the rest of the engineering team, quickly determined that the most important was to find a balance between design and functionality. Various materials, forms and structural calculations formed the first design proposals. Thereafter, an estimated price was set, ease of installation was evaluated and optimal packaging for transportation was included. From this, a project description was laid out with requirements, 'nice to have's, demands from future customers and ideas from partners such as EV manufacturers.

In total Dawid created more than 30 designs,

all of them statically calculated to ensure high safety standards. Extra attention was given on how to calculate static values, as there is a tendency to inaccuracy in these calculations, as fundamental principles often are not accounted for. Therefore, contact was made with a highly regarded professor in the field, who also is the head of a wind tunnel institute in Germany, to obtain the necessary skills to accurately perform structural calculations for carports.

This makes the carports highly reliable, with high safety standards. Throughout the development of the carports, six prototype designs were built, tested, evaluated, and modified until two designs fulfilled the

desired requirements: smart, reliable, and robust with an attractive price.

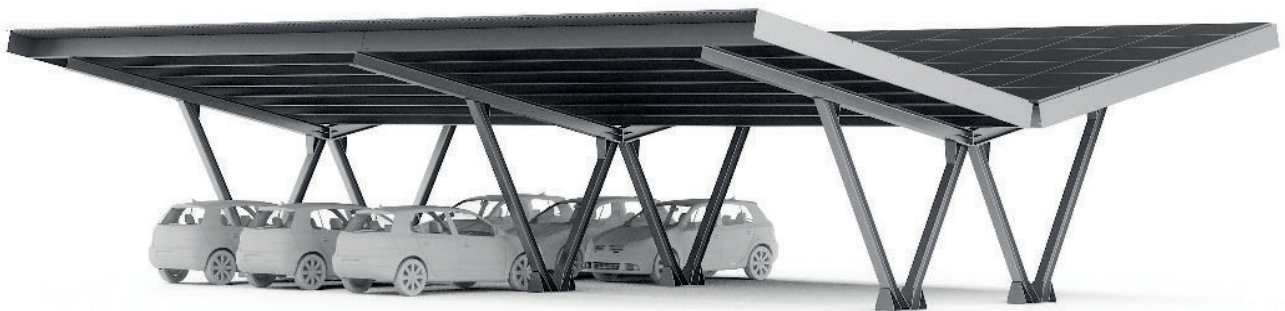
The solar carport solutions

Mounting Systems is now offering the E-Port Line as a standard solution for parking lots. It can be built in harsh environments, extended up to 68m in length, in 12 segments and at one of the best prices on the market. The design is rather simple, but it takes into consideration ease of transportation and installation, making it a solution for most projects.

Each segment has space for two vehicles, which can be powered by 24 PV-modules. Depending on the area available, one can



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E-Port Wings

have two strings with E-Port Lines in a mirrored configuration to take full advantage of the space to produce energy. Mounting Systems offers this solution as an alternative to the more exclusive version of the double-sided carport system; the E-Port Wings.

‘E-Port Wings has a massive and impressive structure. It looks like a piece of art.’ says Dawid. It is hard to deny Dawid’s statement. The massive beams in black steel, also available in all other RAL colours, gives a look which is truly impressive.

Here, the design has been carefully thought through, giving it an attractive design, with robust and reliable structures. Furthermore, in one segment there are space for up to 6

vehicles, three on each side making it bigger and more space efficient than the E-Port Line. With its 10.8m length per segment one can fit 72 PV-modules which gives plenty of energy for EV-charging.

Mounting Systems has a portfolio with 5 different solar carport solutions. E-Port Home is offered as single, double and premium versions, each of them purchasable as off-the-shelves package that can be installed without any specialized tools or advanced training. The E-Port Line and Wings are for larger commercial areas. These are project-based products, which means one would have to send a request to the technical or sales support team to receive a price for that unique project.



Ramp System

The EV-market in the UK

The timing of the carport products could not have been better. As nations around the world are dedicated to a green recovery after the COVID-19 epidemic, new investments and budgets are given to green technologies. The UK government has promised the automotive sector £73.5 million investment to cut carbon emissions. Where promoting a greater volume of low emission cars, such as electric vehicles is part of the strategy. This will safeguard more than 14,000 jobs, and considerably make the move towards electric transport easier for consumers.

Electrification of the energy systems, and especially the transport sector is furthermore vital in helping the UK meet its target of net zero carbon emissions by 2050, while growing the economy and creating jobs in greener industries.

Mounting Systems has partnered with SRS Works Distribution, based 1-2 hours outside London. Together, they will supply the UK with high quality and modern solar systems that can support the vision of having net zero carbon emission by 2050.

SRS Works can deliver and/or plan any project with solar carports, as well as other classical on-roof solar systems manufactured by Mounting Systems. The partnership is exceptionally exciting since SRS Works won the Nationwide EPC framework and will be projecting and commissioning many of the public projects over the next years, foremost in England.

www.mounting-systems.com