

Modular Carports for Power Generation Park@Sol

# Solar Mounting Systems CHLETTER Inc.



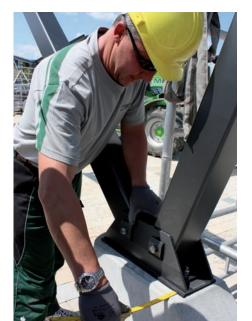








We put our 40 years of experience in the design and manufacturing of steel and aluminum products behind the development of Park@ Sol, engineering the most versatile and economic photovoltaic (PV) mounting system on the market.



## New Usable Surfaces for Solar Energy

Increasing fuel costs, compulsory environmental certifications and desire for an environmental friendly image are the new realities of business. Consequently, solar PV plants on company roofs are in demand. But in many cases, the roof surface areas are too small or weak to support a PV system. Or, in some cases, roof and ground mounted systems are seen as too costly or complex a project for the business or home owner to undertake.

Solar carports offer simplified and economic alternatives in answer to such concerns, while offering a multipurpose structure.

These systems have a well established history in Europe and North America, on a scale of several hundred megawatts (MW) of installed PV systems for both commercial and residential applications.





## Park@Sol Generate a Significant Return on Investment

#### Park@Sol Advantages

- · Quick, easy to install while remaining cost competitive
- Tailored for most module types, orientations, and inclinations
- Customized foundation options
- Support from Schletter engineers and geotechnicans for every step of project planning
- Complete structural analysis
- Durable and corrosion-free aluminum construction
- Complete documentation and system drawings
- · Individualized design and color options on request
- 10 year durability warranty\*



Optional: Sub-decking is made of trapezoidal aluminum sheet metal

- Waterproof structure
- · Prevents icicle formation

<sup>\*</sup>Warranty conditions and further information at www.schletter.us.

#### **Concrete Foundation**

- Concrete ground collar for collision protection
- Unobstructed car door opening
- Central foundation

**B1** 1-row vehicle arrangement (max. depth 6.0 m)

B2 2-row vehicle arrangement (max. depth 13.5 m)





B3 2-row vehicle arrangement (max. depth 13.5 m) Ideal for structures running N/S

#### **Cast-in-place concrete**

The economic solution for small carport plants





#### **Concrete Pillars**

For residential applications requring less excavation

#### **Coming Soon!**

Micro pile foundations—Significantly reduce concrete, installation time, and labor costs.



## Park@Sol Technical data

#### Material

Hardware, bolts: Quality steel 1.4301; Profiles: Aluminum (EN AW 6063, EN AW 6005)

#### Logistics

- Quick and simple mounting
- Maximum level of pre-fabrication
- Direct delivery to the construction site

#### Accessories

- Cable channels, cable ducts
- Lightning protection system (FS Protect System)
- Module clamps with integrated grounding.

#### **Delivery and Services**

- Project planning assistance
- Complete system drawings
- Production and delivery of the complete carport system
- Coming soon: micro pile foundations

#### **Optional**

- Vibration simulation of wind loads on request
- Earth quake simulation, optional

#### Construction

- For framed and unframed modules
- Minimum sealing of the soil surface
- Optional waterproof substructure

#### **Lightning and Grounding**

- Extension with outward lightning protection system is possible
- Components for grounding system
- Potential equillization certified according to VDE 0100, part 712

#### **Warranty and Certifications**

10-year warranty on all Schletter systems





## Tailored & Innovative Optional Accessories

Because each project presents a unique set of requirements, Park@ Sol systems are completely customizable. Plus, Schletter offers a variety of accessory options to ensure the success of each project.

#### Option Examples:

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- Efficient drainage systems
- Cable management
- Inverter fastenings
- Illumination
- Incorporation of your brand
- Custom power coating



#### Private Park@Sol

Take advantage of completely preassembled systems for standard module sizes for smaller carport designs. Excellent for residential use.

#### Example:

Carport for 2 vehicles (15 modules)

Dimensions: 17' x 17'

Spans: 16'

Power: Approx. 3 kW (the modules have to be provided by the customer)

A more exact list of our complete carport system is available. Contact a Schletter representative for more information.

#### Design Park@Sol

On request, our in-house industrial design team will develop customized carport designs that incorporate your brand name or trademark.



Several advertising options



Cable management options



Carport lighting



Drainage





## Solar Carports and Electric Mobility An Unbeatable Combination!

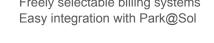
#### Coming Soon: P-CHARGE®\* Charging systems for electric vehicles

The P-CHARGE system is a complete line of charging stations for electric vehicles.

P-CHARGE is the perfect addition to Park@Sol. Consumers are increasingly seeking charging stations. Incorporating P-CHARGE puts your parking structure on the map, literally. Online directories and mobile applications pin-point charging stations for electric vehicle drivers.

P-CHARGE installs easily and is virtually maintenance free. The station's aluminum shell is weather-proof and resistant to mechanical impacts.

- Attractive pillar-shaped charging station in modular design
- Various equipment options and
- Up to 4 charging processes at the
- Freely selectable billing systems





\*Available in the U.S. and Canada in early 2012.

For more information, visit www.schletter.us or at www.p-charge.us









#### Fort Collins, Colorado

Rack configuration: CP 4V x 64 B1 10°

 Power:
 17.92 kWp

 Spans:
 6.03 m

 Dimensions:
 40 m x 4.5 m

 Customer:
 Wirsol

## Park@Sol Reference examples







**CLK** 

Rack configuration: CP 20H x 10 B2 8°

Power: 30 kW Spans: 5.40 m

Dimensions: 12.1 m x 12.80 m
Postal code: 97359 Schwarzach
Customer: AWI Solar

Burger King Waghäusel Different rack configurations

Power: 52.3 kWp
Spans: 5.6 m and 4 m
Dimensions: Various Dimensions
Postal code: 68753 Langgöns

Customer: Wirsol

Wörrstadt

Rack configuration: CP 20H x 35 B2 8°

Power: 100 kWp
Spans: 5.00 m
Dimensions: 42 m x 13 m
Postal code: 55286 Wörrstadt

Customer: Juwi

BV Wörrstadt

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Tucson, Arizona

Rack configuration: CP 11H x 28 B2 20°

Power: 69.3 kV Spans: 8.5 m

Dimensions: 46.5 m x 10.9 m

Customer: SOLON USA







Seeg

Rack configuration: CP 8H x 13 B2 15°

Power: 37.44 kWp
Spans: 3.46 m
Dimensions: 41 m x 7 m
Postal code: 87637 Seeg
Customer: Elektro Uhlemayr

BV Seeg

Langgöns

Different rack configurations

Power: 52.8 kWp
Spans: 5.00 - 5.50 m
Dimensions: Various Sizes
Postal code: 35428 Langgöns
Customer: Gecko Logic

BV Langgöns

Bergheim

Rack configuration: CP 7H X 18 B1

10° (negative)

Power: 122.5 kWp
Spans: 5.00 m
Dimensions: 29 m x 6 m
Postal code: 50126 Bergheim



## Our parking lot showcases different rack configurations

Power: 500 kWp Spans: 5.60 m Dimensions: Various

Postal code: 83527 Kirchdorf
Company: Schletter GmbH

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## Schletter Germany Park@Sol

#### We want to pass on our experience

At our German office, we have equipped a total of 260 parking spaces with Park@Sol.

In only three weeks, we were able to install an additional 500 kW solar power on our carport roofs without interrupting operations.





## Solar carports

## Advantages for Every Application

#### Residential:

- The same incentives, grants and subsidies that apply to roof systems apply to carport systems
- Excellent unit-assembly system for small installations
- Charging station and source of energy or electric bicycles, scooters and cars
- Snow-free parking spaces in winter and cool, shady parking spaces in summer
- Protected loading and unloading of vehicles in case of rain
- · Structural analysis always included

#### Municipalities:

- Creating value in your region
- Boost tourism
- · Noise and exhaust emissions relief
- Better air quality
- Job creation as a result of electric mobility
- Active contribution to the reduction of CO<sub>2</sub> emissions

#### Commercial:

- The same incentives, grants and subsidies that apply to roof systems apply to carport systems
- Public relations opportunity
- Your customers will love snow-free parking spaces in winter and cool, shady parking spaces in summer
- Attract the growing demographic of electric vehicle drivers
- Active contribution to the reduction of CO<sub>2</sub> emissions

## **E-mobility**

### Vision for the future



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#### **Technical Sales**

Phone: (520) 289 - 8730 Fax: (520) 289 - 8696 E-mail: sales@schletter.us

#### **Event/Workshop Information**

Phone: (520) 289 - 8725 Fax: (520) 289 - 8696 E-mail: marketing@schletter.us

#### **Order Processing**

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