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Hollandscheveld A-37

7913 Hollandscheveld A-37
Nederland

Quotation no.: 2540
Date: 29.11.2018

PUK SolarWare SW 10.11
System Analysis / Dimensioning Record

Preliminary remark

The statical verifications produced by the software are based on the currently valid norms and regulations, especially on DIN EN 1990 until DIN EN 1993 (Eurocodes), DIN 18800 (steel constructions) and DIN 1055 (impact on supporting structures). Not considered are country-specific differences of the individual European member states, the effects of earth quakes or other extraordinary loads. Moreover, there is no dimensioning of concrete or screw foundations and no determination of depth in case of ramming, since the on-site composition of the ground usually has to be determined first. The lengths of the bearings determined by the program are based on the top ground surface. Due to their secondary significance (forces not predominating), loads caused by ice and wind impact in longitudinal direction of the tables are neglected.

Building materials

The support systems verified in the following are made of galvanized construction steel. Nonwithstanding, screwing and other fastening material may possibly have to be made of various high-grade steel types. Module clamps are made of aluminium.

Protection notice according to DIN ISO 16016

Please do not hesitate to contact us for further questions.

by order of Perry Wens
PUK-Solar GmbH & Co. KG
This letter was generated with the help of an automatic device and does not require a signature.

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Inputs

Geographical Input

Height above mean sea level (m)	12,00
Wind Zone	N/A
Snow Zone	N/A
Terrain Type	II - Area with isolated obstacles

Module Input

Module Model	Q.PEAK DUO BLK-G5 305-320
Module Type	Crystalline
Length (mm)	1685
Width (mm)	1000
Thickness (mm)	32,0
Delta (mm)	421
Weight (kg)	18,7
Module Power (W)	320,0

Module Arrangement

Orientation	Vertical
Rows	4
Modules per row	15
Inclination (°)	15,0
Eave height H (mm)	700
Number of structures	135,65
Total Power (kW)	2604,48
Total number of modules	8139

Structural Input

Type of Plant	Open Land
Support Distance (mm)	Fixed: 2900
Characteristic Steel Strength (N/mm²)	470
Type of Foundation	Ramming foundation
Driving Depth (mm)	1700
Cantilever length, transversal beam	Calculated (automatic)

Prescribed Beam Cross Sections

Longitudinal Beam	CP 60x2,0F
Transversal Beam	CP 130x4,0F
Wind Bracing	KHB 7
Northern Pile	---
Southern Pile	---
Supports - Cantilever Frames	---
Diagonal Beam	---

Load Assumptions

Dead Load (kN/m²)	0,11
Wind Speed (km/h)	88,5
Wind Pressure (kN/m²)	0,38
Blast Coefficient Cp, Pressure	0,7
Blast Coefficient Cp, Suction	-1,1
Snow Load (kN/m²)	0,70
Snow Load Coefficient	0,80

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Load combinations and wind coefficients

Load combination

Name	Dead Load	Wind Uplift	Wind Downwards	Snow
Heterodyne 3	1,00	1,50	0,00	0,00
Heterodyne 4	1,35	0,00	1,50	1,05
Heterodyne 5	1,35	0,00	0,90	1,50

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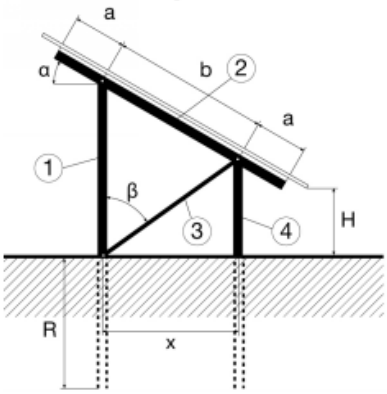
Result - Optimum



H (mm)	700
maxH (mm)	2495
R (mm)	1700
a (mm)	1840
b (mm)	2393
x (mm)	2311
Alpha (°)	15
Beta (°)	61

Truss

Number of longitudinal beams	8
Number of supports	6
Number of wind bracings	2
Bearing distance (mm)	2900
Cantilever arm length (mm)	450
Total weight (kg)	647,35

	Profile type	Length (mm)	Max capacity utilization (%)	Iy (cm4)	Iz (cm4)	Wy (cm³)	Wz (cm³)	A (mm²)	G (kg/m)
1	KHC 60-2,0F	3592	65	13,92	5,91	4,64	2,42	2,36	2,35
2	CP 130x4,0F	6073	89	179,26	14,52	27,58	5,32	7,71	6,55
3	KHAL 41	2638	44	4,15	5,96	2,01	2,91	1,89	1,68
4	KHULL 60F	2972	45	12,22	3,69	4,07	1,30	2,01	2,00
L	CP 60x2,0F	15400	54	17,30	6,06	5,77	2,87	2,71	2,36
WB	KHB 7	3462	0	0,30	1,26	0,32	0,84	0,84	0,80