Data Sheet
Contec.greenlight

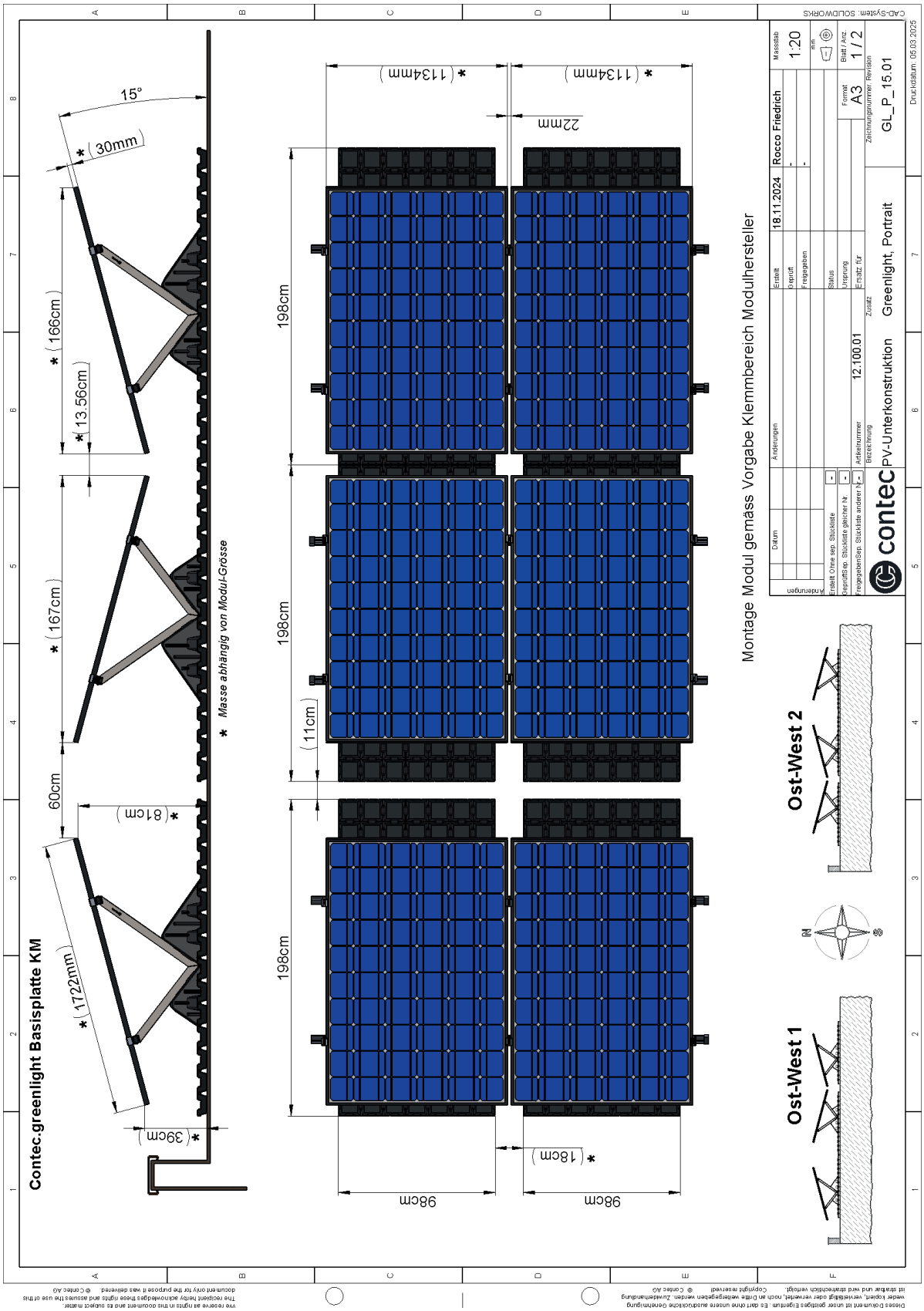
10 / 08 / 2026



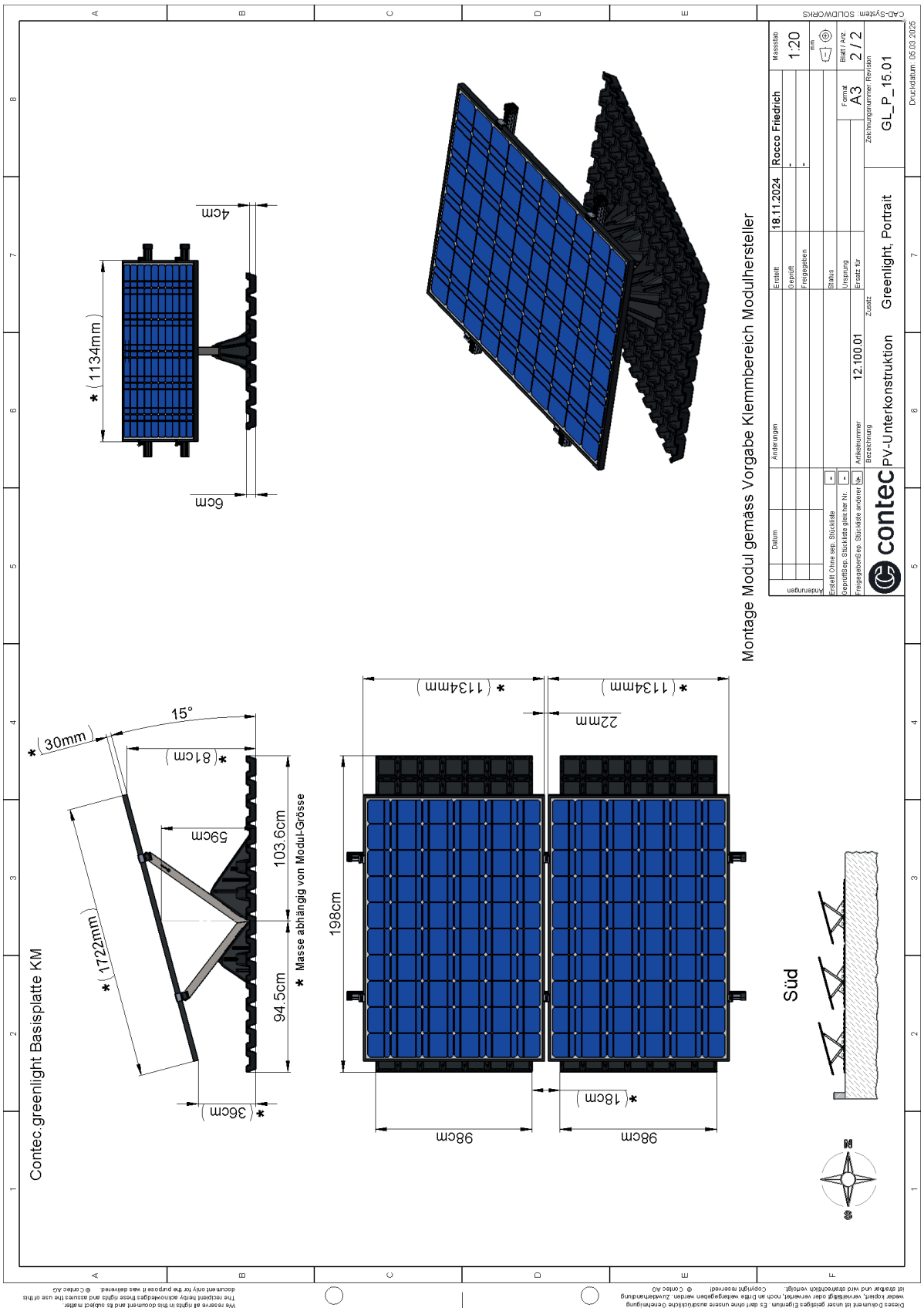
Technical Data

Contec.greenlight base plate	1980 x 980 x 60 mm
Weight per unit	12 kg, weight without ballast, without PV module
Material	Recycled HDPE, Magnelis, aluminium, stainless steel and galvanized steel
Water storage volume	39.5 litres, unfilled
Filling volume base plate	70 litres (substrate backfilled flush)
Compressive strength	Compressive strength unfilled: > 25 kN/m^2 Compressive strength backfilled (flush backfilled): > 70 kN/m^2
Water drainage capacity	i = 0.01 (= 1 % gradient) 0.4 l / (m*s) i = 0.02 (= 2 % gradient) 0.6 l / (m*s) i = 0.05 (= 5 % gradient) 1.0 l / (m*s)
Standard module inclination	10°, 15°, 20° standard (5 - 35°optional)
Roof connection	No structural roof connection necessary
Ballasting	Surcharge load and distance base plate must be compulsorily calculated by Contec AG according to the wind zone plan.
Roof pitch	Inclination up to 5° approved. From 5°: Release only with technical clarification by Contec AG.
Unit consists of	1 x Contec.greenlight base plate 1 x Knickfix 2.0 to 3.4 m profile rail Small components (screws, profile connectors, clamps)
Warranty	10 year system warranty on Contec.greenlight substructure ex works, valid from date of delivery.

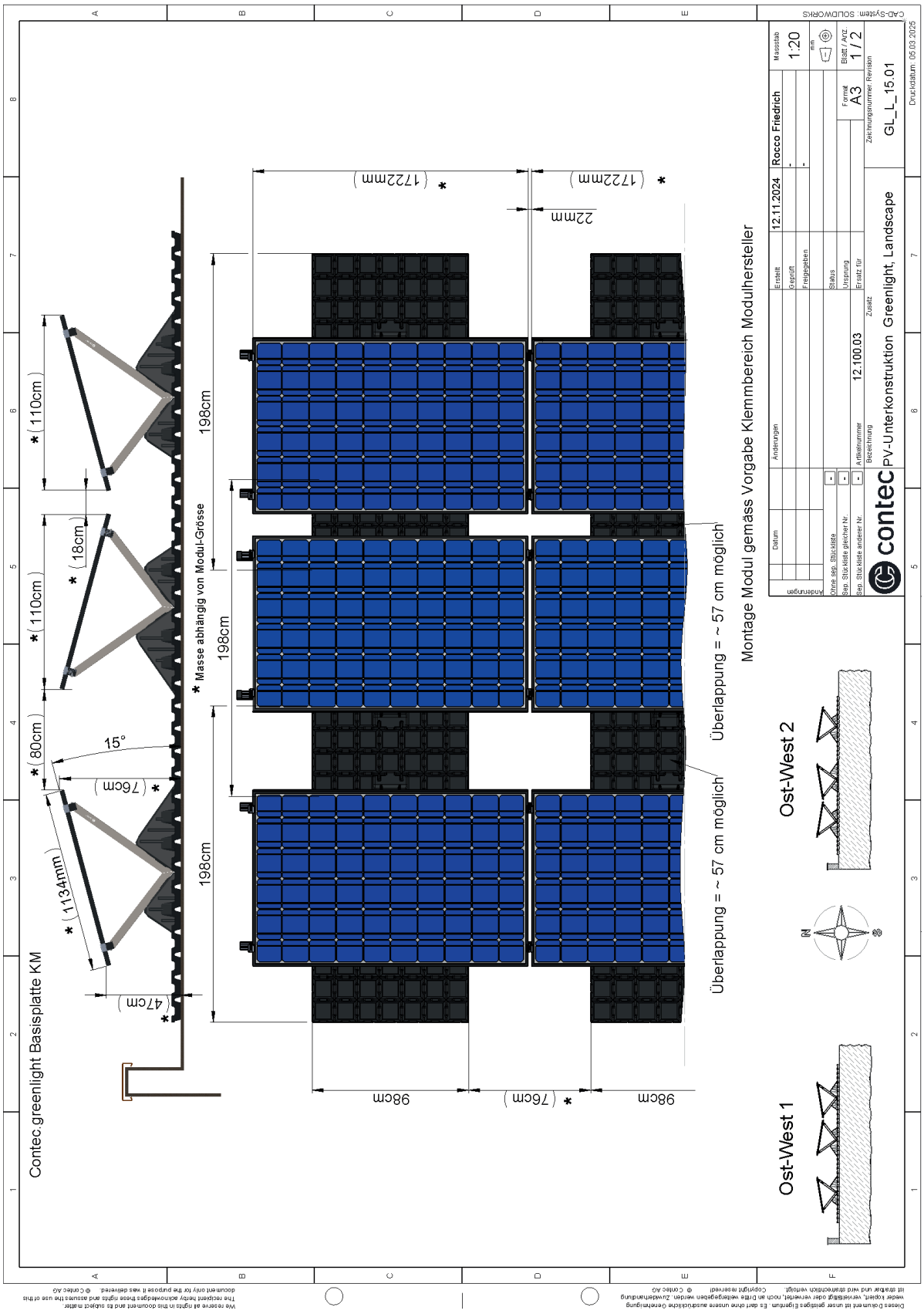
Contec.greenlight Portrait East-West



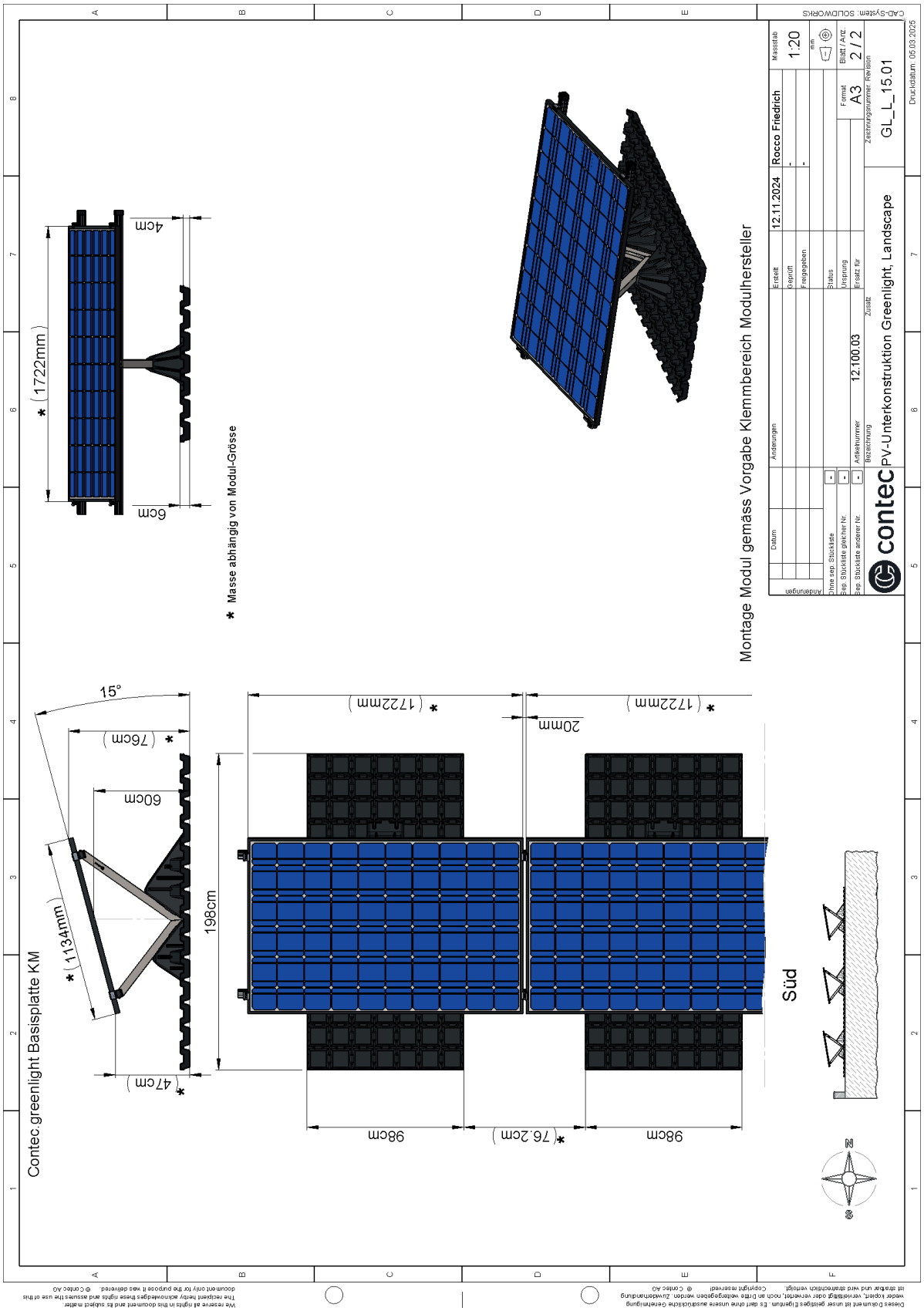
Contec.greenlight Portrait South



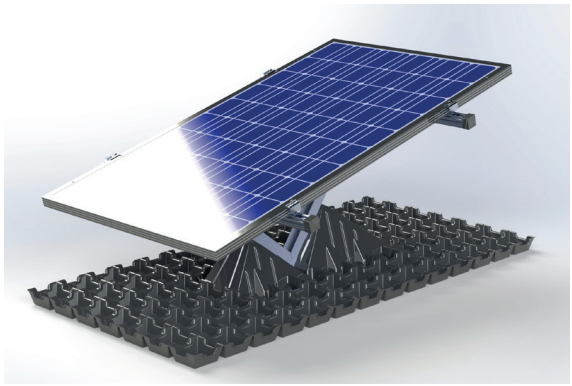
Contec.greenlight Landscape East-West



Contec.greenlight Landscape South



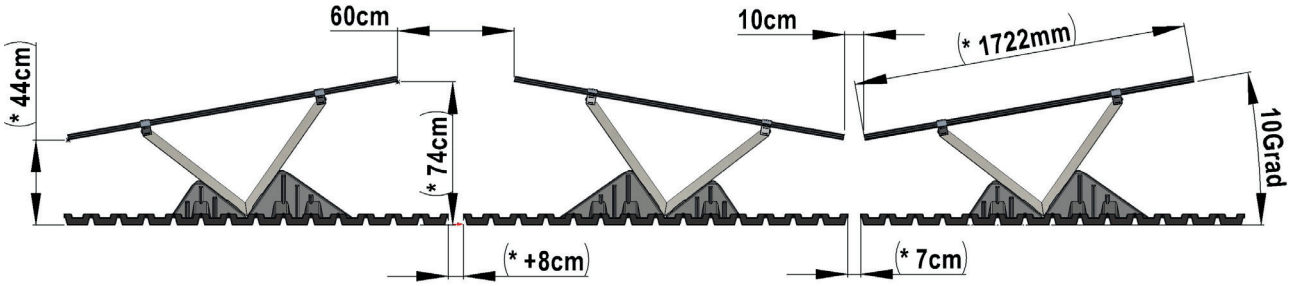
Base Plate



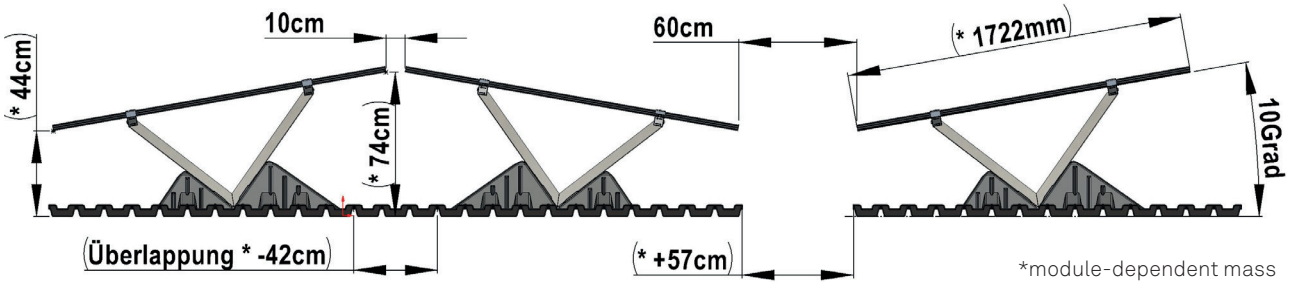
Technical Data

Panel dimensions	1980 x 980 x 60 mm
Water storage volume	39.5 litres unfilled

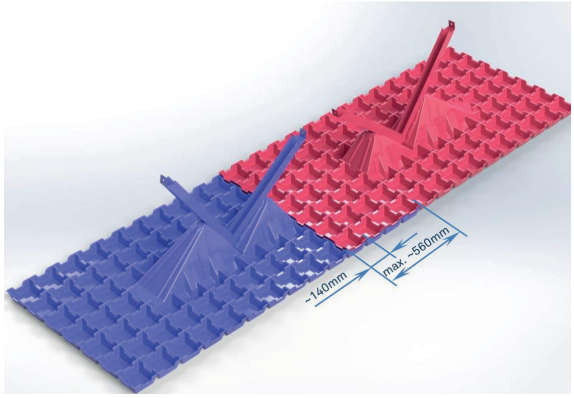
Contec.greenlight, Portrait 10°, Butterfly Shape



Contec.greenlight, Portrait 10°, Roof/Saddle shape



*module-dependent mass



Nesting

The base plate can be nested/overlapped lengthwise and crosswise up to the hump.
Grid/step dimension = 140 mm

Profile Rail Universal

Profile rail art. No: 12.205.21 / Material: EN AW-6063 T66 / AlMgSi0,5

EN AW-6063 is traditionally one of the most widely used alloys in the 6000 series. It offers high strength, good corrosion properties and can be decoratively anodized.
EN AW-6063 is also suitable for thermally conductive tasks such as heat exchangers and heat sinks.

Chemical Composition according to EN573-3 (weight %, rest Al)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Other	
0.20 -0.60	max. 0.35	max. 0.10	max. 0.10	0.45 -0.90	max. 0.10	max. 0.10	max. 0.10	any max. 0.05	total max. 0.15

Mechanical Properties in accordance with EN755-2 %

State*	Wall thickness e***	Yield strength Rp_{02} [MPa]	Tensile strength Rm [MPa]	Stretch		Hardness**
T66	e ≤ 10	200	245	A [%]	A50 mm [%]	HB
				8	6	75
	10 < e ≤ 25	180	225	8	6	70

* Condition according to EN515: T4 solution annealed and cold aged, T5 quenched from the T6- solution annealed and artificially aged, T66- solution annealed and artificially aged - better mechanical properties than T6 due to special control of the process. (properties of T6 and T66 can be achieved by quenching).

** Hardness values are for information only.

*** For profiles with different wall thicknesses, the lowest specified properties apply.

Physical Properties (approximate values, 20°C)

Density [kg/m³]	Melting range [C°]	Electrical conductivity [MS/m]	Thermal conductivity [W/m.K]	Thermal linear expansion 10-6/K	Modulus of elasticity [GPa]
2'700	585 - 650	28 - 34	200 - 220	23.4	~70

Weldability:
Gas: 3; TIG: 2; MIG: 2
Typical fillers (EN ISO 18273): AlMg5Cr(A) or AlSi5, and AlMg3 if the product has to be anodized. Due to the heat input during welding the mechanical properties are reduced by about 50%. (Ref. EN1999-1).

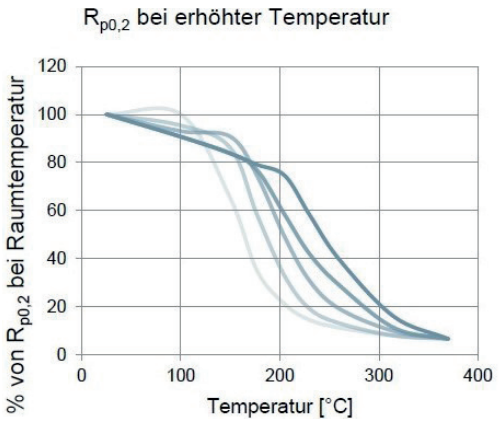
Machinability:
Condition T4: 3
Condition T5 and T6: 2

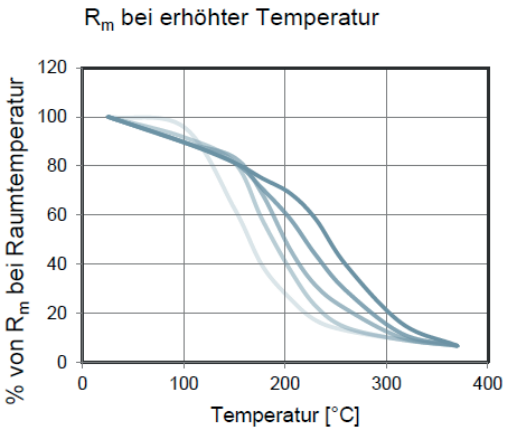
Surface treatment:
Protective anodizing: 1
Decorative anodizing: 1

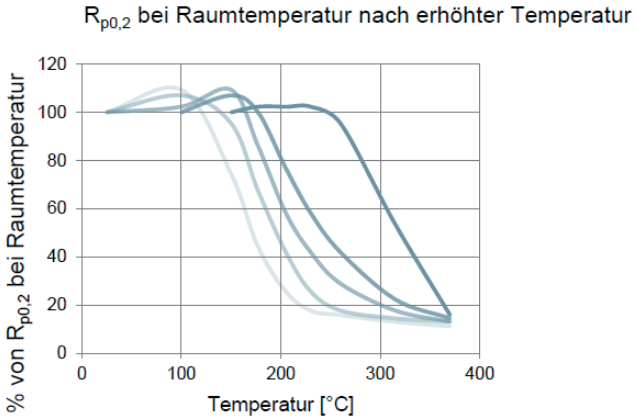
Corrosion resistance:
Weathering: 1
Sea water: 2

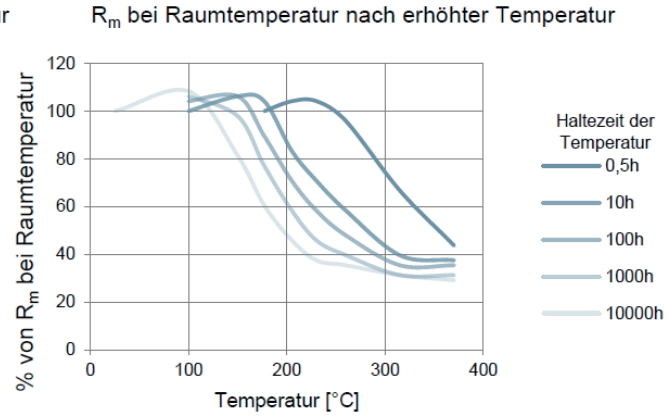
Material Data Sheet – Extruded Profiles Alloy EN AW-6063 [AlMg0.7Si]

Strength values at elevated temperatures

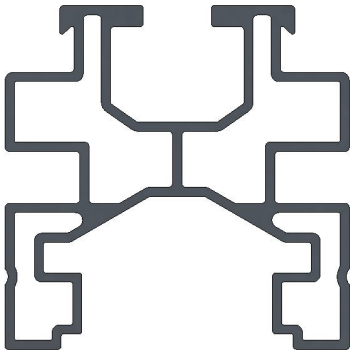








This information is provided as a guide and cannot be guaranteed.



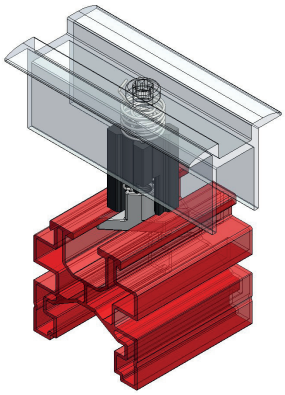
EN AW-6063-T66
Al-Mg-05Si

Aluminium
EN-AW -6063-T66
Area A = 397.5 mm²
Electrical conductivity σ = 36 µΩ*m
Conductivity of the profile rail = 34 - 38 MS/m

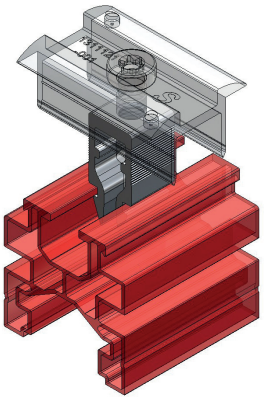
Module Clamps Approved by Contec for Mounting on a Universal Profile Rail

Profile rail part number 12.205.21

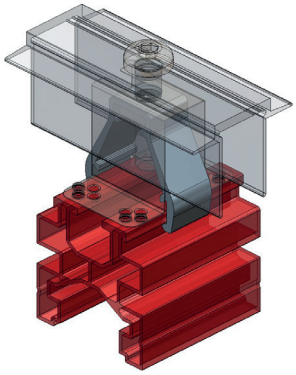
Material: EN AW-6063 T66 / AlMgSi0,5



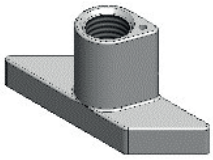
K2

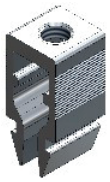


Schletter

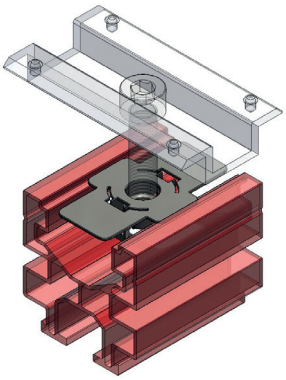


S:Flex

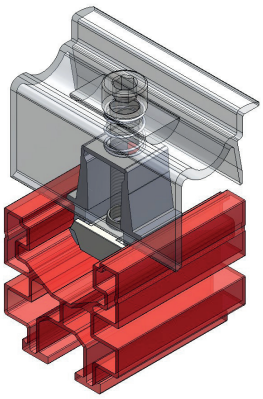




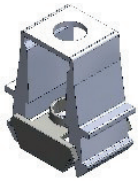




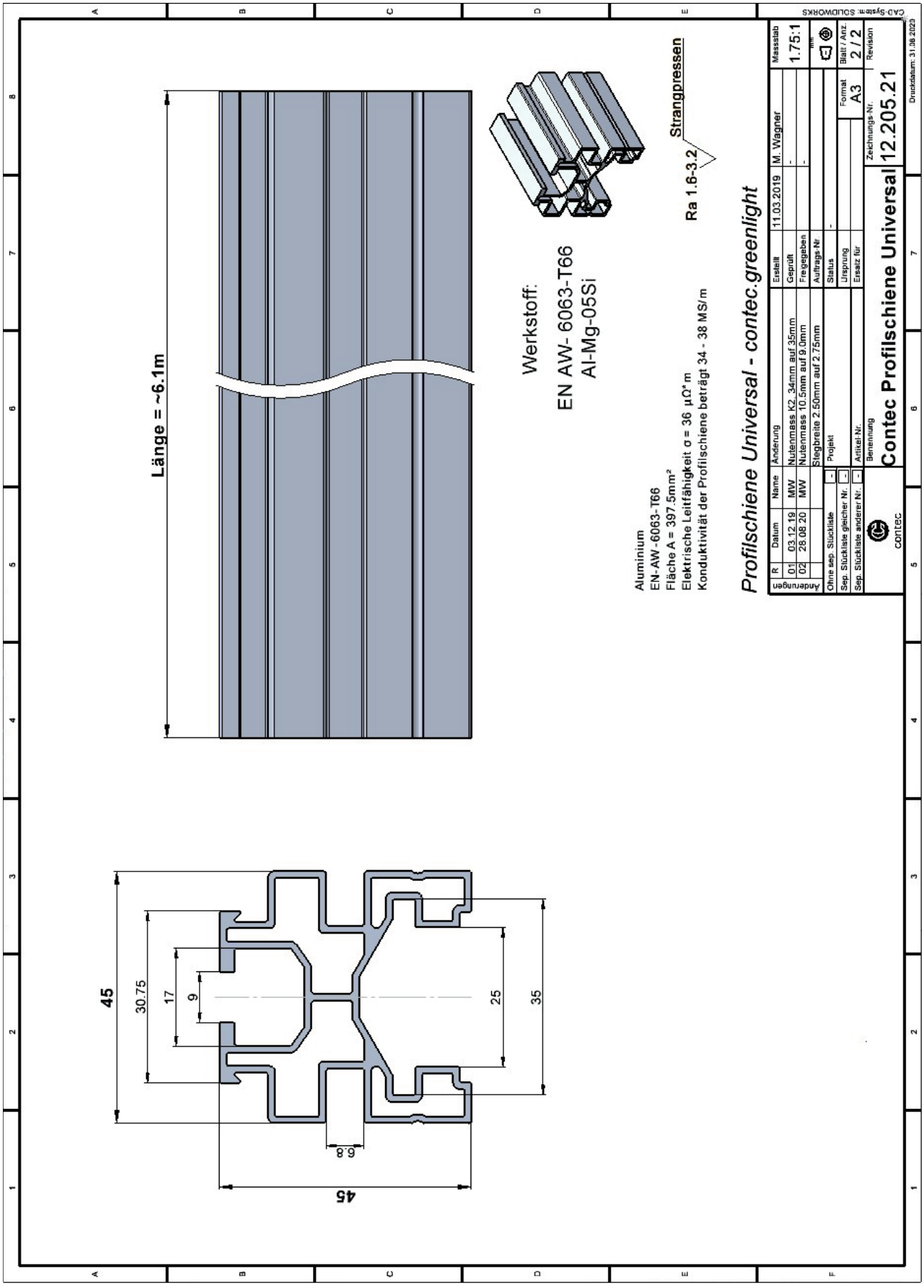
K2



K2






Länge = ~6.1m
Werkstoff:
EN AW- 6063-T66
Al-Mg-05Si
Ra 1.6-3.2
Strangpressen
Aluminium
EN-AW-6063-T66
Fläche A = 397.5mm²
Elektrische Leitfähigkeit σ = 36 µΩ*m
Konduktivität der Profilschiene beträgt 34 - 38 MS/m
Profilschiene Universal - contec.greenlight
Änderungen
R Datum Name Änderung
01 03.12.19 MW Nutenmass K2: 34mm auf 35mm
02 28.08.20 MW Nutenmass 10.5mm auf 9.0mm
Stegbreite 2.50mm auf 2.75mm
Ohne sep. Stückliste
Sep. Stückliste gleicher Nr.
Sep. Stückliste anderer Nr.
Projekt
Artikel-Nr.
Benennung
Contec Profilschiene Universal
Erstellt 11.03.2019 M. Wagner
Geprüft -
Freigegeben -
Auftrags-Nr.
Status -
Ursprung
Ersatz für
Zeichnungs-Nr. 12.205.21
Maßstab 1.75:1
mm
Format A3
Blatt / Anz. 2 / 2
Revision
CAD-System: SOLIDWORKS
Druckdatum: 31.08.2020
45
30.75
17
9
25
35
6.8
45

Determination of Permissible Snow Load /Wind Load



portrait



landscape

Contec.greenlight standard version is approved for a permissible **snow load** of at least 4.04 kN/m² (load coefficient included) in additionally wind-exposed areas. In Switzerland, this corresponds to the snow load at an altitude of sea level of 1050 m.
Contec.greenlight standard version is approved for a permissible wind load of at least 2.40 kN/m² (load coefficient included) → use with standard PV modules, with mounting specifications module manufacturer.

Technical Specifications To Be Met

- 1 module per 1 Contec.greenlight substructure
- Tightening torque module clamps: max. 14 Nm

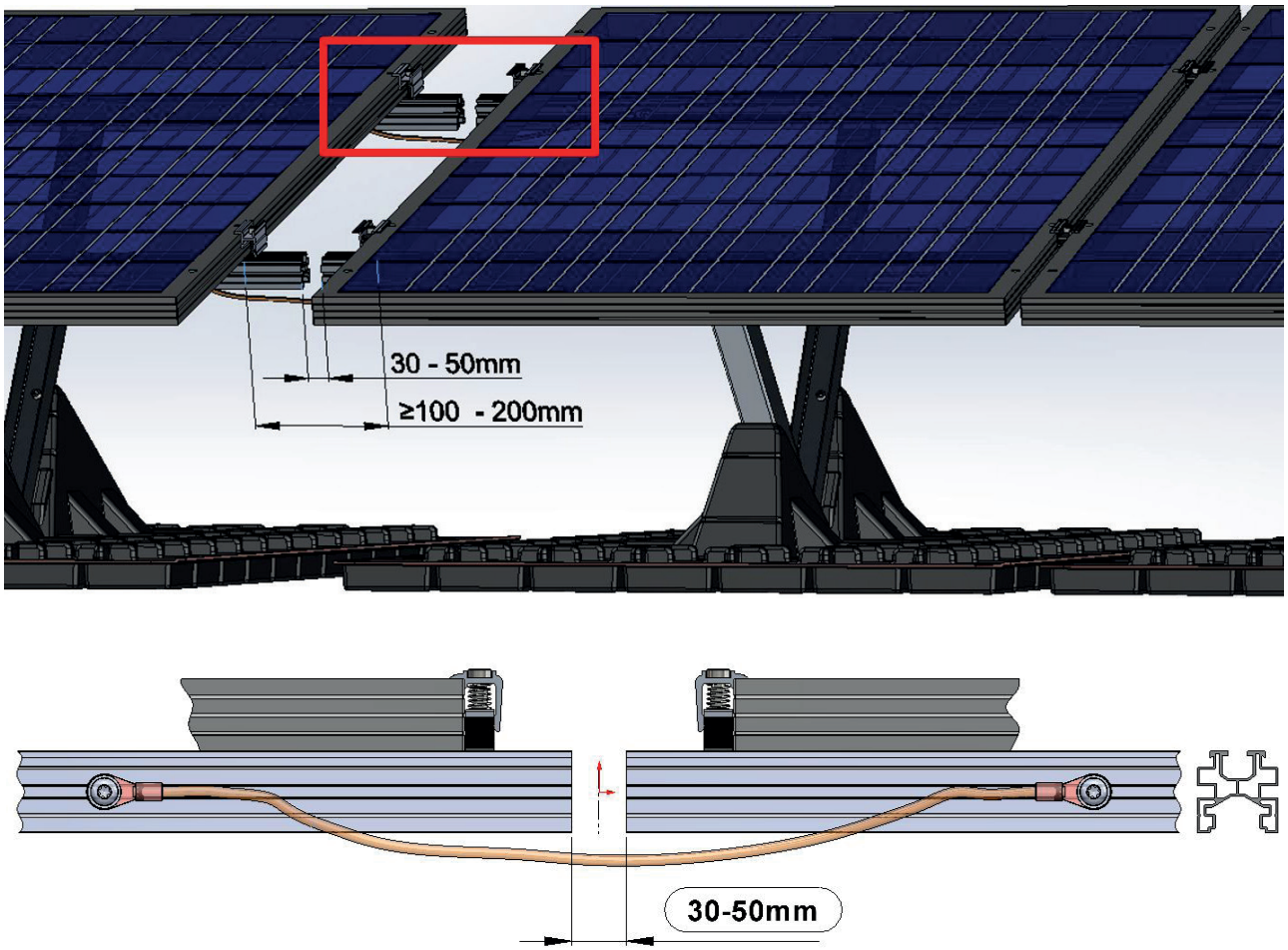
Standard Version

- Contec.greenlight 10°, 15°, 20° (5°, 25°, 30° optional) portrait
- Contec.greenlight 10°, 15°, 20° (5°, 25°, 30° optional) landscape

For project sites with higher loads or PV modules with deviation from standard dimensions, an adaptation of the Knickfix for compliance with the clamping ranges or a reinforced version of the Knickfix for higher loads is possible.
In addition, there is the possibility with a different arrangement of the PV modules to Contec.greenlight substructure in a PV module to reduce the wind forces. This recommendation/specification is made by Contec AG.

Recommendation Lightning Protection

Thermal Separation / Profile Rail Interruption

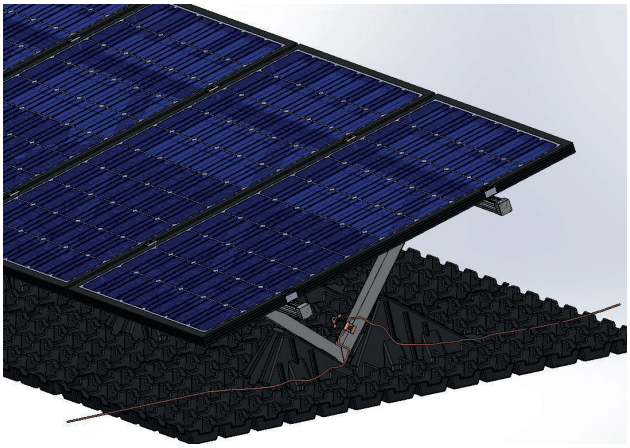


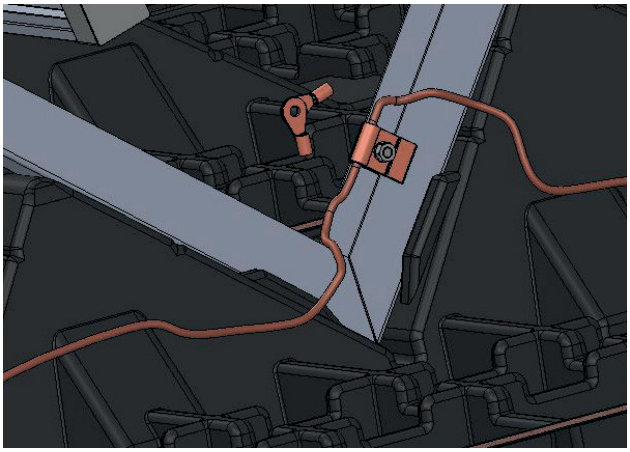
Important: lightning protection must be guaranteed. A lightning current-capable strap loop must be fitted.

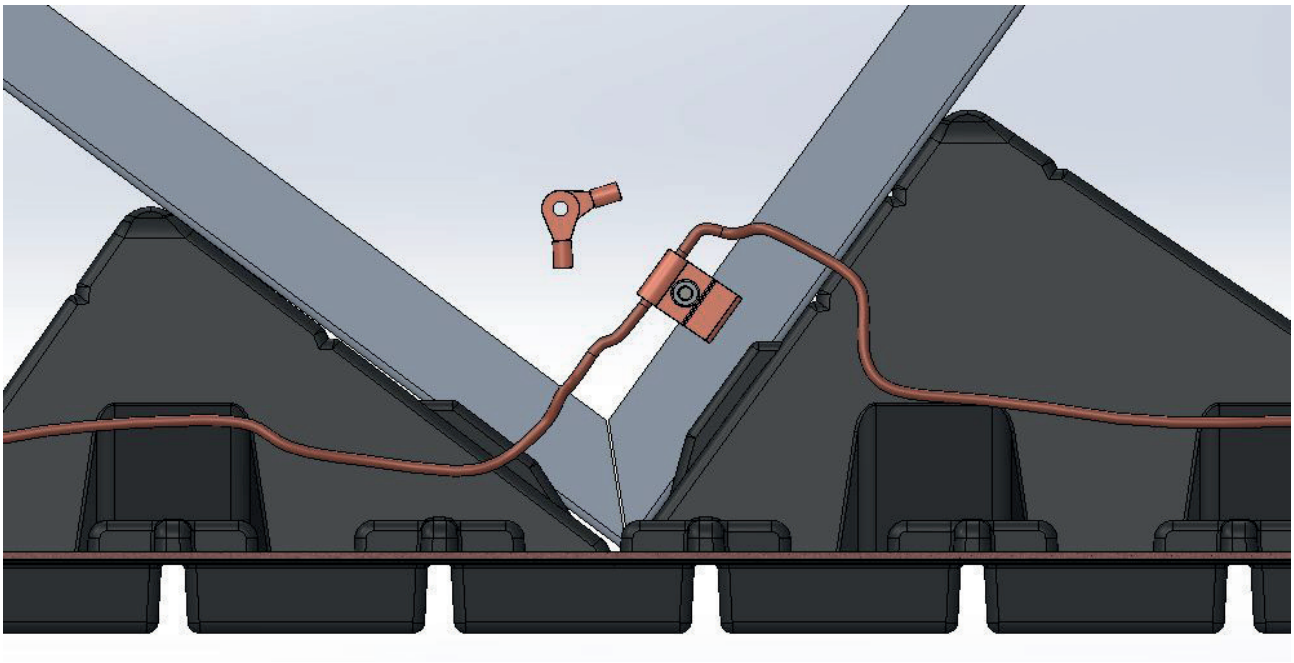
Mounting Instructions Thermal Break / Profile Rail Interruption

- For continuous profile lengths over 24 m a thermal break must be integrated.
- A gap of 3 - 5 cm must be left between the two profile rails. The thermal break must be positioned so that it lies between two modules. These are each fastened with an end clamp.

Proposal / Examples for Lightning Protection Installation – Laying the Lightning Protection Via the Knickfix







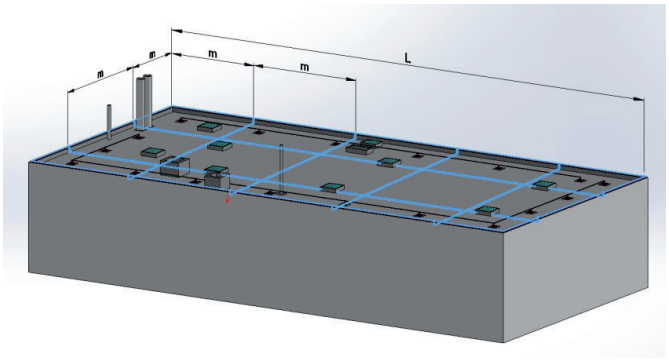
Lightning Protection

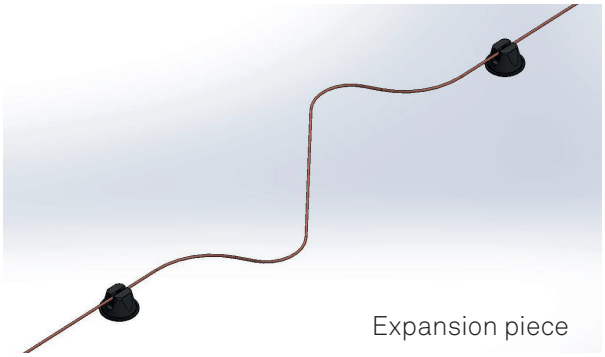
Compliance with the regulations and any integration into existing lightning protection systems must be clarified with the local lightning protection officer. The responsibility lies with the creator of the installation.

Relocation of the Catch Distance / Mesh Size

Depending on the lightning protection class of the building, different mesh sizes/interception distances apply. If the total length L is greater than 20 m, an expansion piece must also be inserted to bridge the temperature-related change in length.

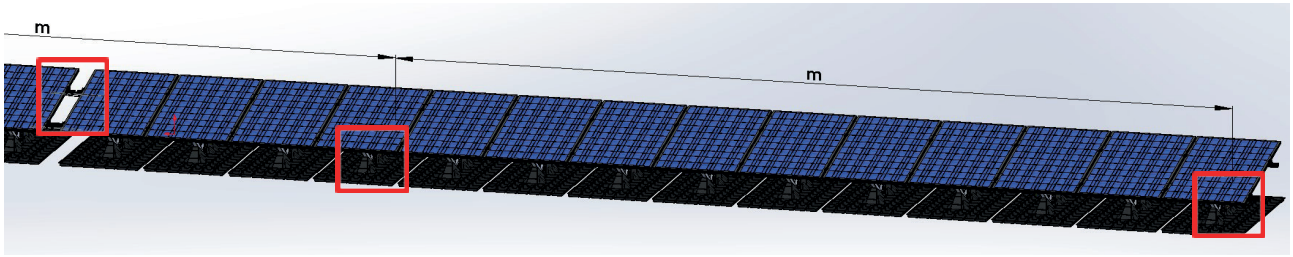
Lightning protection class	Catch distances / mesh size
I	5 x 5 m
II	10 x 10 m
III	15 x 15 m
IV	20 x 20 m

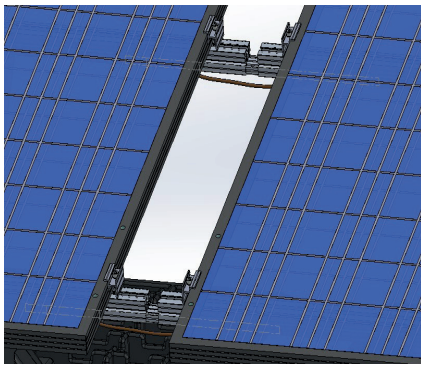


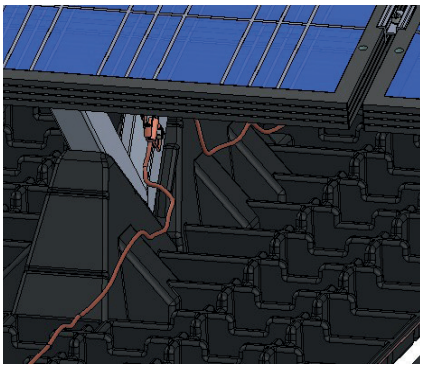


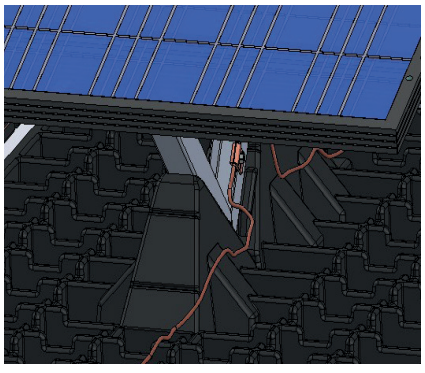
Expansion piece

Application example
Lightning protection on Contec.greenlight pro

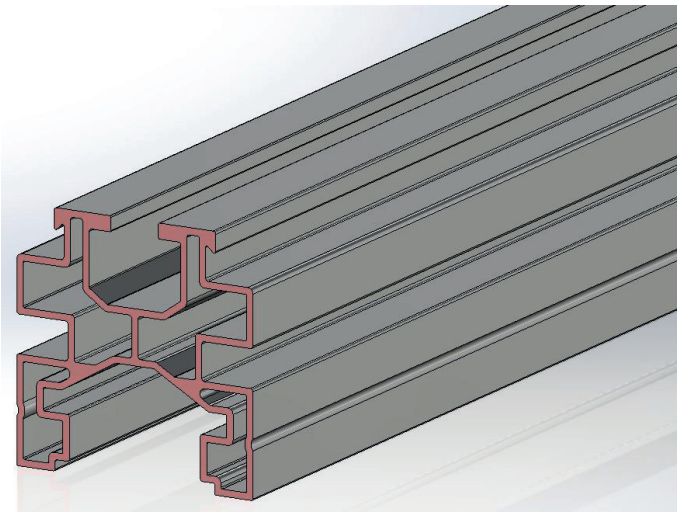








Conductivity Aluminium Profile Rail



Profile rail universal
Aluminium
Item No.: 12.205.21
EN AW-6063-T66
Area A = 405.8mm²

Calculation Tool Specific Resistance Contec.greenlight Aluminium

Contec.greenlight	Cross section	Spec. resistance	Spec. resistance
Profile length	Contec.greenlight profile	Aluminium	Contec.greenlight profile
6.1 m	405.8 mm²	0.03 Ω	1.85 Ω*mm²/m

The listed notes are recommendations for lightning protection with Contec.greenlight pro.

Lightning protection systems must comply with the legal standards DIN EN 62305 and VDE 0185-305:2006.
The obligation to install lightning protection systems is partly federally, partly cantonally regulated.
A lightning protection acceptance test is performed by a lightning protection officer/expert.

Lightning Protection System Inspection: September 2022

Factsheet
Contec.greenlight

Important Information for a Well-Functioning EnergyGreenRoof

- Incorporate the Contec.greenlight system as early as the roof planning stage.
- The layered structure must be considered in the planning, because the substructure also serves as a water reservoir and drainage. This eliminates the need for additional products and reduces costs.
- The interfaces and workflows between the waterproofing contractor, the greening contractor and the solar installer must be clarified during the project phase.
- Responsibilities regarding maintenance, inspections and costs are to be clarified before the installation (landlord / tenant of roof areas).
- Before mounting, the mounting instructions as well as the mounting notes must be observed.
- Observe substrate installation thicknesses, substrate type and weights according to the plan.
- A special seed mixture must be used for the EnergyGreenRoof (low-growing).
- With the EnergyGreenRoof, at least 2 - 4 maintenance passes per year are necessary.
- When maintaining the green roof, ensure that no damage occurs to the PV systems.
- High-growing plants are to be removed manually or with suitable equipment (no string mowers, as these could damage the power cables and contaminate the PV panels).
- Fall protection must be planned in accordance with the guidelines.

Changes in Load Calculations for Photovoltaic Systems

As Contec AG manufactures only mounting systems for PV modules and does not supply modules itself, until the end of 2025 we assessed the suitability of our systems solely on the basis of site loads and selected the Knickfix angle so as to ensure the required profile rail spacing for the chosen module. We now also check the suitability of the desired PV module. To do this, we determine the required site loads – snow and wind – in accordance with SIA 261 and Eurocode 1.
We divide the roof into different load zones in accordance with SIA 261 and Eurocode 1. In the edge zone, the percentage of which depends on the length and width of the building, higher loads apply, as a different, higher multiplier must be applied here. We multiply this zone load by the partial safety factor of 1.5 for unfavourable variable actions in accordance with SIA 260 or Eurocode 0.
This results in the adjusted snow and wind load, which we use for the calculation. We compare this with the module's design load – two-thirds of the manufacturer's test load. If our load is below this, the module is suitable. If it is above, the mounting method must be adjusted or a different PV module used.

Factsheet
Contec.greenlight

Advantages Contec.greenlight

- No yield loss due to shading of the plants (module height lower edge 30 cm from substrate)
- High biodiversity due to sun and shade situation
- Quick and easy assembly
- No accumulation heat under the panels, per 1°C cooler PV module, the additional power increases by 0.35 - 0.45 %)
- No roof penetration
- No additional superimposed loads necessary
- Integrated water reservoir in the substructure
- Simple integration of fall protection
- Optimal use of roof space
- Easy care, control and cleaning thanks to raised installation
  -> approx. 50 % less maintenance required than with flat modules on fertilization
- Ecological added value of the flat roof thanks to the combination of PV and greening
- Snow slides quickly

Contec Service

We create

- Occupancy planning based on a layout proposal (initial planning free of charge, layout changes subject to a charge)
- Substructure plan
- Installation plan incl. load calculation

The planning of the Contec.safe fall protection system is taken into account.

On the roof

- Installation of the substructure and guardrails incl. acceptance tests
- Seeding with suitable seed
- Visual inspection PV plant
- Annual roof maintenance according to checklist
  - Maintenance greening
  - Check fall protection
  - Checking plumbing and connections
  - Cleaning PV panel

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