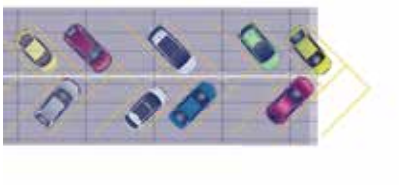
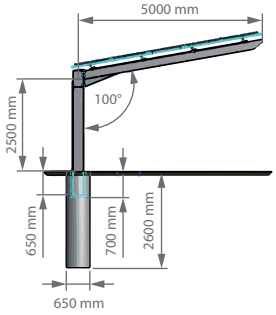
Park@Sol Pro

The steel carport for angle and perpendicular parking

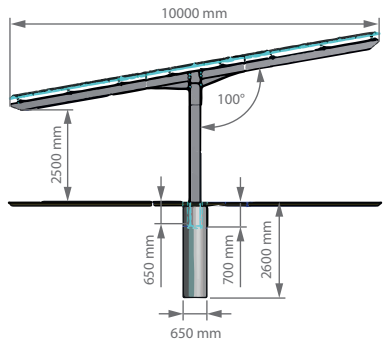


The steel carport by Schletter is a one-support system. The support serves as a central support for the design with 2-rowed vehicle arrangement and as a head support for the design with one-rowed vehicle arrangement.

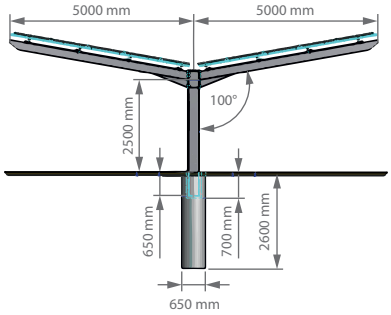
Possible designs



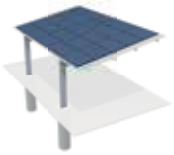
S1 1-rowed vehicle arrangement



S2 2-rowed vehicle arrangement



S3 2-rowed vehicle arrangement



System structure

Due to the projecting girders, this structure is suitable both for perpendicular parking and angle parking. The inclination of the roof is 10°. Like this, a south or an east-west alignment is possible depending on the respective parking lot. The inclination is the most economic one regarding solar yield and material cost. The roofed carport depth can be up to 5 m. In the best case, five rows of solar modules can be arranged horizontally (landscape). Due to possible thermal elongation, the total length of a carport is limited to 50 m. Longer carport rows are to be interrupted to avoid any damage caused by thermal movements. The purlins must not protrude from the last girder by more than 41% of the support width – which is 5 m in this example. This means that with a parking space width of 2.5 m for perpendicular parking, there usually is a support between the first and the second parking space. After that, there usually is a support after each second parking space. With 41%, there is a roofed projection of 2.05 m (41% of 5 m) above the first parking space.

*The terms of guarantee are available at www.schletter.de/AGB_en.

Two structural designs

Depending on the structural requirements, there is a light and a heavy design to withstand the local wind and snow loads. The supports rest on sleeve foundations made of reinforced concrete.

With or without covering shell

In many countries, there are regulations regarding overhead glazing that are not met by most solar modules that are currently available on the market. Thus, an additional covering shell made of steel plate can be integrated in the Schletter steel carport. This covering sheet steel also serves as a water-guiding level. If there are no such requirements and the carport is only intended as a solar generator and a sun protection, the steel plate covering shell is not required and the modules can be mounted directly onto the purlins. Like this, the costs can be reduced considerably.

Components

Supports and girders

Hot-dip galvanized steel structure with an average minimum zinc layer thickness of 80 µm. The girder length can be adapted to individual requirements and is limited to about 5 m. The height of the supports can be adapted to the desired vehicle height.

Purlins

Strip-galvanised or hot-dip galvanized Z-purlins with an average minimum zinc layer thickness of 80 µm.
Fastening with steel-aluminium system connector.

Steel plate covering shell

Trapezoidal galvanized sheet steel and color coated in standard color. Mounting with self-drilling sealing screws onto the purlins.

Module mounting

System fastener ClampFit made of aluminium and high-grade steel components fastened with EPDM gaskets and thin sheet screws onto the covering shell. Landscape (horizontal) alignment of the modules. Without covering shell, a portrait (vertical) alignment is also possible.

Gutters and downspouts must be planned and installed according to local requirements by the customer.
Cable guidance on the roof is possible at the modules using Schletter cable fastening retainers.

Foundation

Drilled piles with an anchoring depth of about 2.5 m and a diameter of about 60 - 80 cm and sleeve foundations for encasing the supports in the foundation with concrete. The exact measurements are defined according to the structural analysis and the soil expertise. Basically, other types of foundation are possible. but this has to be determined individually in each case.

Comments

The construction site must be accessible for heavy vehicles and equipment. If the soil is already sealed, it may be necessary to open it up for drillings and seal it again after the drilling operations. The customer has to bear the ground risk. The customer shall also bear the risk of unforeseeable events that may lead to extra costs. Supply lines must be identified before the start of construction and the site management must be provided accordant plans. Laying of supply lines must be authorized and carried out before the start of construction.

Please find further information in our documents on Park@Sol at www.schletter.eu, for example
➲ Park@Sol brochure

The respective building laws must be observed!

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