

# Module mounting matrix 2022

Valid for the following framed modules:

Power-60	KPV 330/335Wp silver KPV 325Wp black	1680 x 1002 x 40mm	19,5kg
Power-60 HC	KPV 370/375Wp HC KPV 365Wp HC black	1773 x 1047 x 40mm	20,3kg
Power-66 HC	KPV 405/410Wp HC KPV 400Wp HC black	1933 x 1047 x 40mm	22,3kg
Power-60 HC Maxim	KPV 370/375Wp HC Maxim KPV 365Wp HC Maxim black	1773 x 1047 x 40mm	20,3kg
Power-60 Alpin	KPV 325Wp Alpin black	1680 x 1002 x 40mm	21,5kg
HC Modules 35mm	KPV 410Wp HC NE KPV 410Wp HC NE black KPV 380Wp HC NE	1724 x 1134 x 35mm	22,0kg
Sonnengläser with frame	KPV GME 310Wp 2x2mm bifacial KPV GME 305Wp 2x2mm black	1755 x 1038 x 35mm	20,0kg
Sonnengläser HC with frame	KPV GME 360Wp HC 2x2mm bifacial KPV GME 360Wp HC Maxim 2x2mm black	1668 x 994 x 40mm	21,0kg
Sonnenkraftwerk	KPV 300W Sonnenkraftwerk AT KPV 300W Sonnenkraftwerk DE	1773 x 1047 x 40mm	23,0kg
		1680 x 1002 x 40mm	25,0kg

To resist the named snow and wind loads, the marked distances must be followed when mounting. In case of a longitudinal mounting, the specified mounting points must also be adhered to. If this is not possible because of the substructure, a crossbar system must be used!

For standard mounting of modules with frame, the modules must be securely fastened with continuous support profiles on at least 4 points. The PV modules can only be attached to the substructure by clamping from the front. The clamping area must be at least 400 mm<sup>2</sup> per fastening point.

According to EN IEC 61215-1:2016 / EN IEC 61215-1-1 / EN IEC 61215-2:2017, the load limits specified in the mounting matrix are the "test loads" (except for Power-60 Alpin 8,000Pa - SPF standard). According to the above-mentioned standard, a safety factor of 1.5 has to be used to determine the design load.

Please note when using modules with half cut cells (HC), the position of the junction box is in the middle of the module. If the installation of a third support profile (in the middle of the module) is necessary, please consider an offset of at least 5 cm from the module centre (due to the position of the box). The direction to be chosen for the profile offset should not be the side of the cable outlet of the junction box.

Make sure that other mechanical system components (e.g. substructure, parts of the roof, etc.) cannot have a harmful effect on the modules.

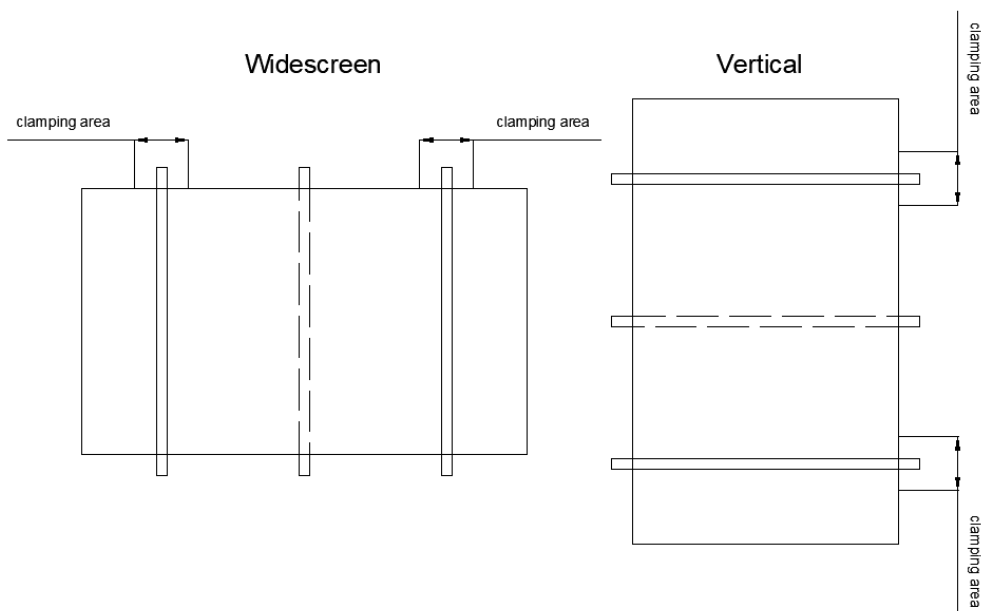
Further information about correct installation of the photovoltaic modules can be found in the following file: "KIOTO\_Installation\_manual\_2022".

## Fixing variation: tilted roof

### Roof parallel standard - fixing on long module side

Format: vertical, widescreen

Positioning mounting profiles: parallel to short module side



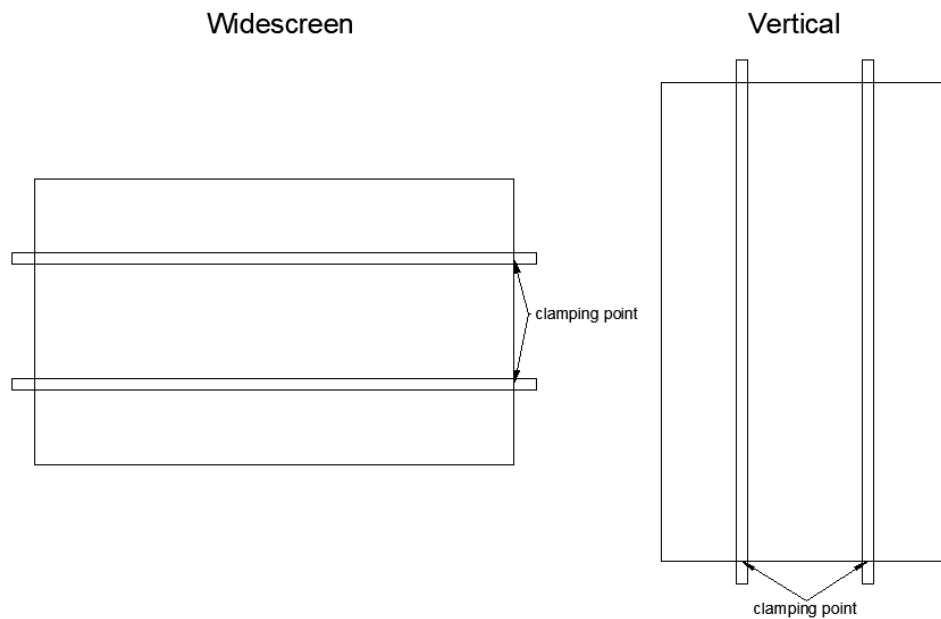
Module series	Number of mounting rails	Maximum usable distance From module edge to the middle of the mounting profiles (symmetric separation)	Maximum load (Suction / Pressure)
Power-60 Sonnenkraftwerk Sonnengläser with frame	2 mounting rails	200 - 405mm	2400Pa / 5400Pa
Power-60 Alpin	2 mounting rails	200 - 405mm	2400Pa / 5800Pa
	3 mounting rails	200 - 300mm lateral profiles 840mm central profile	2400Pa / 6400Pa
	3 mounting rails and <b>Alpin backrails</b>	200 - 300mm lateral profiles 840mm central profile	2400Pa / 7000Pa
	Please refer additional assembly instructions (SPF_8.000Pa_Installation instructions)	Please refer additional assembly instructions (SPF_8.000Pa_Installation instructions)	2400Pa / 8000Pa
Power-60 HC Power-60 HC Maxim Sonnengläser HC with frame	2 mounting rails	280 - 450mm	2400Pa / 5400Pa
Power-66 HC	2 mounting rails	325 - 500mm	2400Pa / 3600Pa
	3 mounting rails	325 - 500mm lateral profiles central profile offset by 5cm	2400Pa / 5400Pa
HC Modules 380Wp 35mm HC Modules 410Wp 35mm	2 mounting rails	340 - 440mm	2400Pa / 5400Pa

## Fixing variation: tilted roof

### Roof parallel standard - fixing on short module side

Format: vertical, widescreen

Positioning mounting profiles: parallel to long module side

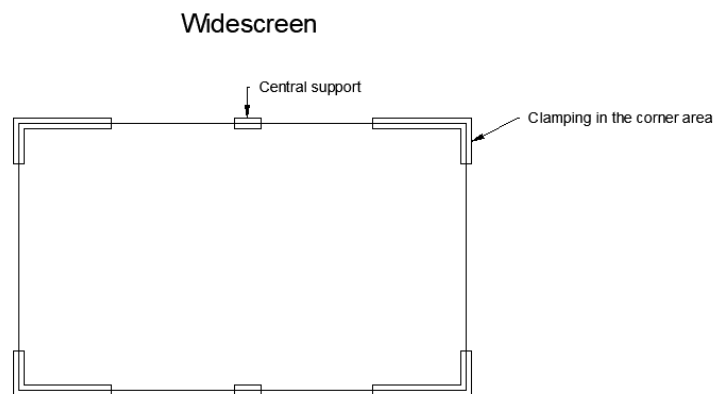


Module series	Number of mounting rails	Maximum usable distance From module edge to the middle of the mounting profiles (symmetric separation)	Maximum load (Suction / Pressure)
Power-60 Sonnenkraftwerk Sonnengläser with frame Power-60 Alpin	2 mounting rails	280mm	2400Pa / 5400Pa
Power-60 HC Power-60 HC Maxim Sonnengläser HC with frame	2 mounting rails	300mm	2400Pa / 5400Pa
Power-66 HC	not permitted	not permitted	not permitted
HC Modules 380Wp 35mm HC Modules 410Wp 35mm	not permitted	not permitted	not permitted

## Fixing variation: flat roof Elevated module substructure - Clamping in the corner area

Format: widescreen

Positioning mounting profiles: no continuous mounting profiles

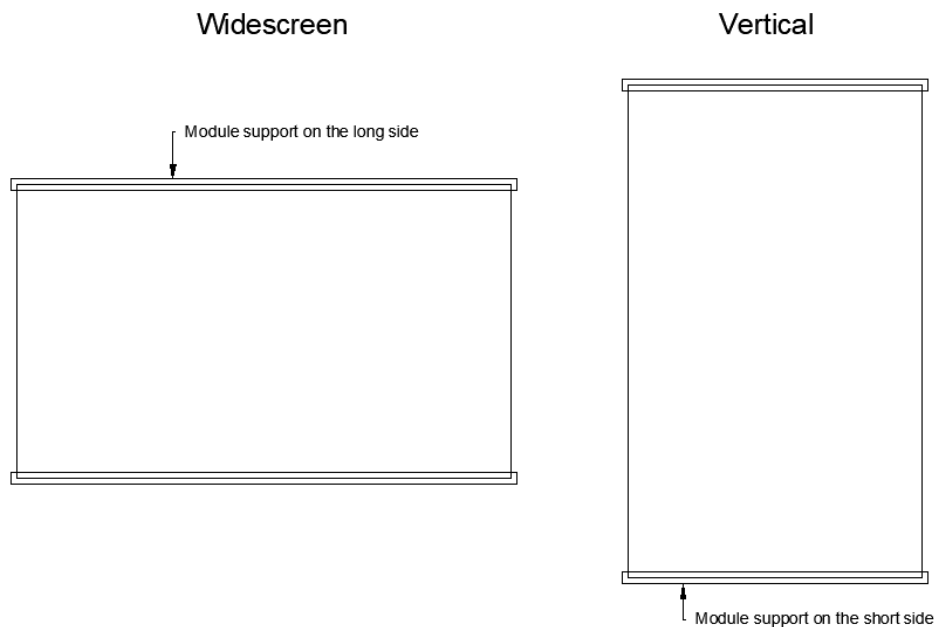


Module series	Number of clamping points	Maximum usable distance From module edge to the middle of the mounting clamp (symmetric separation)	Maximum load (Suction / Pressure)
Power-60 Power-60 HC Power-60 HC Maxim Sonnengläser with frame Rahmen Sonnengläser HC with frame Sonnenkraftwerk	Clamping in the corner area (4-point clamping)	Given by system	2400Pa / 2400Pa
	Clamping in the corner area with central support (6-point clamping)		2400Pa / 3000Pa
Power-60 Alpin	Clamping in the corner area (4-point clamping)	Given by system	2400Pa / 3000Pa
	Clamping in the corner area and <b>Alpin backrails</b> (4-point clamping)	Given by system	2400Pa / 3600Pa
	Clamping in the corner area with central support (6-point clamping)	Given by system	2400Pa / 4000Pa
	Clamping in the corner area with central support and <b>Alpin backrails</b> (6-point clamping)	Given by system	2400Pa / 4400Pa
Power-66 HC HC Modules 380Wp 35mm HC Modules 410Wp 35mm	Clamping in the corner area (4-point clamping)	Given by system	1600Pa / 1600Pa
	Clamping in the corner area with central support (6-point clamping)	Given by system	1600Pa / 2400Pa

## Fixing variation: tilted roof Roof parallel inlaying system (e.g. Siko) - lateral module support

Format: vertical, widescreen

Positioning mounting profiles: support on the short/long module side



Module series	Mounting type	Maximum usable distance From module edge to the middle of the mounting profiles (symmetric separation)	Maximum load (Suction / Pressure)
<b>Power-60</b> <b>Power-60 HC</b> <b>Power-60 HC Maxim</b> <b>Sonnengläser with frame</b> <b>Sonnengläser HC with frame</b> <b>Sonnenkraftwerk</b> <b>Power-60 Alpin</b>	Module support on the short side	Given by system	2400Pa / 2400Pa
	Module support on the long side	Given by system	2400Pa / 3600Pa
<b>Power-66 HC</b> <b>HC Modules 380Wp</b> <b>35mm</b> <b>HC Modules 410Wp 35mm</b>	Module support on the long side	Given by system	1600Pa / 2400Pa
	Module support on the short side	not permitted	not permitted