

ESDEC

INNOVATIVE MOUNTING SYSTEMS

PROJECTPLAN

New Project 101, Roof 1

Calculatiedatum: 28-06-2023

CLICKFIT

EVO

PANNEN DAK

INHOUDSOPGAVE

Overzicht	3
Locatie	3
Dakspecificatie	3
Systeemspecificatie	3
Complete materiaallijst	4
Materiaallijst voor het totale dak	4
Assemblage	5
Dakoverzicht	5
Segment 1	6
Montageplan	6
Bevestigingsplan	7
Materialen	7
Berekeningen	8
Input	8
Dakbelasting	9
Dakbelasting voor segment 1	10
Disclaimer	11



Scan de code voor de uitgebreide product handleiding.

OVERZICHT

Locatie

Land	Nederland
Windzone	II
Terreincategorie	III
Windbelasting	679,88 N/m ²
Karakteristieke waarde van sneeuw op de grond	0,7 kN/m ²
Sneeuwbelasting op het dak	560,0 N/m ²
Gevolgklasse	CC1
Calculatiedatum	28-06-2023

Dakspecificatie

Hoogte dak	10,0 m
Diepte van de randzone	1,43 m
Dakhelling	30,0°
Dakbedekking	Pannendak

Systeemspecificatie

Paneelmodel	LONGI LR5-54-HPB-400M
Afmetingen zonnepaneel	1772 mm x 1134 mm x 30 mm
Gewicht zonnepaneel	21,0 kg
Aantal zonnepanelen	1
Aantal panelen per optimizer	0
Oriëntatie	Liggend (landscape)
Railsysteem	Verticaal
Aantal segmenten	1
Opbrengst per paneel	400 Wp
Totale opbrengst	400 Wp

COMPLETE MATERIAALLIJST

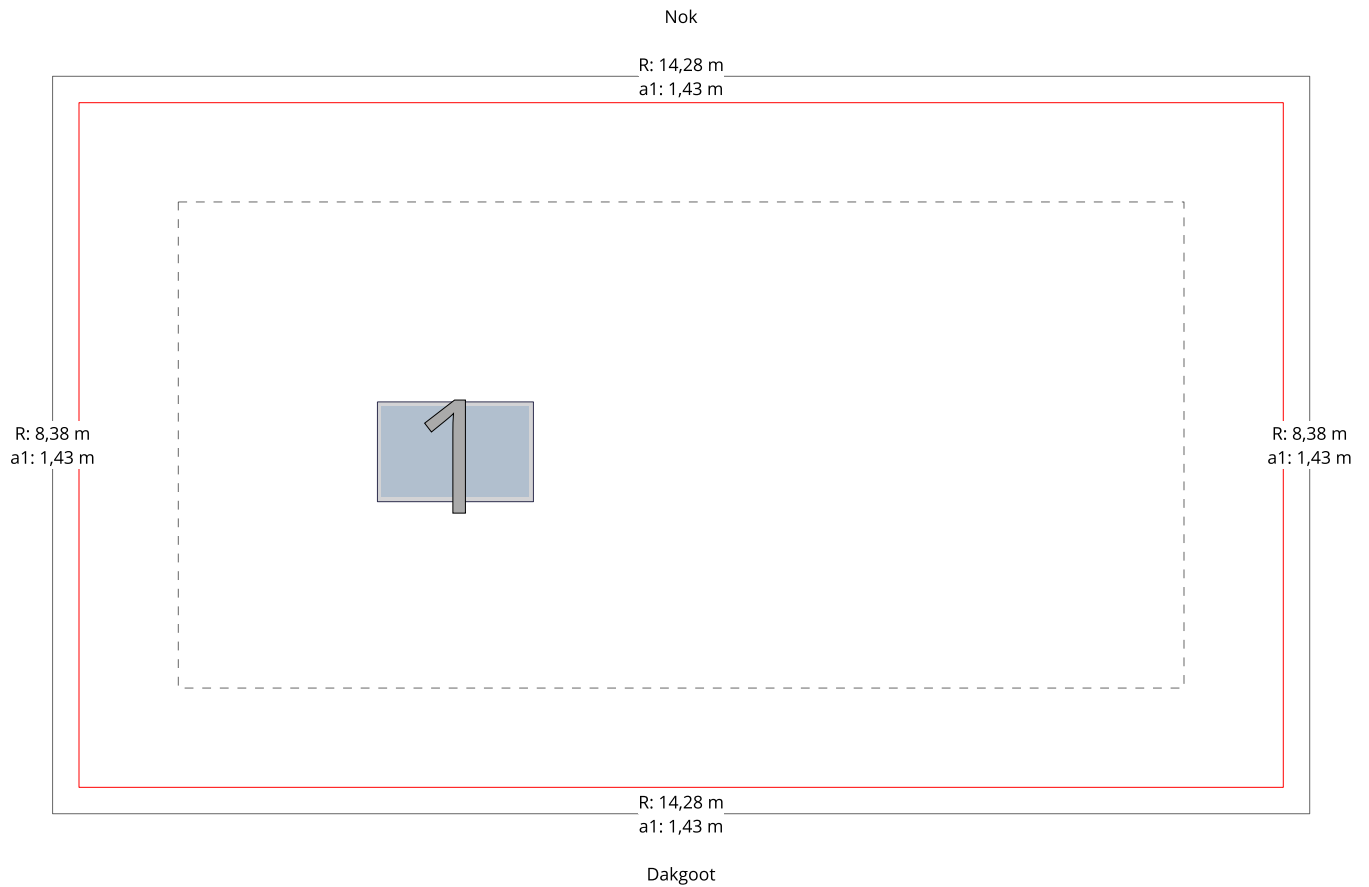
Materiaallijst voor het totale dak


Artikelnummer	Omschrijving	Aantal
1003016	Zelfborende schroef 6,3 x 42 mm SW10/T30	2
1008020	ClickFit EVO - Module klem Universeel Grijs	4
1008040	ClickFit EVO - Dakhaak Universeel	4
1008060	ClickFit EVO - Montagerail eindkap Grijs	4
1008064*	ClickFit EVO - Montagehulp	1
1008131	ClickFit EVO - Montagerail L=1188mm	2

* Optioneel artikel

ASSEMBLAGE

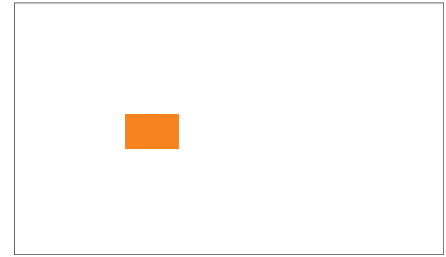
Dakoverzicht




R: XXm	Lengte van de buitenste dakzijde
	Diepte van de no-go zone
a1: XXm	Diepte van de randzone

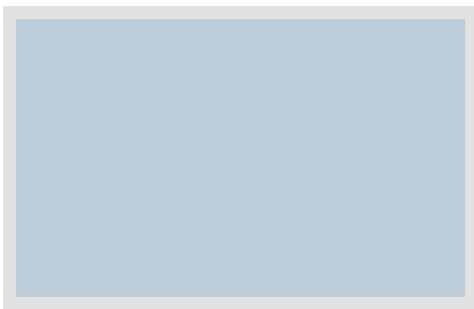
SEGMENT 1

Aantal zonnepanelen	1
Totale opbrengst	0,400 kWp
Oriëntatie	Liggend (landscape)
Railsysteem	Verticaal

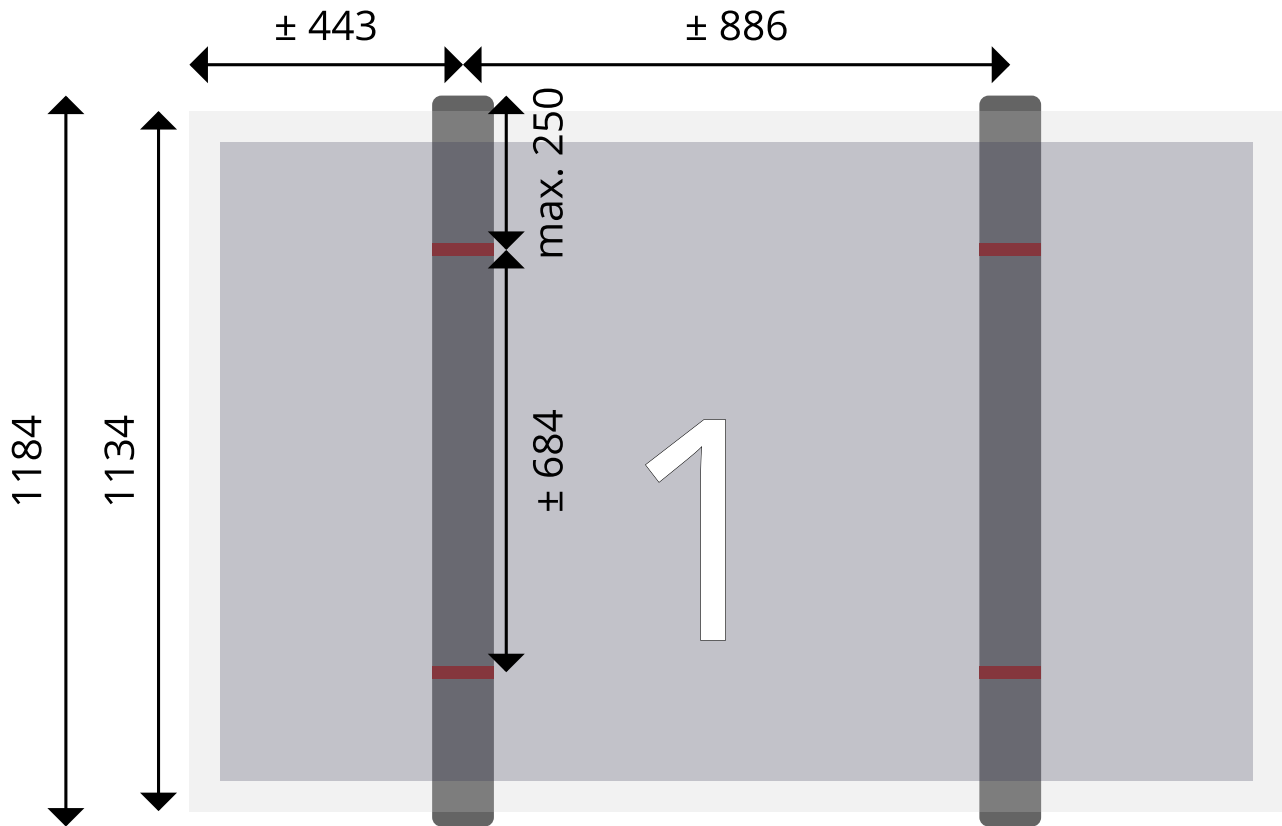


 Dit assemblageplan is van toepassing op de fel gekleurde segmenten

Montageplan



Bevestigingsplan



Eenheden zijn in mm

Materialen

Artikelnummer	Omschrijving	Aantal
1003016	Zelfborende schroef 6,3 x 42 mm SW10/T30	2
1008020	ClickFit EVO - Module klem Universeel Grijs	4
1008040	ClickFit EVO - Dakhaak Universeel	4
1008060	ClickFit EVO - Montagerail eindkap Grijs	4
1008064	ClickFit EVO - Montagehulp	1
1008131	ClickFit EVO - Montagerail L=1188mm	2

BEREKENINGEN

Input

Land	Nederland
Windzone	II (27,0 m/s)
Terreincategorie	III
Luchtdichtheid	1,25 kg/m ³
Orografie	1,0
Windbelasting	679,88 N/m ²
Karakteristieke waarde van sneeuw op de grond	0,7 kN/m ²
Sneeuwblootstellingsfactor (Ce)	1,0
Sneeuwvanglers	Nee
Sneeuwlast vormcoëfficiënt	0,8
Sneeuwbelasting op het dak	560,0 N/m ²
Gevolklasse	CC1
Hoogte dak	10,0 m
Diepte van de randzone	1,43 m
Dakhelling	30,0°
Dakoppervlakte	119,67 m ²
Dakbedekking	Pannendak
Paneelmodel	LONGI LR5-54-HPB-400M
Afmetingen zonnepaneel	1772 mm x 1134 mm x 30 mm
Gewicht zonnepaneel	21,0 kg
Aantal zonnepanelen	1
Aantal panelen per optimizer	0
Oriëntatie	Liggend (landscape)
Railsysteem	Verticaal
Aantal segmenten	1
Opbrengst per paneel	400 Wp
Totale opbrengst	400 Wp

Dakbelasting

Totale gewicht	24,73 kg
Dakoppervlakte (bruto)	119,67 m ²
Systeemoppervlakte (geprojecteerde oppervlakte)	2,03 m ²
Gemiddelde dakbelasting dakoppervlakte	0,21 kg/m ²
Gemiddelde dakbelasting systeemoppervlakte	12,18 kg/m ²
Maximale neerwaartse kracht per bevestiging	376 N
Maximale opwaartse kracht per bevestiging	-187 N
Maximale kracht op de dakpan	676 N

Dakbelasting voor segment 1

Gewicht panelen	21,0 kg
Gewicht systeem	3,73 kg
Totaal gewicht	24,73 kg
Systeemoppervlakte	2,03 m ²
Gemiddelde dakbelasting systeemoppervlakte	12,18 kg/m ²
Gemiddelde neerwaartse kracht per bevestiging	376 N
Gemiddelde opwaartse kracht per bevestiging	-187 N
Rekenwaarde voor de maximale opwaartse kracht op de dakhaak en dakpan	-496 N
Rekenwaarde voor de maximale neerwaartse kracht op de dakpan	676 N

DISCLAIMER

Please read this information carefully before starting with the design and installation of the PV system.

The output for the design of the PV system is generated by using the calculator tool made available through the website of Esdec B.V. ("Esdec") at www.esdec.com (the "Calculator"). The responsibility for the correct application of the output derived from the Calculator lies with the user of the Calculator and/or the installer or any other person responsible for the installation of the PV system, which output may be subject to or impacted by many different variables and factors. The installation of a PV system onto an existing building can for example impact the existing building loads (e.g., as a result of snow and wind) or the building construction. To avoid personal injury and/or property damages, the installer or any other person responsible for the installation of a PV system should ensure that the static calculations applicable to the existing building are reviewed and confirmed beforehand by a qualified technician. Any applicable regulations, including (but not limited to) NEN 7250, EN 1990, EN 1991-1-3, EN 1991-1-4 and relevant national annexes, should be observed and adhered to. Failure to obtain such confirmation or observe and adhere to applicable regulations may, amongst others, lead to failure of the roof load-bearing structure of the building. It is advisable to consult with the insurer of the building in case of the intention to install a PV system or in case of any other intended changes to the building.

The installer or any other person responsible for the installation of a PV system should also consider, confirm or control applicable design elements which include (but are not limited to):

- a. changes as a result of the additional weight of the complete PV system on the building;
- b. changes as a result of the changed geometry of the building's roof;
- c. changes as a result of the dynamic wind pressure and possible accumulation of rain or any other precipitation on the building;
- d. the loads occurring during installation on the building, roofing material and insulation;
- e. the compatibility of the insulation and roofing material at the location of the contact points of the long-term PV-system's support structure, as a result of the pressure point;
- f. the compatibility of the roofing material in combination with the support structure at the location of the contact points;
- g. the effect of thermal performance of the building on the PV system and vice versa; and/or
- h. the effect of any movement and vibrations of the roof on the PV system and vice versa.

In addition, the installer or any other person responsible for the installation of a PV system should confirm the compatibility of any third party products, components or materials (including PV panels) used in conjunction with Esdec's products, if such third party products, components or materials have not been provided for such use by or on behalf of Esdec or the use of which has not been expressly authorized by Esdec. Reference to a third party product in the Calculator should not be deemed an express or implied authorization by Esdec. Esdec's products should always be used in accordance with instructions set out in the most recent version of the applicable manual, available via www.esdec.com.

Prices in the Calculator are indicative and are subject to change resulting from, amongst others, fluctuations in commodity prices.

To generate output from the Calculator Esdec relies solely on the input and information that was submitted by the user of the Calculator. Esdec is under no obligation to confirm or verify such input or information. Esdec assumes no responsibility or liability of any kind in relation to, or resulting from, such input and/or information, and/or any risks, consequences or damages (including, but not limited to, indirect or consequential losses) resulting from incorrect, inaccurate, or incomplete input and/or information that was submitted through the Calculator or resulting from the improper use of Esdec's products. Any such responsibilities and liabilities are solely for the account of the user of the Calculator and/or any other person responsible for the installation of a PV system, as applicable.

No rights can be derived from any designs (including drawings and dimensions), calculations or other output that is generated through the Calculator. Esdec provides no representations, warranties or guarantees in relation to any designs (including drawings and dimensions), calculations or other output that is generated through the Calculator. Any warranty provided by Esdec is limited to its solar rooftop mounting products, as set out in Esdec's Warranty Conditions (and subject to the limitations and exclusions set out therein) which are available via www.esdec.com. Nothing contained in this output, the Calculator, the Calculator Terms of Use, on any Esdec website or otherwise should be construed differently.



**BUILDING VALUE⁺ FOR
SOLAR PROFESSIONALS**

Esdec

Londenstraat 16
7418 EE Deventer
The Netherlands

☎ +31 850 702 000

✉ info@esdec.com