Sunbeam SOLAR MOUNTING

Ecorus

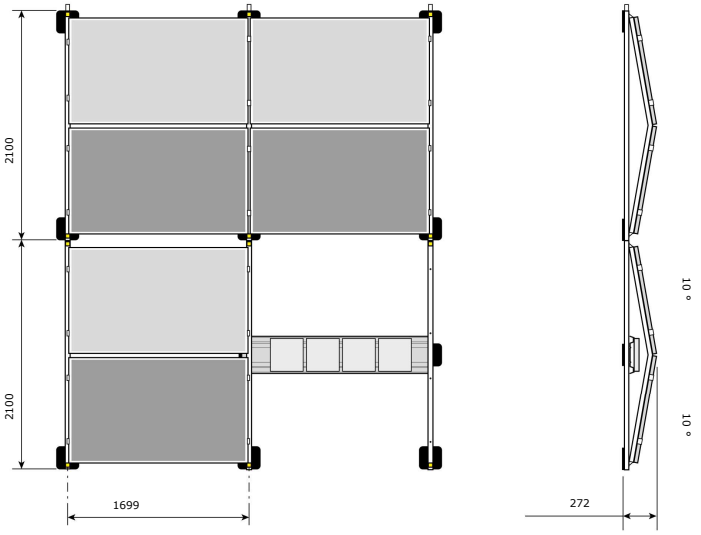
Gemeente Brummen

Hoort bij besluit van het college van Brummen

BESLUIT 2021-0790- Aldi-Ballastplan

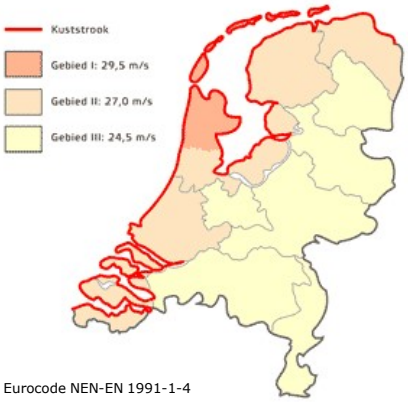
Project Aldi 02 **Aldi -Groenlo**

module	**JA Solar JAM60S10 340-345 MR**	dimensions	1689	x 996	x 35	mm
Sunbeam type	**Symmetrical 2100**	weight	19,0	kg		
		power	345	Wp		



Location

country	**the Netherlands**
address	**2 Het Pand, Groenlo**
postcode / city	**groenlo**
province	**Gelderland**
basic wind speed	**24,5** m/s
surroundings	☐ the building is surrounded by other buildings or trees on **all four sides**
	☐ the building has about the **same height** as (or is lower than) surrounding buildings
	☒ the building is more than 200 m away from open water
terrain category	**II Onbebouwd**



Eurocode NEN-EN 1991-1-4

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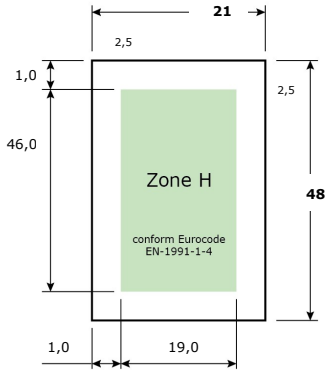
Project Aldi 02 **Aldi** *Aldi-HetPand-Groenlo*

area name	**A**		**1**	x
building height	**5**	m		
roof dimensions	**21**	x **48**	m	
roof covering	**PVC**			
with gravel	☐			
ballast	**30 x 30 x 4,5 cm (9 kg)**			

Results

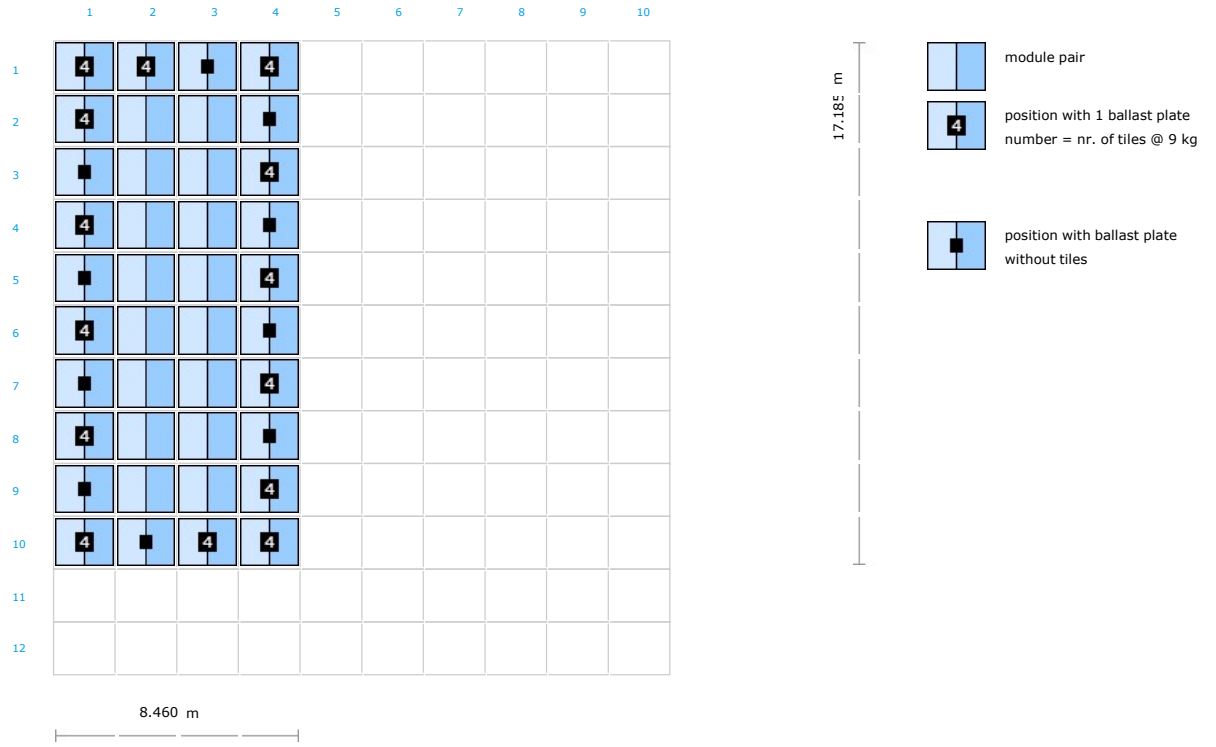
peak pressure	**540**	N/m2	
nr. of modules	**80**		
system footprint	**143**	m2	
total system weight	**16,2**	kg/m2	2317 kg
pressure per foot	**12**	kPa	



Roof areas according to Eurocode

The image indicates which roof edge zones apply for a rectangular roof. This may be different for other roof shapes It is your own responsibility to determine the roof zones.
Calculations are based on the assumption that the system is completely inside zone H.

☒ Use empty ballast plates ☒ Use rubber mats



Required items

Module	**80**	pieces	Ballast plate	**24**	pieces	Base unit end cap	**11**	pieces optional
Ballast	**56**	pieces	Wind plate	**0**	pieces	Rubber mat (thin)	**81**	pieces
Base unit	**44**	pieces	End clamp	**32**	pieces	Rubber H-block	**0**	pieces
Base unit end piece	**0**	pieces	Mid clamp	**144**	pieces	Polyester sheet	**81**	pieces
Foot	**81**	pieces	Clamp screw	**176**	pieces			
Carrier	**44**	pieces	Short screw	**118**	pieces			

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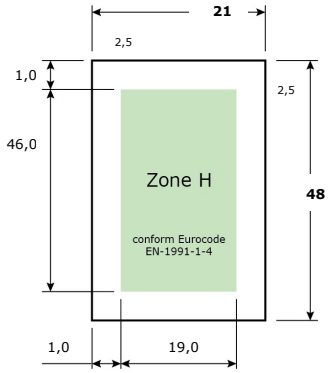
Project Aldi 02 **Aldi** *Aldi-HetPand-Groenlo*

area name	**B**		**1**	x
building height	**5**	m		
roof dimensions	**21**	x **48**	m	
roof covering	**PVC**			
with gravel	☐			
ballast	**30 x 30 x 4,5 cm (9 kg)**			

Results

peak pressure	**540**	N/m2	
nr. of modules	**68**		
system footprint	**121**	m2	
total system weight	**16,9**	kg/m2	2054 kg
pressure per foot	**12**	kPa	



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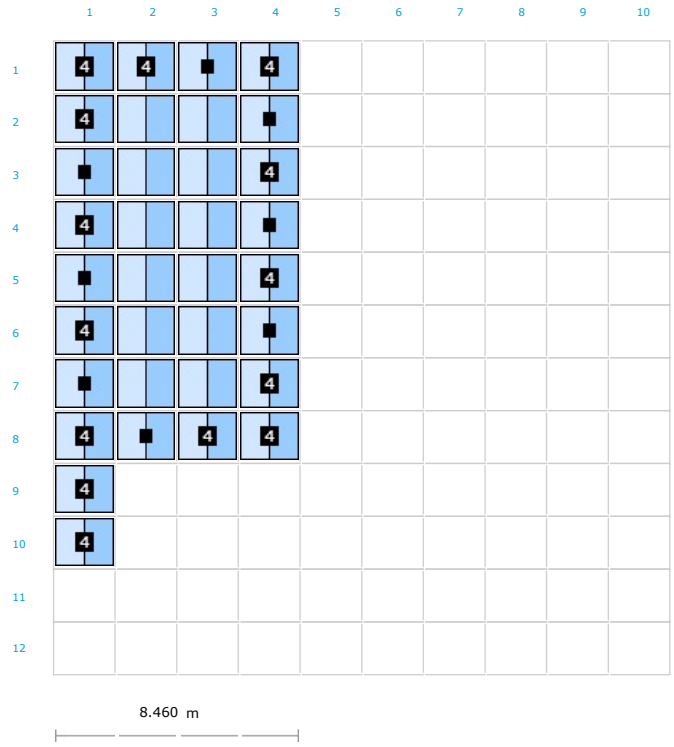

Required items

Module	**68**	pieces	Ballast plate	**22**	pieces	Base unit end cap	**11** pieces optional
Ballast	**56**	pieces	Wind plate	**0**	pieces	Rubber mat (thin)	**73** pieces
Base unit	**38**	pieces	End clamp	**32**	pieces	Rubber H-block	**0** pieces
Base unit end piece	**0**	pieces	Mid clamp	**120**	pieces	Polyester sheet	**73** pieces
Foot	**73**	pieces	Clamp screw	**152**	pieces		
Carrier	**38**	pieces	Short screw	**104**	pieces		

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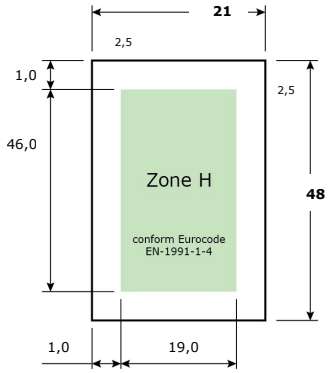
Project Aldi 02 **Aldi** *Aldi-HetPand-Groenlo*

area name	**C**		**1**	x
building height	**5**	m		
roof dimensions	**21**	x **48**	m	
roof covering	**PVC**			
with gravel	☐			
ballast	**30 x 30 x 4,5 cm (9 kg)**			

Results

peak pressure	**540**	N/m2	
nr. of modules	**72**		
system footprint	**128**	m2	
total system weight	**16,7**	kg/m2	2140 kg
pressure per foot	**12**	kPa	



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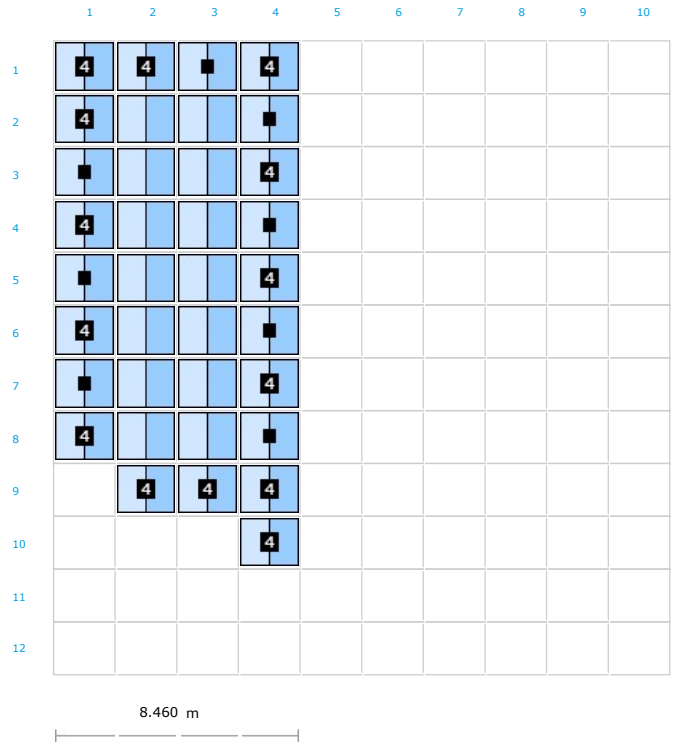

Required items

Module	**72**	pieces	Ballast plate	**22**	pieces	Base unit end cap	**11** pieces optional
Ballast	**56**	pieces	Wind plate	**0**	pieces	Rubber mat (thin)	**77** pieces
Base unit	**40**	pieces	End clamp	**32**	pieces	Rubber H-block	**0** pieces
Base unit end piece	**0**	pieces	Mid clamp	**128**	pieces	Polyester sheet	**77** pieces
Foot	**77**	pieces	Clamp screw	**160**	pieces		
Carrier	**40**	pieces	Short screw	**108**	pieces		

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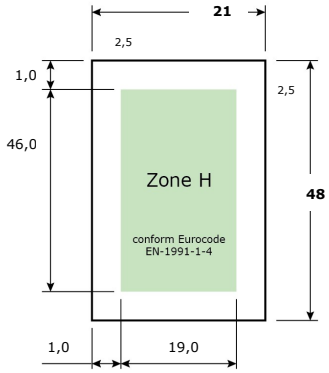
Project Aldi 02 **Aldi** *Aldi-HetPand-Groenlo*

area name	**D**		**1**	x
building height	**5**	m		
roof dimensions	**21**	x **48**	m	
roof covering	**PVC**			
with gravel	☐			
ballast	**30 x 30 x 4,5 cm (9 kg)**			

Results

peak pressure	**540**	N/m2	
nr. of modules	**76**		
system footprint	**136**	m2	
total system weight	**16,4**	kg/m2	2229 kg
pressure per foot	**12**	kPa	



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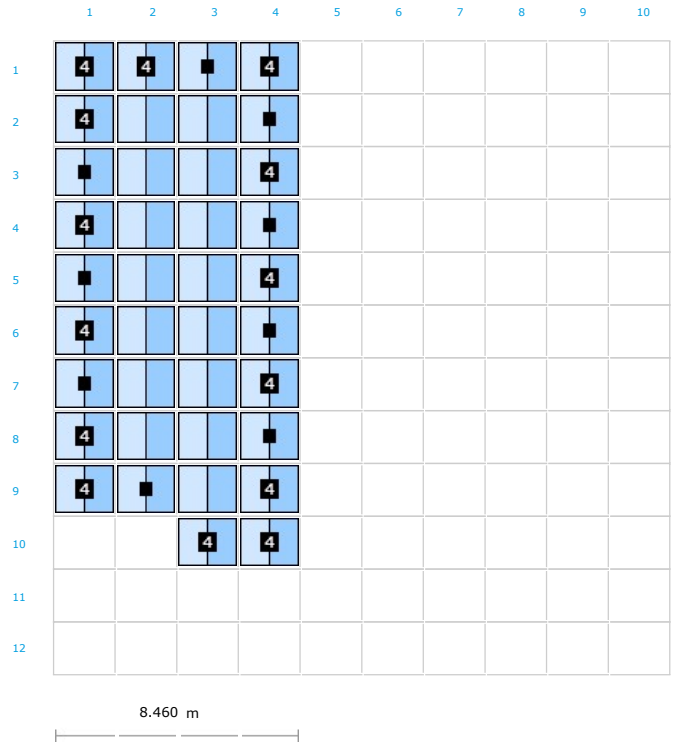

Required items

Module	**76**	pieces	Ballast plate	**23**	pieces	Base unit end cap	**11** pieces optional
Ballast	**56**	pieces	Wind plate	**0**	pieces	Rubber mat (thin)	**78** pieces
Base unit	**42**	pieces	End clamp	**32**	pieces	Rubber H-block	**0** pieces
Base unit end piece	**0**	pieces	Mid clamp	**136**	pieces	Polyester sheet	**78** pieces
Foot	**78**	pieces	Clamp screw	**168**	pieces		
Carrier	**42**	pieces	Short screw	**113**	pieces		

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Project Aldi 02 **Aldi** *Aldi-HetPand-Groenlo*

Module

JA Solar *JAM60S10 340-345 MR*	**345**	Wp	**296**	pieces	**102,120** kWp

Ballast required

Pavement slab	30 x 30 x 4,5 cm (9 kg)	**224**	pieces

Standard items	code	auto		total
Base unit	12.10-2100-MS			**164**
Foot	22.20			**309**
Carrier	102.20-10.10-2100			**164**
Ballast plate	12.41-1750			**91**
End clamp	102.30-E	128	+ 1%	**130**
Mid clamp	102.30-M	528	+ 2%	**539**
Clamp screw	32.70	656	+ 2%	**670**
Short screw	32.19	443	+ 4%	**461**

Options	code	total
Size tool	102-1750	**6**
Rubber mat (thin)	20.22-250x250x3	**309**
Polyester sheet	20.23-270x270x1	**309**
Hex bolt driver 3/8"	30.38	**3**

Project areas

area name	*height*	*roof covering*	*nr. of modules*					*peak pressure*	*total system weight*	*pressure per foot*
A	**5** m	**PVC**	**80** x	**1**	=	**80**	pieces	**540** N/m2	**16,2** kg/m2	**12,0** kPa
B	**5** m	**PVC**	**68** x	**1**	=	**68**	pieces	**540** N/m2	**16,9** kg/m2	**12,0** kPa
C	**5** m	**PVC**	**72** x	**1**	=	**72**	pieces	**540** N/m2	**16,7** kg/m2	**12,0** kPa
D	**5** m	**PVC**	**76** x	**1**	=	**76**	pieces	**540** N/m2	**16,4** kg/m2	**12,0** kPa