DIVISION 08 . SB-SCP

Commercial Solar Carports

Aluminium canopy, EV-ready

A carport is judged on two things: whether the gutter leaks and whether the structure is ready for EV charging. Both are designed in, not retrofitted.

CLEAR SPAN **10 - 24 m**	BAY **5 m**	FRAME **Aluminium**
GUTTER **Lock-seam**	EV **Conduit ready**	SNOW **L1 - L3**

Structure

· Aluminium frame with steel columns, or all-aluminium where coastal corrosion governs.
· Lock-seam aluminium gutter with an expansion joint every 20 m: the usual leak point is designed out.
· Purlin spacing set for the PV rail system and the snow tier.
· Concrete pad foundations or ballasted bases on the parking deck.

Membrane & envelope

· Profiled metal roof deck, or glass-glass PV modules as the roof where the array is the product.
· Waterproofing at penetrations with EPDM boot and a continuous upstand.
· Anti-corrosion coating class selected for C3-C5 environment.
· Cable tray integrated under the purlin line.

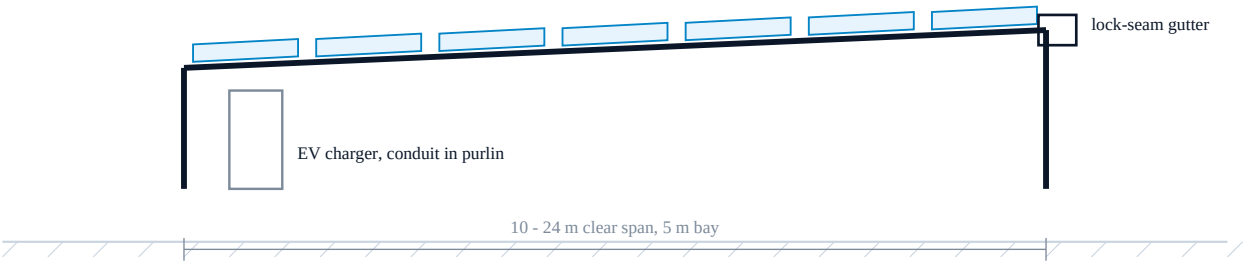
Openings & options

· EV charger mounting, conduit and load-management enclosure.
· LED parking lighting, signage and payment kiosk bracket.
· Battery room or inverter enclosure under the canopy.
· Rainwater harvesting connection to the downpipe.

What we need in order to quote

Site location and altitude drives snow and wind, not just the tier	**Clear span and length** whole bays; whole containers for DIV-07	**Opening size** door or end wall clear width and height
Largest machine or aircraft sets the door, not the span	**Floor and foundations** slab by others, or our anchor design	**Services** lighting, power, ventilation, fire strategy

Section - PV modules as roof, water managed at the gutter



Section - schematic, not to scale. Dimensions are confirmed on the project drawing. Site photographs of delivered buildings are available on request.

Size and price matrix

EXW price per square metre of covered area, standard configuration, excluding installation, freight, concrete and VAT. The three columns are the snow-load packages L1 to L3; steel weight is the L2 column.

Clear span x length	Area	Steel	L1 0.5 kN/m2	L2 2.0 kN/m2	L3 3.5 kN/m2
10 x 20 m	200 m2	33 kg/m2	$134	$140	$164
14 x 28 m	392 m2	37 kg/m2	$134	$141	$167
18 x 36 m	648 m2	40 kg/m2	$137	$144	$173
21 x 42 m	882 m2	43 kg/m2	$140	$148	$178
24 x 48 m	1152 m2	46 kg/m2	$143	$152	$184
24 x 60 m	1440 m2	46 kg/m2	$142	$151	$184

Load basis

Tier	Snow load	Equivalent snow depth	Typical use
L1	**0.5 kN/m2**	**250 mm at 200 kg/m3**	**Sheltered sites, temporary cover, low-altitude temperate**
L2	**2.0 kN/m2**	**900 mm at 220 kg/m3**	**Central and northern Europe, most of North America**
L3	**3.5 kN/m2**	**1,250 mm at 280 kg/m3**	**Alpine, Nordic, Canadian prairie, heavy drift sites**

Wind: designs are checked against the basic wind speed for the site, up to 180 km/h at the lightest tier. Snow and wind are always recalculated for the project; the tier is a commercial package, not the site load.

Typical applications

Factory and warehouse parking, retail and office car parks, fleet depots, logistics yards, public charging hubs.

Notes, exclusions and basis of quotation

- PV modules, inverters and electrical design are quoted with the PV contractor unless requested.
- Structural design must account for module wind uplift, not only snow.
- Snow sliding off the canopy is a pedestrian risk; a snow guard is recommended at walkways.

Design basis: ASCE 7-16 or EN 1991-1-3 / 1-4 as applicable; steel to Q235B / Q355B; hot-dip galvanising to ISO 1461; membrane PVDF-polyester, PVC on request. Certification documents, mill certificates and membrane test reports are issued with the shipping documents. Warranty: 25 years on the structure, membrane per manufacturer's data.

Plan

5 m bay, double row of parking



Plan - lock-seam gutter on the centre line

Plan - schematic, not to scale. Bay module and anchor positions as described above.