



CASK STEEL
A DIVISION OF CASK ELECTRIC

SOLAR MOUNTING STRUCTURES

Ground, tracker, carport, roof and
facade systems in steel and aluminium.



SAFE &
RELIABLE



STRONG &
DURABLE



EASY TO
INSTALL



COMPLETE
SOLUTIONS

CATALOGUE

2026



INTRODUCTION

Solar power is now the world's fastest-growing source of electricity

≈ **700 GW**

of new solar PV installed worldwide in 2025, another record year

≈ **3 TW**

total solar PV capacity in operation at the end of 2025

≈ **75 %**

of all new renewable power capacity added in 2025 was solar

> **10 %**

of the world's electricity demand is now met by solar PV

Why solar, and why now

In little more than a decade, solar photovoltaics has moved from a niche technology to the largest source of new power capacity on the planet. Module prices have fallen sharply, project finance has matured and governments in Europe, the Middle East, Africa and Asia now plan their energy systems around solar. For industry, farms and households, a solar plant means a fixed, predictable cost of energy for 25 to 30 years.

Solar is also a question of energy security. Every kilowatt-hour produced on a roof, a car park or a field is a kilowatt-hour that does not have to be imported. Countries with strong sunshine, across the Mediterranean, the Gulf and Africa, have the best conditions in the world and are building some of the largest plants ever planned.

The structure carries the investment

Modules, inverters and cables produce the energy, but it is the mounting structure that holds the plant in place for its whole life. It

must carry the modules through storms, snow, sand and salt air for decades, keep them at the right angle to the sun and stay safe for the people who build and maintain the plant. A weak or poorly protected structure is the most expensive part of a plant to repair.

This is why every CASK Steel structure is engineered for the site, calculated to European standards and protected with a coating chosen for its corrosion category. The result is a structure that lasts as long as the modules it carries.

Where the market is going

To reach the global goal of tripling renewable capacity by 2030, the world will need to add more than 1 TW of renewable power every year. Growth is moving to new markets: the Middle East, Africa, Central Asia and Eastern Europe, and to new uses such as trackers, agrivoltaics, carports and building facades. This catalogue covers all of them.

Sources: IEA PVPS, Snapshot of Global PV Markets 2026 (2025 installations about 698 GW, cumulative about 3 TW, about 10.5 % of global electricity demand); IRENA, Renewable Capacity Statistics 2026 (511 GW AC solar added in 2025, about 75 % of 692 GW renewable additions). Figures rounded.

Our vision

CASK Electric builds the infrastructure that brings clean energy from the sun to the grid, the factory and the home.

CASK Electric is an electrical infrastructure group serving utilities, contractors, industry and developers across Europe, the Middle East and Africa. Through **CASK Steel** we design and manufacture the steel systems that every electrical project needs: cable trays and ladders, earthing and lightning protection, and now a complete range of solar mounting structures.

We believe the next twenty years of energy will be built on solar. Our vision is to be the partner that a developer or EPC contractor can trust for the whole balance of system: the structure that holds the modules, the cables that carry the power, the trays that route them and the earthing that protects the plant, all engineered to work together and all from one supplier.

What we stand for

Engineering first. Every project receives its own structural calculation to Eurocode, its own drawings and a technical file. We do not sell a one-size structure and hope it fits the site.

Honest quality. We offer three clear quality tiers, ECO, PRO and MAX, so that the steel grade, the coating and the fasteners match the corrosion category and the design life the project really needs.

Made by us. Profiles are roll-formed, punched and cut in our own production, so lead times, tolerances and traceability stay under our control.

Built to last, built to recycle. Steel and aluminium are fully recyclable. Zinc-aluminium-magnesium (ZM) alloy coatings protect the steel with less zinc than conventional galvanising, and a long-lasting structure is the most sustainable structure of all.

One supplier for the balance of system

Structures from CASK Steel, solar and power cables from CASK Cables, cable trays, earthing and lightning protection from one group, delivered together.

Every type of site

Utility-scale ground plants, single-axis trackers, carports, flat, metal and tiled roofs, facades, agrivoltaics, floating plants and pole mounts.

Ready for the ERP and the site

Every item in this catalogue has its own CASK part number, so offers, orders, packing lists and site documents always match.



From design to site

How a CASK Steel solar structure is engineered, made and delivered.

01

Site and load data

Location, module type, layout, soil or roof data. We set wind, snow and seismic loads for the site.

02

Design and calculation

Structural calculation to EN 1993 and EN 1991, pile or ballast design, layout drawings.

03

Approval

Drawings, bill of materials with CASK part numbers and the quality tier are approved by the client.

04

Manufacturing

Roll-forming, punching, cutting and coating in our production, with batch traceability.

05

Delivery and support

Packed per row or per roof, with installation manual, torque values and site support.

The technical file supplied with every project

- | | |
|---|--|
| ✓ Structural calculation report (EN 1993-1-3, EN 1991-1-3, EN 1991-1-4) | ✓ General arrangement and layout drawings |
| ✓ Shop drawings of every profile and bracket | ✓ Bill of materials with CASK part numbers and weights |
| ✓ Pile pull-out test plan, or ballast plan for flat roofs | ✓ Material certificates (EN 10204 3.1) for steel and aluminium |
| ✓ Coating thickness records (EN ISO 1461 or EN 10346) | ✓ Installation manual with tightening torques |
| ✓ Earthing and bonding plan for the structure | ✓ Inspection and maintenance plan |

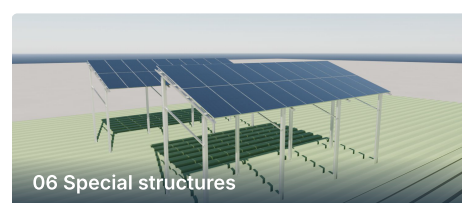
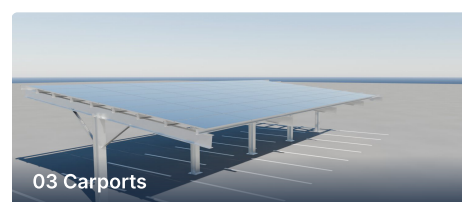
Design standards

Standard	Subject
EN 1990	Basis of structural design, load combinations
EN 1991-1-3 / -1-4	Snow loads / wind actions
EN 1993-1-1 / -1-3	Steel structures / cold-formed members and sheeting
EN 1999-1-1	Aluminium structures
EN 1090-2 / -3	Execution of steel and aluminium structures
EN 10346, EN 10025-2	Coated steel strip, hot-rolled steel
EN ISO 1461, ISO 9223	Hot-dip galvanising, corrosivity of atmospheres
EN 1998-1	Seismic design, where required



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Part numbers and finishes

Every item in this catalogue has a CASK part number that describes it: the family, the size and the finish. The same number is used in our ERP, in offers, orders, packing lists and on the site drawings, so what you order is exactly what arrives.

CST-SF001	-	120	-	50	-	20	-	2.5	-	ZM
Family lipped C-channel		H mm		B mm		C mm		t mm		Finish code below

Systems are ordered by system number and configuration, for example CST-SG001-2P-ZM. Profiles are supplied cut to the project length, added before the finish as -L, for example CST-SF001-120-50-20-2.5-L4520-ZM. Accessories carry their size, for example CST-SA070-76-1400-HDG.

Families

CST-SG	Ground-mount systems	CST-ST	Trackers
CST-SC	Carports	CST-SR	Roof systems
CST-SW	Wall and facade systems	CST-SX	Special structures
CST-SF	Structural profiles and tubes	CST-SA	Clamps, fixings and accessories

Finish codes

CODE	FINISH	DESCRIPTION
-HDG	 Hot-dip galvanised	Zinc coating after fabrication, EN ISO 1461. Posts, brackets, hot-rolled parts.
-PG	 Pre-galvanised	Z275 coated strip, EN 10346. Light members for dry sites.
-ZM	 Zinc-aluminium-magnesium (ZM) alloy coated steel	ZM310 or ZM430 strip, EN 10346. Self-healing cut edges, standard for cold-formed solar profiles.
-EP	 HDG + epoxy powder coat	Galvanised and epoxy coated, for chemical and coastal sites.
-PC	 HDG + polyester powder coat	Galvanised and polyester coated in RAL colours, for carports and facades.
-SS304	 Stainless steel 1.4301 (304)	Fasteners, roof hooks, clips.
-SS316	 Stainless steel 1.4404 (316L)	Fasteners and hooks for coastal and offshore sites.
-AL	 Aluminium, mill finish or anodised	Rails and clamps in EN AW-6063 T6 and 6005A T6.

Materials and quality tiers

Every CASK Steel solar structure is offered in three quality tiers. The geometry stays the same; steel grade, coating and fasteners change with the site, the corrosion category and the design life you need. The tier is selected with the finish code at the end of each part number.

ECONOMY CASK ECO Light commercial roofs and dry inland sites.		STANDARD CASK PRO Utility and commercial ground mount, carports, trackers.		PREMIUM CASK MAX Coastal, desert and high-wind sites, long design life.	
Profiles	S250GD + Z275 pre-galvanised	Profiles	S350GD + ZM310 alloy coated	Profiles	S420GD / S450GD + ZM430
Posts	S235JR, hot-dip galvanised	Posts	S355JR, HDG min. 70 µm	Posts	S355J2, HDG min. 85 µm or ZM430
Rails	Steel top-hat, Z275	Rails	ZM steel or aluminium 6063-T6	Rails	Aluminium 6005A-T6
Fasteners	Grade 8.8, hot-dip galvanised	Fasteners	Stainless A2-70 (304)	Fasteners	Stainless A4-70 (316)
Environment	C2 to C3	Environment	C3 to C4	Environment	C4 to C5
Indicative life	15 to 25 years	Indicative life	25 to 30 years	Indicative life	30 to 40 years
Finish codes	-PG, -HDG	Finish codes	-ZM, -HDG	Finish codes	-ZM, -HDG, -EP, -SS316, -AL
Corrosion		Corrosion		Corrosion	

Steel and alloy grades minimum values

Grade	Standard	Yield f _y N/mm ²	Tensile f _u N/mm ²	Used for
S250GD	EN 10346	250	330	Light purlins, rails, roof brackets
S350GD	EN 10346	350	420	Purlins, rafters, braces
S420GD	EN 10346	420	480	High-load purlins, tracker torque parts
S450GD	EN 10346	450	510	Long-span purlins, carport beams
S235JR	EN 10025-2	235	360	Base plates, small brackets
S355JR / J2	EN 10025-2	355	470	Posts, piles, carport columns
EN AW-6063 T6	EN 755-2	170	215	Roof rails, clamps
EN AW-6005A T6	EN 755-2	215	260	Heavy rails, tracker module rails
1.4301 (304)	EN 10088-2	230	540	Bolts, roof hooks, clips
1.4404 (316L)	EN 10088-2	240	530	Coastal fasteners and hooks

Coatings and service life years

Code	Coating	µm per side	C3	C4	C5
-PG	Z275 pre-galvanised	20	10-29	5-10	2-5
-HDG	Hot-dip galvanised (HDG)	70	33-40+	17-33	8-17
-HDG	HDG, heavy	85	40+	20-40+	10-20
-ZM	ZM310 alloy coating	25	36-40+	18-36	9-18
-ZM	ZM430 alloy coating	34	40+	24-40+	12-24

Years to first maintenance, indicative. Calculated from the zinc loss rates of ISO 9223 for each corrosivity category; ZM = zinc-aluminium-magnesium (ZM) alloy coated steel, taken at three times the life of zinc of the same thickness. C3 urban and light industrial, C4 industrial and coastal, C5 severe coastal and industrial.

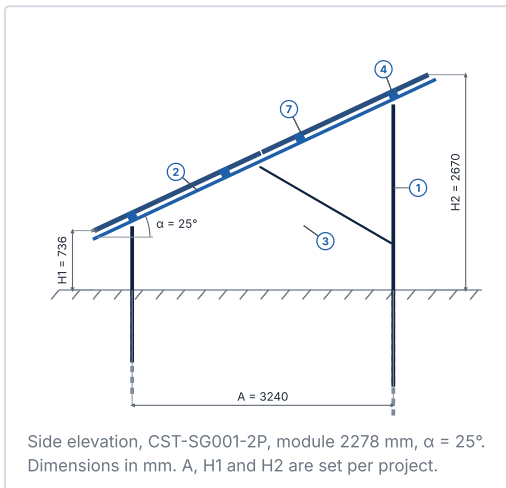
01 Ground-mount systems

Fixed-tilt tables on driven posts, ground screws or concrete footings, from small fields to utility-scale plants.



CST-SG001 · double-post fixed tilt

2 modules in portrait · S350GD + ZM310 · driven Σ-posts



- Posts driven 1.2 to 2.0 m deep, embedment set by pull-out tests on site
- Designed per project for wind and snow to EN 1991-1-4 / 1-3, steel to EN 1993-1-3
- Slotted connections take ± 30 mm site tolerance in every direction
- Pre-punched, pre-cut members: no welding or drilling on site

Configurations

System	Modules	Tilt α °	Support	Frame spacing m	H1 mm
CST-SG001-2P	2 portrait	10–35	2 posts	3.0–4.5	650–900
CST-SG001-3P	3 portrait	10–30	2 posts	2.5–4.0	650–900
CST-SG001-4L	4 landscape	10–30	2 posts	2.5–4.0	650–900

Components

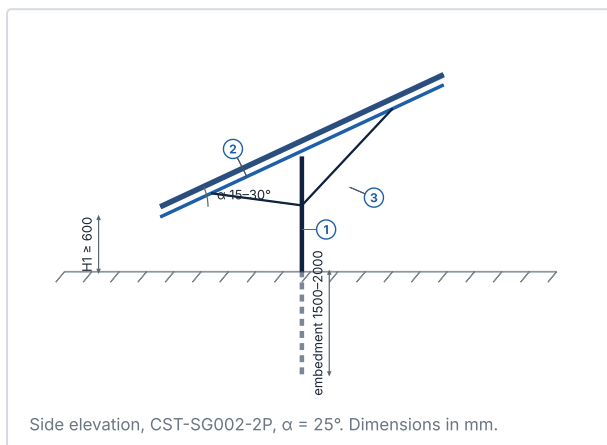
Pos.	Component	Part number + finish	Material
1	Front and rear post, Σ-profile	CST-SF003-140-60-18-2.5-ZM	S350GD / S355JR
2	Rafter, lipped C-channel	CST-SF001-120-50-20-2.5-ZM	S350GD
3	Diagonal brace, lipped C-channel	CST-SF001-60-30-10-2.0-ZM	S350GD
4	Module purlin, top-hat	CST-SF004-50-50-22-1.8-ZM	S350GD
5	Post-to-rafter bracket	CST-SA030-140-HDG	S355JR
6	Purlin splice	CST-SA040-50-ZM	S350GD
7	Mid clamp / end clamp	CST-SA001-35 / SA002-35-AL	6063-T6
8	Bolt set M10 × 25	CST-SA020-M10-25-SS304	A2-70
9	Earthing clip	CST-SA050-30-40-SS304	1.4301

Part number = component number + finish code, for example CST-SF003-140-60-18-2.5-ZM. Lengths are cut to the project and added as -L.



CST-SG002 · single-post fixed tilt

one post per frame · fewer piles · ideal on uneven ground



- Half the number of posts of a double-post table
- Free space under the table for cleaning and vegetation control
- Same purlins, clamps and fixings as CST-SG001

Configurations

System	Modules	Tilt α °	Frame spacing m	H1 mm
CST-SG002-2P	2 portrait	15-30	3.0-4.0	≥ 600
CST-SG002-2L	2 landscape	15-30	3.0-4.0	≥ 600

Components

Pos.	Component	Part number + finish	Material
1	Single post, Σ -profile	CST-SF003-160-65-20-3.0-ZM	S350GD
2	Rafter, lipped C-channel	CST-SF001-120-50-20-2.5-ZM	S350GD
3	Double brace, lipped C-channel	CST-SF001-60-30-10-2.0-ZM	S350GD
4	Module purlin, top-hat	CST-SF004-50-50-22-1.8-ZM	S350GD
5	Post head bracket	CST-SA030-160-HDG	S355JR

Foundations choose per site

Foundation	Systems	Best for
Driven Σ -post	CST-SG001 / SG002	Most soils without large stones; pull-out test per site
Ground screw	CST-SG003-2P + CST-SA070	Rocky or mixed soil, temporary plants, no concrete
Concrete footing + base plate	CST-SG004-2P + CST-SA060	Rock, landfill or where piles are not allowed
Ballast block	CST-SG004-2P + CST-SA080	Landfill and sealed ground, no penetration



Ground-screw foundation

CST-SG003-2P

Screwed in by machine in minutes, fully removable at end of life.

Part number	Ø mm	Length mm	kg/pc
CST-SA070-76-1000	Ø76	1000	7.2
CST-SA070-76-1400	Ø76	1400	9.6
CST-SA070-76-1600	Ø76	1600	10.8
CST-SA070-89-1600	Ø89	1600	13.1
CST-SA070-89-2000	Ø89	2000	15.9
CST-SA070-114-2000	Ø114	2000	21.4

- Helical flight welded to a hot-dip galvanised tube
- Flange connects directly to the post or base plate
- Torque recorded at every screw for quality control



Concrete footing with base plate

CST-SG004-2P

For rock, landfill and sites where driven piles are not possible.

Part number	For post	Plate mm	kg/pc
CST-SA060-120	Σ H120	300 × 300 × 15	11.8
CST-SA060-140	Σ H140	300 × 300 × 15	12.4
CST-SA060-160	Σ H160	300 × 300 × 15	13.0
CST-SA060-180	Σ H180	300 × 300 × 15	13.6

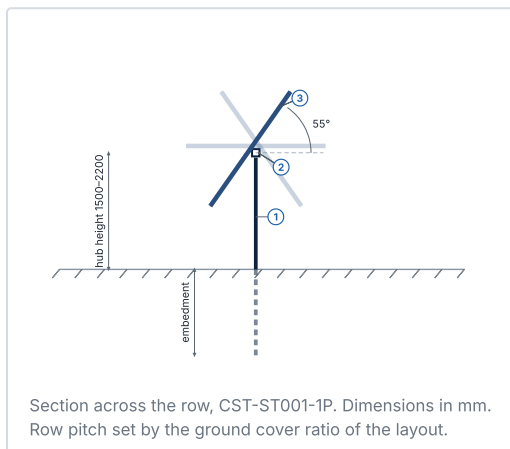
- 300 × 300 × 15 mm plate, four anchors M16
- Post stub welded and galvanised after welding
- Footing size set by the calculation

02 Solar trackers

Single-axis trackers follow the sun from east to west and raise the energy yield of a ground plant compared with fixed tilt.



CST-ST001 · single-axis tracker, 1 portrait
one row, one drive · rotation $\pm 55^\circ$ · backtracking



- North-south axis, east-west rotation with backtracking to avoid row shading
- Wind stow position set by the project wind study
- Bearings with self-lubricating polymer bushes, no maintenance
- Works on slopes up to 15 % north-south with adjustable post heads
- Suitable for bifacial modules: open rear side, slim torque tube

Configurations

System	Modules	Rotation °	Modules per row	Hub height mm	Torque tube mm
CST-ST001-1P	1 portrait	± 55	60-90	1500-2200	120 × 120
CST-ST002-2P	2 portrait	± 50	40-60	2200-2800	150 × 150

Components

Pos.	Component	Part number + finish	Material
1	Post, Σ -profile or I-section	CST-SF003-180-70-20-3.0-ZM	S350GD / S355JR
2	Torque tube, square	CST-SF030-120-120-4.0-HDG	S355
3	Bearing housing, polymer bush	CST-SA100-120-HDG	S355JR / UHMW-PE
4	Module rail, top-hat	CST-SF004-40-50-20-1.8-ZM	S350GD
5	Module rail clamp (U-bolt)	CST-SA101-120-HDG	S355JR
6	Mid clamp / end clamp	CST-SA001-35 / SA002-35-AL	6063-T6
7	Drive unit and controller	supplied with the system	per project

Drive unit, controller and wind sensors are integrated per project. Structural parts carry CASK part numbers; finish code as listed.

Tracker components

Torque tubes, bearings and clamps, made by CASK Steel.

Torque tubes CST-SF030 · S355, hot-dip galvanised

Part number	Size mm	kg/m	I _y cm ⁴	W _y cm ³	I _t cm ⁴
CST-SF030-100-100-3.0	100 × 100 × 3.0	9.14	183	36.5	274
CST-SF030-100-100-4.0	100 × 100 × 4.0	12.06	236	47.3	354
CST-SF030-120-120-3.5	120 × 120 × 3.5	12.80	369	61.5	553
CST-SF030-120-120-4.0	120 × 120 × 4.0	14.57	417	69.5	624
CST-SF030-150-150-4.0	150 × 150 × 4.0	18.34	831	110.7	1245
CST-SF030-150-150-5.0	150 × 150 × 5.0	22.76	1017	135.7	1524
CST-SF030-200-100-4.0	200 × 100 × 4.0	18.34	1240	124.0	970
CST-SF030-200-200-6.0	200 × 200 × 6.0	36.55	2923	292.3	4381

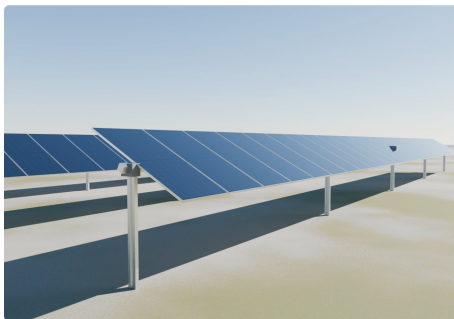
I_t torsion constant of the closed section; torque tubes carry the module torsion to the drive. Section values calculated without corner radii.

Bearing housings CST-SA100

Part number	Tube	kg/pc
CST-SA100-100	100 × 100	4.2
CST-SA100-120	120 × 120	4.9
CST-SA100-150	150 × 150	6.1

Module rail clamps CST-SA101

Part number	Tube	kg/pc
CST-SA101-100	100 × 100	0.6
CST-SA101-120	120 × 120	0.7
CST-SA101-150	150 × 150	0.85



Single-axis tracker, 2 portrait

CST-ST002

Two modules in portrait on one torque tube, fewer rows and drives per MW.

System	Modules	Rotation °	Modules / row
CST-ST002-2P	2 portrait	±50	40–60

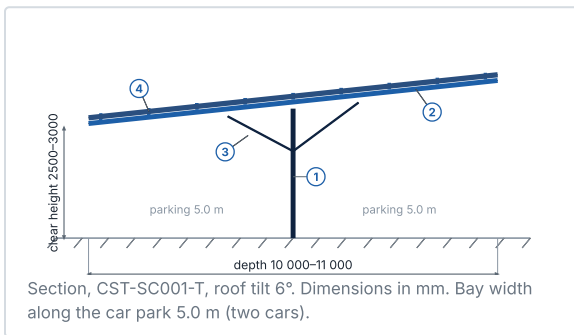
- Torque tube 150 × 150 mm
- Hub height 2200 to 2800 mm
- Rotation ±50°, backtracking

03 Solar carports

Shade for cars, power for the building and charging points for electric vehicles, in one structure.



CST-SC001 · carport T-type, double row
central columns · 5.0 m bays · gutter and EV-charger ready



- One column per bay, no columns between parking spaces
- Watertight option with trapezoidal sheet and gutter under the modules
- Brackets for EV chargers, LED lighting and cable trays
- Finish -PC available in any RAL colour for visible steel

Configurations

System	Type	Depth m	Clear height mm	Tilt °
CST-SC001-T	T, double row	10.0–11.0	2500–3000	3–8
CST-SC002-C	cantilever, single row	5.0–6.0	2500–3000	3–8
CST-SC003-M	multi-column	grid 8–16 m	3000–5000	3–8

Components

Pos.	Component	Part number + finish	Material
1	Column, I-section	CST-SF010-190-200-6.5-10-HDG	S355JR
2	Main beam, I-section	CST-SF010-300-150-7.1-10.7-HDG	S355JR
3	Knee brace, lipped C-channel	CST-SF001-120-50-20-2.5-ZM	S350GD
4	Purlin, Z-profile	CST-SF002-150-60-20-2.5-ZM	S350GD
5	Base plate and anchors	per calculation	S355JR
6	Mid clamp / end clamp	CST-SA001-35 / SA002-35-AL	6063-T6

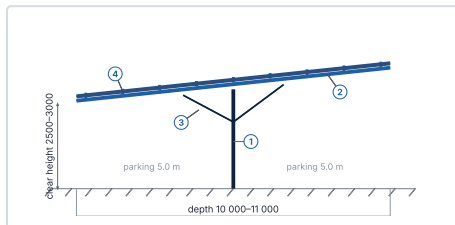
Columns and beams are hot-rolled or welded I-sections, galvanised after fabrication.

Carport components and options

I-sections for columns and beams CST-SF010 · S355JR

Part number	H × B × tw × tf mm	kg/m	I _y cm ⁴	W _y cm ³	I _z cm ⁴	W _z cm ³
CST-SF010-152-160-6-9	152 × 160 × 6 × 9	28.9	1595	210	615	77
CST-SF010-190-200-6.5-10	190 × 200 × 6.5 × 10	40.1	3509	369	1334	133
CST-SF010-230-240-7.5-12	230 × 240 × 7.5 × 12	57.3	7397	643	2766	230
CST-SF010-240-120-6.2-9.8	240 × 120 × 6.2 × 9.8	29.2	3671	306	283	47
CST-SF010-300-150-7.1-10.7	300 × 150 × 7.1 × 10.7	40.7	7999	533	603	80
CST-SF010-360-170-8-12.7	360 × 170 × 8 × 12.7	54.9	15524	862	1041	123

Values calculated without root radius. Equivalent to European HEA and IPE sizes.



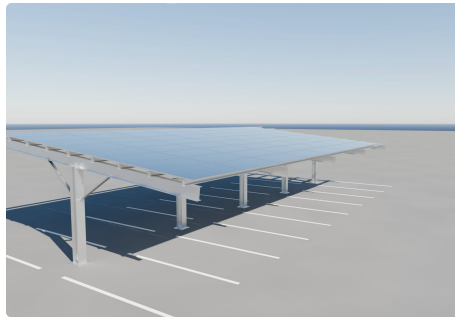
Carport cantilever, single row

CST-SC002

Columns at the back of the parking space, 5.0 m clear cantilever to the front.

System	Depth m	Clear height mm
CST-SC002-C	5.0-6.0	2500-3000

- Ideal along building walls and site boundaries
- Same beams, purlins and clamps as CST-SC001



Carport multi-column, large spans

CST-SC003

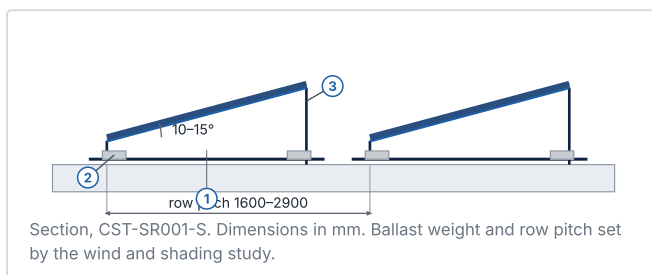
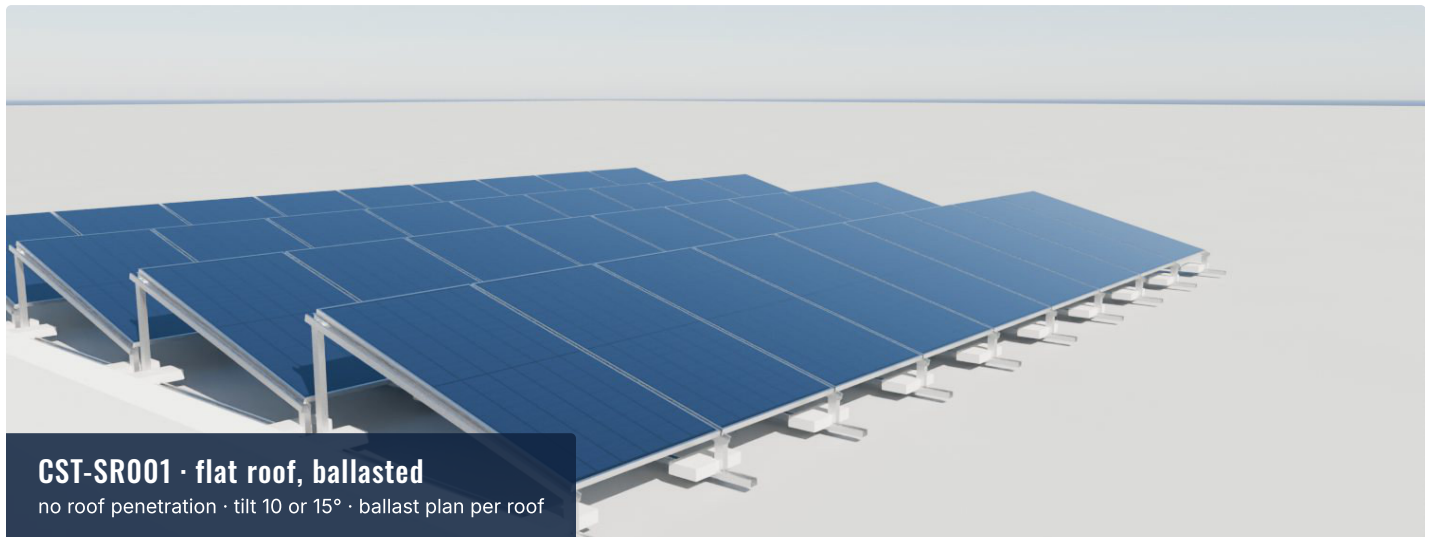
For trucks, buses, logistics yards and fuel stations.

System	Grid m	Clear height mm
CST-SC003-M	8-16	3000-5000

- Column grid 8 to 16 m, clear height up to 5 m
- Optional watertight roof and rain water collection
- LED lighting by Zolaris Luminaire, part of our group

04 Roof systems

Flat, metal and tiled roofs: light structures that protect the roof and are fast to install.



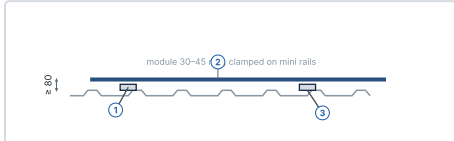
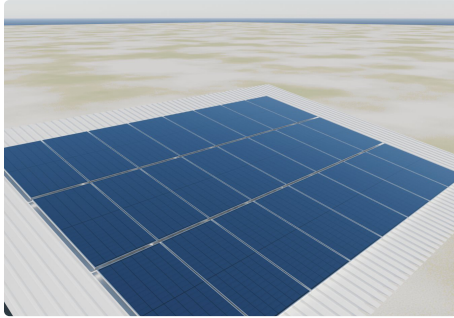
- No drilling: the structure is held by ballast, the roof membrane stays intact
- Added roof load set by the ballast plan; checked against the roof capacity
- Protection pads under every bearing point
- East-west version CST-SR002-EW for the highest module density

Configurations

System	Orientation	Tilt °	Modules	Fixing
CST-SR001-S	south facing	10 / 15	1 portrait	ballast
CST-SR002-EW	east - west	10	1 landscape	ballast

Components

Pos.	Component	Part number + finish	Material
1	Base rail, lipped C-channel	CST-SF001-60-30-10-2.0-ZM	S350GD
2	Front and rear leg	CST-SF001-60-30-10-2.0-ZM	S350GD
3	Module rafter	CST-SF001-60-30-10-2.0-ZM	S350GD
4	Ballast tray	CST-SA080-400-ZM	S350GD
5	Roof protection pad	EPDM, supplied with tray	EPDM
6	Mid clamp / end clamp	CST-SA001-35 / SA002-35-AL	6063-T6



Trapezoidal metal roof

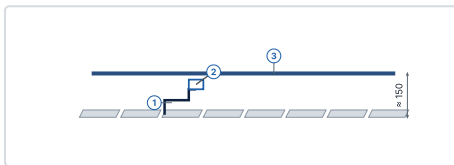
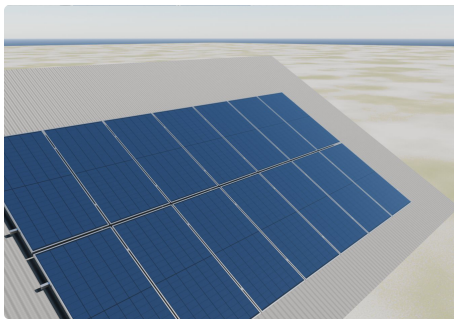
CST-SR003

Mini rails fixed directly to the sheet ribs with self-drilling screws.

System	Mounting	Fixing	Roof sheet
CST-SR003-TR	parallel	mini rail	steel ≥ 0.5 / alu ≥ 0.7 mm
CST-SR006-TL	tilted 10–30°	tilt-up frame on mini rails	low-pitch metal roof

Pos.	Component	Part number + finish	Material
1	Mini rail 400 mm	CST-SA011-400-AL	6005A-T6
2	Mid clamp / end clamp	CST-SA001-35 / SA002-35-AL	6063-T6

- Lowest weight and fastest installation
- EPDM pad seals every screw
- Landscape or portrait modules



Tiled roof

CST-SR005

Stainless roof hooks under the tiles carry aluminium rails.

System	Mounting	Fixing	Roof
CST-SR005-TL	parallel	hooks + rails	tiles, slate

Pos.	Component	Part number + finish	Material
1	Roof hook	CST-SA010-ADJ-SS304	1.4301
2	Module rail	CST-SF020-40-40-2.0-AL	6005A-T6
3	Hammer-head bolt	CST-SA021-M8-25-SS304	A2-70

- Hooks every 0.8 to 1.2 m on the rafters
- Height-adjustable hook for uneven roofs
- No tile cutting with standard hooks

Standing-seam roof

CST-SR004

Clamps grip the seam, no penetration of the roof.

System	Mounting	Fixing	Roof
CST-SR004-SS	parallel	seam clamp	standing seam

Pos.	Component	Part number + finish	Material
1	Seam clamp	CST-SA012-R / -A-AL	6063-T6

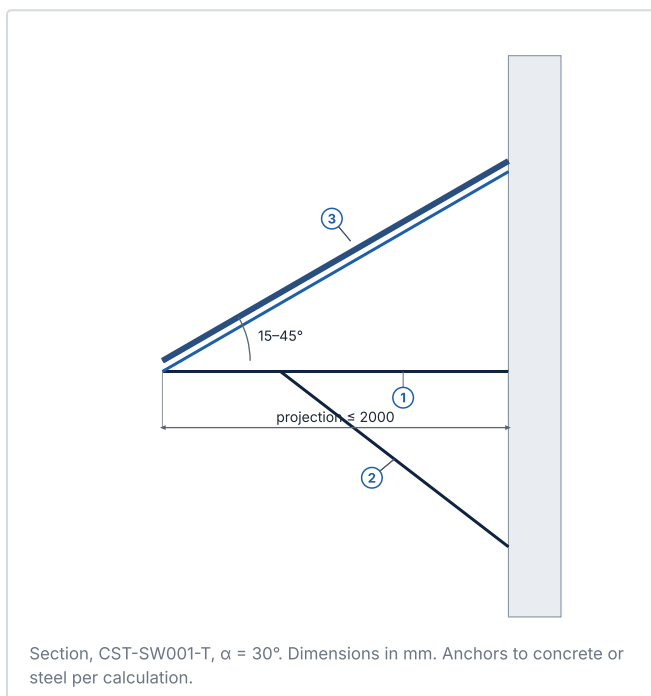
- For round-seam and angle-seam profiles
- Rails CST-SF020 or direct module clamping

05 Wall and facade systems

South-facing walls produce energy all year and give shade to the windows below.



CST-SW001 · wall-mounted tilted array
 cantilever brackets · tilt 15 to 45° · shades windows below



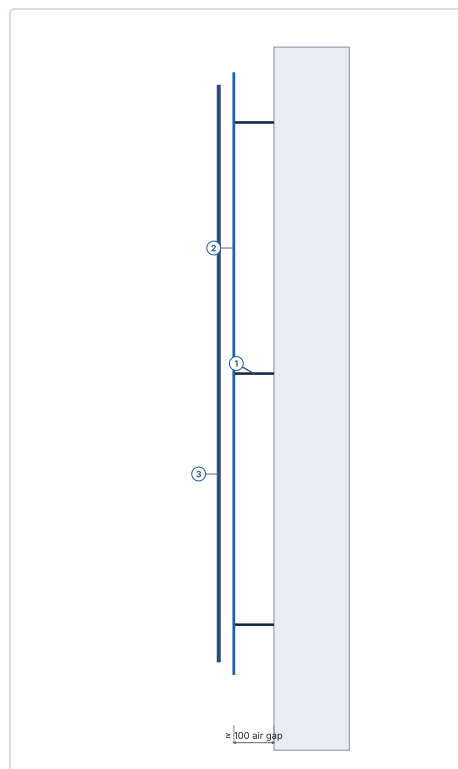
- Cantilever brackets every 1.0 to 1.2 m
- Works as a sun shade (brise-soleil) for the floor below
- Finish -PC in the facade colour on request

Configurations

System	Tilt °	Projection mm	Bracket spacing m
CST-SW001-T	15-45	≤ 2000	1.0-1.2

Components

Pos.	Component	Part number + finish	Material
1	Wall arm, lipped C-channel	CST-SF001-60-30-10-2.0-ZM	S350GD
2	Strut, lipped C-channel	CST-SF001-60-30-10-2.0-ZM	S350GD
3	Module rafter	CST-SF001-60-30-10-2.0-ZM	S350GD
4	Wall plate and anchors	per calculation	S355JR
5	Mid clamp / end clamp	CST-SA001-35 / SA002-35-AL	6063-T6



Vertical facade rail system

CST-SW002

Modules flush to the facade on vertical rails, with a ventilated air gap.

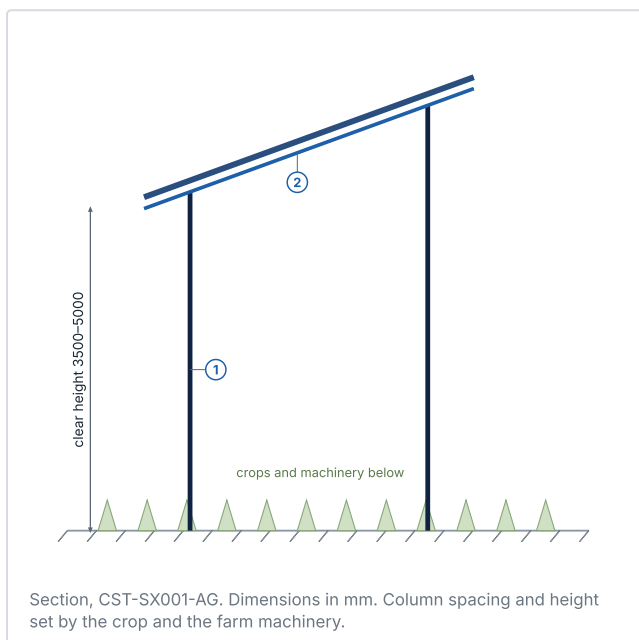
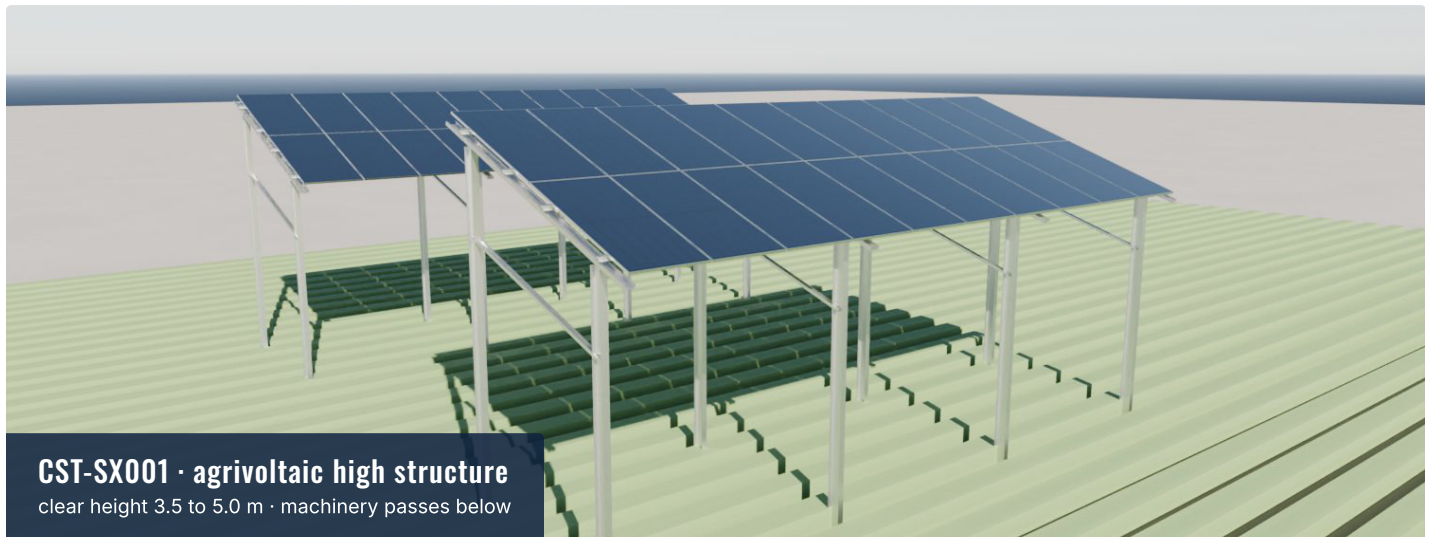
System	Mounting	Air gap mm
CST-SW002-V	vertical, flush	≥ 100

Pos.	Component	Part number + finish	Material
1	Vertical rail	CST-SF020-40-60-2.2-AL	6005A-T6
2	Wall bracket	CST-SA031-100-HDG	S350GD

- Air gap ≥ 100 mm keeps modules cool
- Works with framed and glass-glass facade modules
- Rails CST-SF020, brackets CST-SA031

06 Special structures

Agrivoltaics, floating plants and pole mounts: solar where land, water and space are shared.



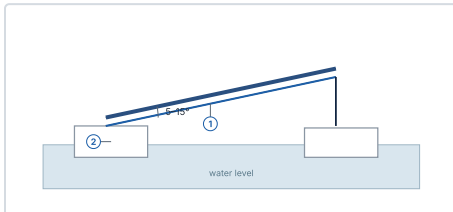
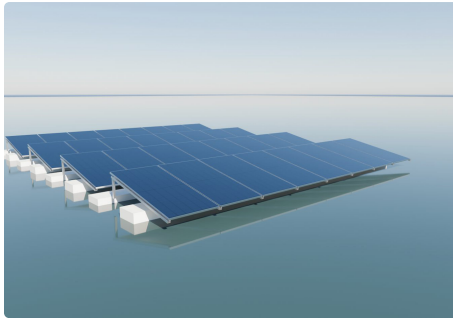
Configurations

System	Clear height mm	Column spacing m	Tilt °
CST-SX001-AG	3500-5000	4-8	10-30

Components

Pos.	Component	Part number + finish	Material
1	Column, I-section	CST-SF010-240-120-6.2-9.8 - HDG	S355JR
2	Rafter, lipped C-channel	CST-SF001-150-50-20-3.0 - ZM	S350GD
3	Brace, lipped C-channel	CST-SF001-80-40-15-2.5 - ZM	S350GD
4	Module purlin, top-hat	CST-SF004-50-50-22-1.8 - ZM	S350GD

- Land produces food and energy at the same time
- Partial shade protects crops from heat and saves irrigation water
- I-section columns spaced for tractors and harvesters



Floating array frame

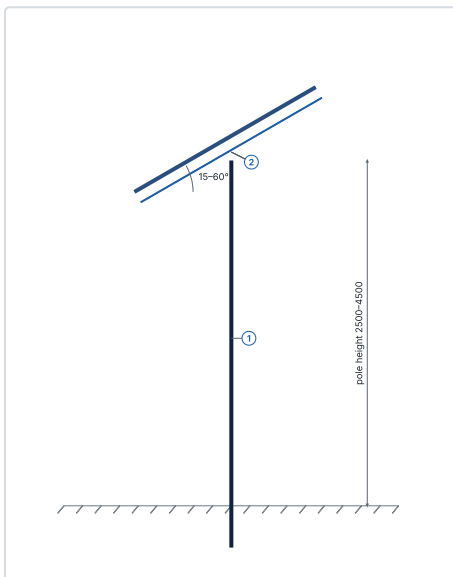
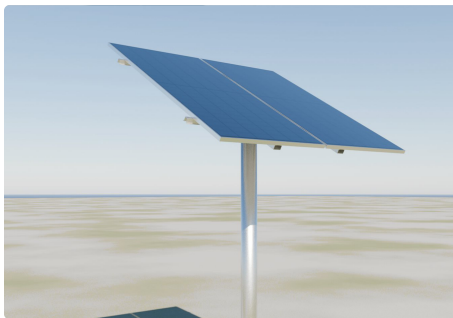
CST-SX002

Steel frames that carry the modules on float platforms on reservoirs, lakes and ponds.

System	Tilt °	Finish
CST-SX002-FL	5-15	-ZM / -SS316

Pos.	Component	Part number + finish	Material
1	Frame member, lipped C-channel	CST-SF001-60-30-10-2.0-ZM	S350GD
2	Bolt set M10	CST-SA020-M10-25-SS316	A4-70

- Tilt 5 to 15°, low wind profile
- Water cools the modules
- Floats, anchoring and mooring designed per project



Pole mount, 1 to 4 modules

CST-SX003

For solar street lights, cameras, telecom, signs and small off-grid systems.

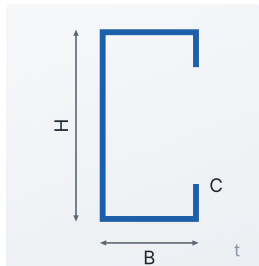
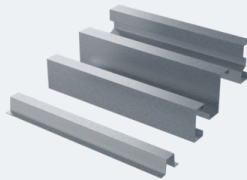
System	Modules	Pole	Tilt °
CST-SX003-PM	1-4	Ø76-114	15-60

Pos.	Component	Part number + finish	Material
1	Pole, round tube	CST-SF031-114.3-3.6-HDG	S355
2	Pole-top mounting head	CST-SA110-114.3-HDG	S355JR
3	Module rail, top-hat	CST-SF004-40-50-20-1.5-ZM	S350GD

- Pole Ø76 to Ø114 mm, height 2.5 to 4.5 m
- Tilt 15 to 60°, adjustable on site
- Perfect match for Zolaris smart solar street lights

07 Structural profiles

Cold-formed profiles roll-formed and punched in our plant, plus hot-rolled sections, tubes and aluminium rails.

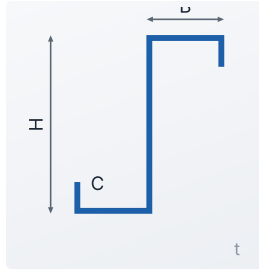


Rafters, braces, carport purlins, wall brackets.
Steel S350GD, S420GD or S450GD; finish -ZM, -HDG or -PG.

C-channel, lipped 19 sizes

CST-SF001

Part number	H mm	B mm	C mm	t mm	A cm ²	Mass kg/m	I _y cm ⁴	W _y cm ³	I _z cm ⁴	W _z cm ³
CST-SF001-60-30-10-1.5	60	30	10	1.5	2.10	1.65	12.7	4.13	3.0	1.49
CST-SF001-60-30-10-2.0	60	30	10	2.0	2.80	2.20	16.9	5.46	4.0	1.97
CST-SF001-80-40-15-1.5	80	40	15	1.5	2.85	2.24	30.4	7.47	7.4	2.85
CST-SF001-80-40-15-2.0	80	40	15	2.0	3.80	2.98	40.6	9.90	9.9	3.76
CST-SF001-80-40-15-2.5	80	40	15	2.5	4.75	3.73	50.7	12.30	12.4	4.66
CST-SF001-100-50-15-2.0	100	50	15	2.0	4.60	3.61	77.6	15.22	17.8	5.29
CST-SF001-100-50-15-2.5	100	50	15	2.5	5.75	4.51	97.0	18.93	22.2	6.56
CST-SF001-100-50-15-3.0	100	50	15	3.0	6.90	5.42	116.4	22.61	26.7	7.82
CST-SF001-120-50-20-2.0	120	50	20	2.0	5.20	4.08	121.1	19.85	21.1	6.26
CST-SF001-120-50-20-2.5	120	50	20	2.5	6.50	5.10	151.3	24.71	26.4	7.77
CST-SF001-120-50-20-3.0	120	50	20	3.0	7.80	6.12	181.6	29.53	31.7	9.26
CST-SF001-150-50-20-2.0	150	50	20	2.0	5.80	4.55	202.8	26.69	22.7	6.40
CST-SF001-150-50-20-2.5	150	50	20	2.5	7.25	5.69	253.5	33.25	28.4	7.95
CST-SF001-150-50-20-3.0	150	50	20	3.0	8.70	6.83	304.2	39.77	34.1	9.48
CST-SF001-150-65-20-2.0	150	65	20	2.0	6.40	5.02	236.6	31.13	41.3	9.25
CST-SF001-150-65-20-2.5	150	65	20	2.5	8.00	6.28	295.7	38.78	51.7	11.50
CST-SF001-150-65-20-3.0	150	65	20	3.0	9.60	7.54	354.9	46.39	62.0	13.73
CST-SF001-200-65-20-2.5	200	65	20	2.5	9.25	7.26	573.0	56.59	56.6	11.84
CST-SF001-200-65-20-3.0	200	65	20	3.0	11.10	8.71	687.6	67.75	67.9	14.13

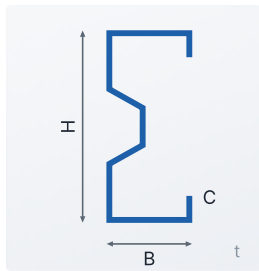


Purlins, lapped or sleeved over supports.
Steel S350GD, S420GD or S450GD; finish -ZM, -HDG or -PG.

Z-purlin, lipped 12 sizes

CST-SF002

Part number	H mm	B mm	C mm	t mm	A cm ²	Mass kg/m	I _y cm ⁴	W _y cm ³	I _z cm ⁴	W _z cm ³
CST-SF002-100-50-15-1.5	100	50	15	1.5	3.45	2.71	58.2	11.47	23.8	4.68
CST-SF002-100-50-15-2.0	100	50	15	2.0	4.60	3.61	77.6	15.22	31.7	6.21
CST-SF002-100-50-15-2.5	100	50	15	2.5	5.75	4.51	97.0	18.93	39.6	7.73
CST-SF002-120-50-20-1.5	120	50	20	1.5	3.90	3.06	90.8	14.95	27.5	5.42
CST-SF002-120-50-20-2.0	120	50	20	2.0	5.20	4.08	121.1	19.85	36.7	7.19
CST-SF002-120-50-20-2.5	120	50	20	2.5	6.50	5.10	151.3	24.71	45.9	8.95
CST-SF002-150-60-20-2.0	150	60	20	2.0	6.20	4.87	225.3	29.65	57.6	9.44
CST-SF002-150-60-20-2.5	150	60	20	2.5	7.75	6.08	281.7	36.94	72.0	11.76
CST-SF002-150-60-20-3.0	150	60	20	3.0	9.30	7.30	338.0	44.18	86.4	14.06
CST-SF002-200-70-20-2.0	200	70	20	2.0	7.60	5.97	478.4	47.37	84.9	11.96
CST-SF002-200-70-20-2.5	200	70	20	2.5	9.50	7.46	598.0	59.06	106.2	14.90
CST-SF002-200-70-20-3.0	200	70	20	3.0	11.40	8.95	717.6	70.70	127.5	17.83

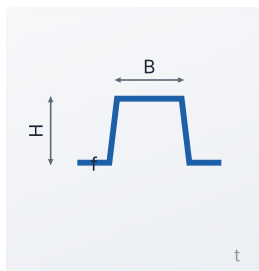


Driven posts and columns; the Σ web stiffener raises buckling resistance.
Steel S350GD, S420GD or S450GD; finish -ZM, -HDG or -PG.

Σ-post (sigma) 9 sizes

CST-SF003

Part number	H mm	B mm	C mm	t mm	A cm ²	Mass kg/m	I _y cm ⁴	W _y cm ³	I _z cm ⁴	W _z cm ³
CST-SF003-120-50-15-2.0	120	50	15	2.0	5.52	4.34	119.2	19.54	16.9	5.19
CST-SF003-120-50-15-2.5	120	50	15	2.5	6.90	5.42	149.0	24.33	21.2	6.44
CST-SF003-140-60-18-2.0	140	60	18	2.0	6.51	5.11	193.0	27.18	29.0	7.44
CST-SF003-140-60-18-2.5	140	60	18	2.5	8.13	6.38	241.3	33.86	36.2	9.24
CST-SF003-140-60-18-3.0	140	60	18	3.0	9.76	7.66	289.5	40.49	43.5	11.02
CST-SF003-160-65-20-2.5	160	65	20	2.5	9.11	7.15	347.8	42.81	47.3	11.18
CST-SF003-160-65-20-3.0	160	65	20	3.0	10.93	8.58	417.4	51.21	56.8	13.34
CST-SF003-180-70-20-2.5	180	70	20	2.5	9.94	7.80	476.4	52.21	58.4	12.70
CST-SF003-180-70-20-3.0	180	70	20	3.0	11.92	9.36	571.7	62.48	70.1	15.16



Module purlins and rails; clamps fix to the top.
Steel S350GD, S420GD or S450GD; finish -ZM, -HDG or -PG.

Top-hat (omega) purlin 6 sizes

CST-SF004

Part number	H mm	B mm	f mm	t mm	A cm ²	Mass kg/m	I _y cm ⁴	W _y cm ³	I _z cm ⁴	W _z cm ³
CST-SF004-30-40-15-1.2	30	40	15	1.2	1.48	1.16	2.2	1.40	5.6	1.56
CST-SF004-30-40-15-1.5	30	40	15	1.5	1.85	1.45	2.8	1.74	6.9	1.94
CST-SF004-40-50-20-1.5	40	50	20	1.5	2.41	1.90	6.4	3.10	14.6	3.19
CST-SF004-40-50-20-1.8	40	50	20	1.8	2.90	2.27	7.7	3.69	17.5	3.81
CST-SF004-50-50-22-1.8	50	50	22	1.8	3.29	2.58	13.0	4.86	20.2	4.23
CST-SF004-50-50-22-2.0	50	50	22	2.0	3.65	2.87	14.4	5.38	22.5	4.69

Aluminium module rails CST-SF020 · EN AW-6005A T6 · finish -AL

Part number	B × H × t mm	kg/m	I _y cm ⁴	W _y cm ³	I _z cm ⁴	W _z cm ³
CST-SF020-40-40-2.0	40 × 40 × 2.0	0.82	7.3	3.67	7.3	3.67
CST-SF020-40-60-2.2	40 × 60 × 2.2	1.14	21.0	7.00	11.1	5.55
CST-SF020-40-80-2.5	40 × 80 × 2.5	1.55	47.6	11.90	15.9	7.93
CST-SF020-50-100-3.0	50 × 100 × 3.0	2.33	112.1	22.42	37.4	14.98

Rail with top channel for hammer-head bolts; values for the closed box section. Rails are used on tiled roofs, facades and trackers.

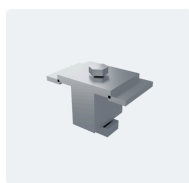
Round tubes CST-SF031 · S355 · finish -HDG

Part number	Ø × t mm	kg/m	I cm ⁴	W cm ³	Used for
CST-SF031-76.1-3.2	Ø76.1 × 3.2	5.75	48.8	12.8	ground screws Ø76
CST-SF031-88.9-3.6	Ø88.9 × 3.6	7.57	87.9	19.8	ground screws Ø89
CST-SF031-114.3-3.6	Ø114.3 × 3.6	9.83	192.0	33.6	poles, ground screws Ø114
CST-SF031-139.7-4.0	Ø139.7 × 4.0	13.39	392.9	56.2	poles
CST-SF031-168.3-4.5	Ø168.3 × 4.5	18.18	777.2	92.4	poles, carport columns

Square tubes CST-SF030 are listed under Trackers; I-sections CST-SF010 under Carports. Section values on the centre-line of the gross section, without corner radii. Mass excludes the coating.

08 Clamps, fixings and accessories

Every connection of a CASK Steel structure, each with its own part number.

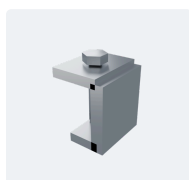


Mid clamp for framed modules

CST-SA001

EN AW-6063 T6, bolt A2-70 · finish -AL

Part number	Size	kg/pc
CST-SA001-30	module frame 30 mm, with M8 bolt and slot nut	0.09
CST-SA001-32	module frame 32 mm, with M8 bolt and slot nut	0.09
CST-SA001-35	module frame 35 mm, with M8 bolt and slot nut	0.09
CST-SA001-40	module frame 40 mm, with M8 bolt and slot nut	0.09
CST-SA001-45	module frame 45 mm, with M8 bolt and slot nut	0.09



End clamp for framed modules

CST-SA002

EN AW-6063 T6, bolt A2-70 · finish -AL

Part number	Size	kg/pc
CST-SA002-30	module frame 30 mm, with M8 bolt and slot nut	0.08
CST-SA002-32	module frame 32 mm, with M8 bolt and slot nut	0.08
CST-SA002-35	module frame 35 mm, with M8 bolt and slot nut	0.08
CST-SA002-40	module frame 40 mm, with M8 bolt and slot nut	0.08
CST-SA002-45	module frame 45 mm, with M8 bolt and slot nut	0.08



Roof hook for tiled roofs

CST-SA010

Stainless 1.4301 · finish -SS304 / -SS316

Part number	Size	kg/pc
CST-SA010-140	base 140 mm, fixed height	0.55
CST-SA010-180	base 180 mm, fixed height	0.68
CST-SA010-ADJ	height-adjustable, base 180 mm	0.82



Mini rail for trapezoidal sheet

CST-SA011

EN AW-6005A T6, EPDM pad · finish -AL

Part number	Size	kg/pc
CST-SA011-300	length 300 mm, with self-drilling screws	0.28
CST-SA011-400	length 400 mm, with self-drilling screws	0.38
CST-SA011-500	length 500 mm, with self-drilling screws	0.47

Standing-seam clamp

CST-SA012

EN AW-6063 T6, bolts A2-70 · finish -AL

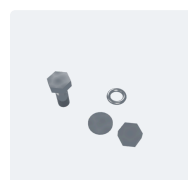
Part number	Size	kg/pc
CST-SA012-R	for round-seam (bulb) profiles	0.16
CST-SA012-A	for angle-seam profiles	0.15

Hanger bolt with mounting plate

CST-SA013

Stainless 1.4301 · finish -SS304 / -SS316

Part number	Size	kg/pc
CST-SA013-M10-200	M10 × 200 mm	0.18
CST-SA013-M10-250	M10 × 250 mm	0.21
CST-SA013-M12-300	M12 × 300 mm	0.33



Bolt set: hex bolt, nut, 2 washers

CST-SA020

Grade 8.8 HDG or A2-70 / A4-70 · finish -HDG / -SS304 / -SS316

Part number	Size	kg/pc
CST-SA020-M8-20	M8 × 20 mm	0.02
CST-SA020-M8-25	M8 × 25 mm	0.022
CST-SA020-M10-25	M10 × 25 mm	0.036
CST-SA020-M10-30	M10 × 30 mm	0.039
CST-SA020-M12-30	M12 × 30 mm	0.058
CST-SA020-M12-40	M12 × 40 mm	0.064
CST-SA020-M16-50	M16 × 50 mm	0.14

Hammer-head bolt for rail channel

CST-SA021

Stainless A2-70 · finish -SS304 / -SS316

Part number	Size	kg/pc
CST-SA021-M8-25	M8 × 25 mm, with flange nut	0.018
CST-SA021-M10-25	M10 × 25 mm, with flange nut	0.03



Post-to-rafter bracket

CST-SA030

S355JR · finish -HDG / -ZM / -EP / -PC

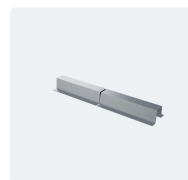
Part number	Size	kg/pc
CST-SA030-120	for Σ-post H120	1.4
CST-SA030-140	for Σ-post H140	1.6
CST-SA030-160	for Σ-post H160	1.9
CST-SA030-180	for Σ-post H180	2.2

Purlin cleat (rafter-to-purlin)

CST-SA031

S350GD · finish -HDG / -PG / -ZM / -EP / -PC

Part number	Size	kg/pc
CST-SA031-50	for purlin H50	0.25
CST-SA031-100	for purlin H100	0.4
CST-SA031-120	for purlin H120	0.48
CST-SA031-150	for purlin H150	0.6
CST-SA031-200	for purlin H200	0.8



Splice for top-hat purlin

CST-SA040

S350GD · finish -HDG / -PG / -ZM / -EP / -PC

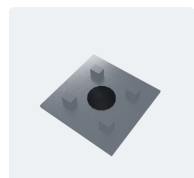
Part number	Size	kg/pc
CST-SA040-30	for top-hat H30, length 300 mm	0.32
CST-SA040-40	for top-hat H40, length 300 mm	0.42
CST-SA040-50	for top-hat H50, length 300 mm	0.52

Sleeve for Z- and C-purlins

CST-SA041

S350GD · finish -HDG / -PG / -ZM / -EP / -PC

Part number	Size	kg/pc
CST-SA041-100	for purlin H100, length 600 mm	1.5
CST-SA041-120	for purlin H120, length 600 mm	1.8
CST-SA041-150	for purlin H150, length 600 mm	2.6
CST-SA041-200	for purlin H200, length 600 mm	3.4



Earthing clip for module frame

CST-SA050

Stainless 1.4301 · finish -SS304 / -SS316

Part number	Size	kg/pc
CST-SA050-30-40	module frame 30 to 40 mm	0.005

Earthing terminal for rail

CST-SA051

Stainless 1.4301, tinned copper · finish -SS304 / -SS316

Part number	Size	kg/pc
CST-SA051-6-16	conductor 6 to 16 mm ²	0.04

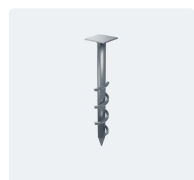


Base plate with post stub

CST-SA060

S355JR · finish -HDG / -ZM / -EP / -PC

Part number	Size	kg/pc
CST-SA060-120	for Σ-post H120, plate 300 x 300 x 15 mm	11.8
CST-SA060-140	for Σ-post H140, plate 300 x 300 x 15 mm	12.4
CST-SA060-160	for Σ-post H160, plate 300 x 300 x 15 mm	13.0
CST-SA060-180	for Σ-post H180, plate 300 x 300 x 15 mm	13.6



Ground screw with flange

CST-SA070

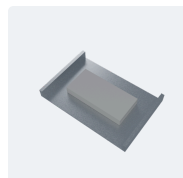
S355JR · finish -HDG / -ZM / -EP / -PC

Part number	Size	kg/pc
CST-SA070-76-1000	Ø76 x 1000 mm	7.2
CST-SA070-76-1400	Ø76 x 1400 mm	9.6
CST-SA070-76-1600	Ø76 x 1600 mm	10.8
CST-SA070-89-1600	Ø89 x 1600 mm	13.1
CST-SA070-89-2000	Ø89 x 2000 mm	15.9
CST-SA070-114-2000	Ø114 x 2000 mm	21.4

Ballast tray for flat roofs

CST-SA080

S350GD · finish -HDG / -PG / -ZM / -EP / -PC



Part number	Size	kg/pc
CST-SA080-400	length 400 mm, for concrete blocks	1.9
CST-SA080-600	length 600 mm, for concrete blocks	2.8

Module cable clip

CST-SA090

Stainless 1.4301 · finish -SS304 / -SS316

Part number	Size	kg/pc
CST-SA090-1	holds 1 cables Ø4 to 7 mm	0.004
CST-SA090-2	holds 2 cables Ø4 to 7 mm	0.004
CST-SA090-4	holds 4 cables Ø4 to 7 mm	0.004

Tracker bearing housing with polymer bush

CST-SA100

S355JR, UHMW-PE bush · finish -HDG / -ZM / -EP / -PC

Part number	Size	kg/pc
CST-SA100-100	for torque tube 100 x 100 mm	4.2
CST-SA100-120	for torque tube 120 x 120 mm	4.9
CST-SA100-150	for torque tube 150 x 150 mm	6.1

Torque tube module-rail clamp (U-bolt)

CST-SA101

S355JR · finish -HDG / -ZM / -EP / -PC

Part number	Size	kg/pc
CST-SA101-100	for torque tube 100 x 100 mm	0.6
CST-SA101-120	for torque tube 120 x 120 mm	0.7
CST-SA101-150	for torque tube 150 x 150 mm	0.85

Pole-top mounting head

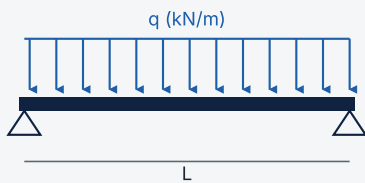
CST-SA110

S355JR · finish -HDG / -ZM / -EP / -PC

Part number	Size	kg/pc
CST-SA110-76.1	for pole Ø76.1 mm	3.4
CST-SA110-88.9	for pole Ø88.9 mm	3.9
CST-SA110-114.3	for pole Ø114.3 mm	4.8

09 Technical data

Span tables, bolt torques and installation guidance for pre-selection. Every project receives its own calculation.



How to use. Take the design line load on the member from the module weight, wind and snow (load per $\text{m}^2 \times$ load width). Find the column for that load and read the largest span for each profile. Choose a profile whose span is equal to or longer than the frame spacing.

Example: purlin load width $1.15 \text{ m} \times 1.30 \text{ kN/m}^2 = 1.5 \text{ kN/m}$, frame spacing $3.5 \text{ m} \rightarrow$ CST-SF002-100-50-15-2.0 (3.88 m).

Lipped C-channel CST-SF001 · S350GD

Part number	Maximum span L (m) for design line load q_{Ed} (kN/m)						
	0.5	1	1.5	2	3	4	5
CST-SF001-100-50-15-2.0	5.60	4.44	3.88	3.53	3.08	2.80	2.60
CST-SF001-100-50-15-2.5	6.03	4.78	4.18	3.80	3.32	3.01	2.80
CST-SF001-100-50-15-3.0	6.41	5.08	4.44	4.04	3.53	3.20	2.97
CST-SF001-120-50-20-2.0	6.49	5.15	4.50	4.09	3.57	3.25	3.01
CST-SF001-120-50-20-2.5	6.99	5.55	4.85	4.40	3.85	3.50	3.25
CST-SF001-120-50-20-3.0	7.43	5.90	5.15	4.68	4.09	3.71	3.45
CST-SF001-150-50-20-2.0	7.71	6.12	5.34	4.86	4.24	3.85	3.58
CST-SF001-150-50-20-2.5	8.00	6.59	5.76	5.23	4.57	4.15	3.85
CST-SF001-150-50-20-3.0	8.00	7.00	6.12	5.56	4.86	4.41	4.10
CST-SF001-150-65-20-2.0	8.00	6.44	5.63	5.11	4.47	4.06	3.77
CST-SF001-150-65-20-2.5	8.00	6.94	6.06	5.51	4.81	4.37	4.06
CST-SF001-150-65-20-3.0	8.00	7.37	6.44	5.85	5.11	4.64	4.31
CST-SF001-200-65-20-2.5	8.00	8.00	7.56	6.86	6.00	5.45	5.06
CST-SF001-200-65-20-3.0	8.00	8.00	8.00	7.29	6.37	5.79	5.37

Spans limited by bending stress ($f_y = 350 \text{ N/mm}^2$) in dark figures, by deflection $L/200$ under the characteristic load ($q_{Ed} / 1.4$) in blue.

Z-purlin CST-SF002 · S350GD

Part number	Maximum span L (m) for design line load q_{Ed} (kN/m)						
	0.5	1	1.5	2	3	4	5
CST-SF002-100-50-15-1.5	5.08	4.04	3.53	3.20	2.80	2.54	2.36
CST-SF002-100-50-15-2.0	5.60	4.44	3.88	3.53	3.08	2.80	2.60
CST-SF002-100-50-15-2.5	6.03	4.78	4.18	3.80	3.32	3.01	2.80
CST-SF002-120-50-20-1.5	5.90	4.68	4.09	3.71	3.25	2.95	2.74
CST-SF002-120-50-20-2.0	6.49	5.15	4.50	4.09	3.57	3.25	3.01
CST-SF002-120-50-20-2.5	6.99	5.55	4.85	4.40	3.85	3.50	3.25
CST-SF002-150-60-20-2.0	7.98	6.34	5.54	5.03	4.39	3.99	3.71
CST-SF002-150-60-20-2.5	8.00	6.83	5.96	5.42	4.73	4.30	3.99
CST-SF002-150-60-20-3.0	8.00	7.25	6.34	5.76	5.03	4.57	4.24
CST-SF002-200-70-20-2.0	8.00	8.00	7.11	6.46	5.65	5.13	4.76
CST-SF002-200-70-20-2.5	8.00	8.00	7.66	6.96	6.08	5.53	5.13
CST-SF002-200-70-20-3.0	8.00	8.00	8.00	7.40	6.46	5.87	5.45

Aluminium rails CST-SF020 · 6005A-T6, single span

Part number	Maximum span L (m) between roof hooks for design line load q_{Ed} (kN/m)					
	0.3	0.5	0.75	1	1.5	2
CST-SF020-40-40-2.0	2.31	1.95	1.70	1.54	1.35	1.23
CST-SF020-40-60-2.2	3.00	2.76	2.41	2.19	1.92	1.74
CST-SF020-40-80-2.5	3.00	3.00	3.00	2.88	2.52	2.29
CST-SF020-50-100-3.0	3.00	3.00	3.00	3.00	3.00	3.00

$f_{0.2} = 200 \text{ N/mm}^2$ with $\gamma_{M1} = 1.1$, $E = 70\,000 \text{ N/mm}^2$, deflection $L/150$; capped at 3.00 m.

Bolt tightening torque

Bolt	Grade 8.8 HDG N·m	Stainless A2-70 / A4-70 N·m
M8	25	18
M10	49	35
M12	85	60
M16	210	150

Threads lightly lubricated. Module clamps: follow the module maker's clamping zone and force.

Design basis

Elastic gross-section values, simply supported, uniformly distributed load, restrained against lateral-torsional buckling by modules and clamps. Values are for pre-selection; every CASK Steel project receives a structural calculation to EN 1993-1-3 / EN 1999-1-1 with effective sections, connection checks and site wind and snow loads to EN 1991-1-4 and EN 1991-1-3.

Installation in eight steps ground-mount example

1 Survey the site and set out the post positions from the layout drawing.	2 Carry out pull-out tests; confirm embedment depth.	3 Drive the posts to depth and check height and alignment ($\pm 30 \text{ mm}$).	4 Fix the post-to-rafter brackets and mount the rafters at the set tilt.
5 Fit the diagonal braces; tighten bolts to the torque table.	6 Mount the purlins and splices; check straightness along the table.	7 Place the modules and fix with mid and end clamps in the clamping zone.	8 Install earthing clips and bonding; final inspection and records.

Inspection and maintenance

- Visual check of structure and coatings after the first year, then every 2 to 3 years and after storms
- Re-tighten a sample of bolts (5 %) to the torque table at the first inspection
- Touch up coating damage with zinc-rich paint (min. $80 \mu\text{m}$ dry film)
- Keep vegetation and sand away from post bases; check ballast position on flat roofs

MADE BY CASK STEEL

We design and manufacture every structure in this catalogue

CASK Steel produces the profiles, brackets, clamps and complete systems shown here. We make them to your project: the size, the load, the finish and the quality tier you need, with the drawings, the calculation and the technical file to prove it.

Roll-forming and punching

C, Z, Σ and top-hat profiles in S250GD to S450GD, cut and punched to the project drawing.

Fabrication and coating

Brackets, base plates and hot-rolled parts, galvanised to EN ISO 1461 or powder coated in RAL colours.

Engineering

Layouts, structural calculations to Eurocode, pull-out test plans and ballast plans.

Complete systems

Ground mount, trackers, carports, roofs, facades, agrivoltaic, floating and pole structures.

One group, one delivery

With solar and power cables from CASK Cables and trays, earthing and lightning protection from CASK Steel.

Ready for your ERP

Every item has a CASK part number and appears in the item list that comes with this catalogue.

Range at a glance

Family	Products	Part numbers
CST-SG / ST / SC	Ground mount, trackers, carports	12 systems
CST-SR / SW / SX	Roof, wall and special structures	11 systems
CST-SF	Profiles, I-sections, tubes, aluminium rails	69 sizes
CST-SA	Clamps, hooks, fixings, ground screws, brackets	72 items



PRODUCT CATALOGUE 2026

Solar Mounting Structures

Designed and manufactured by CASK Steel. Every structure in this catalogue is produced by us: profiles, brackets, clamps and complete systems, made to your project size, load and finish, with drawings, calculations and a full technical file for each project.

- Ground mount, trackers, carports, roofs, facades and special structures
- Three quality tiers: ECO, PRO and MAX
- Steel S250GD to S450GD, aluminium 6063 and 6005A, stainless 304 and 316
- Hot-dip galvanised, zinc-aluminium-magnesium (ZM) alloy coated, powder coated

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