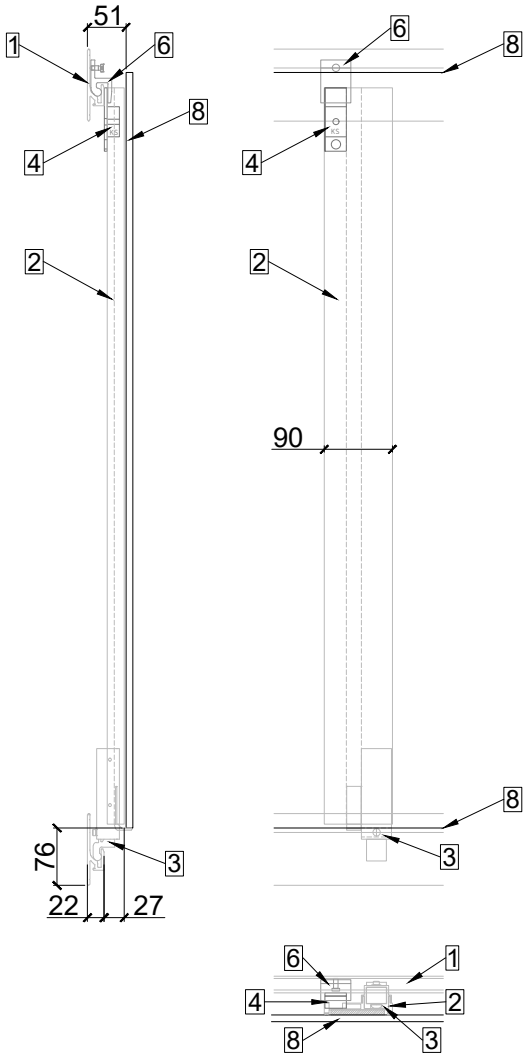
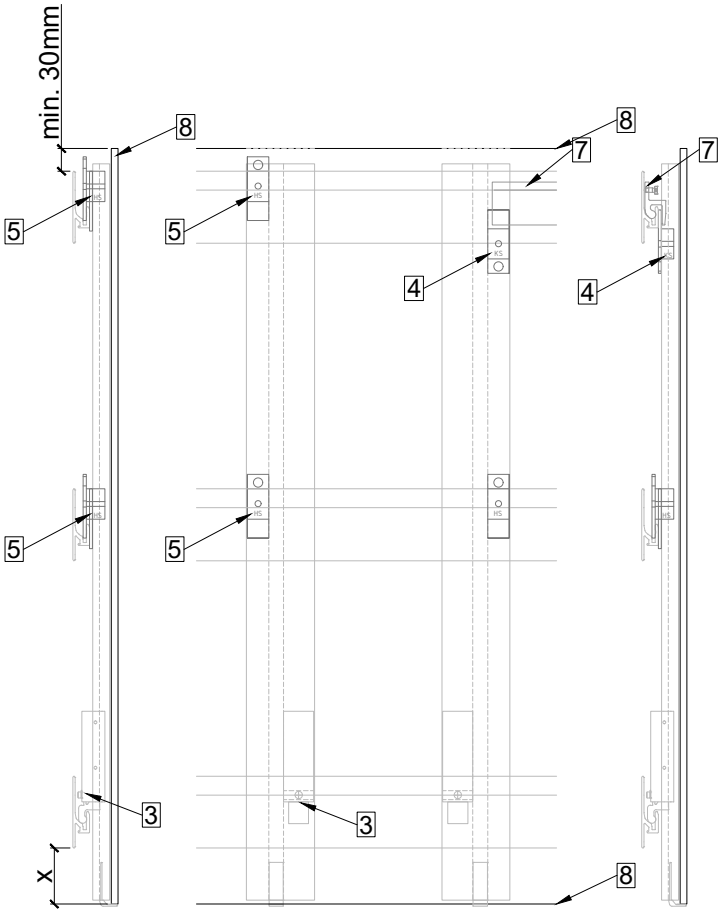
FAST 2 facade system

Description and dimensions

| A4 | 1:10 | V22.12 |

1 FAST 2 horizontal profile
2 FAST 2 backrail
3 FAST 2 adjustment
4 FAST 2 safety bracket
5 FAST 2 hanging bracket
6 FAST 2 safety slider 1M 40 mm
7 FAST 2 safety slider 2M
8 Megasol GG module





Notice:
The FAST 2 facade system is designed on a project-specific basis.
Structural analysis is the responsibility of the contractor.

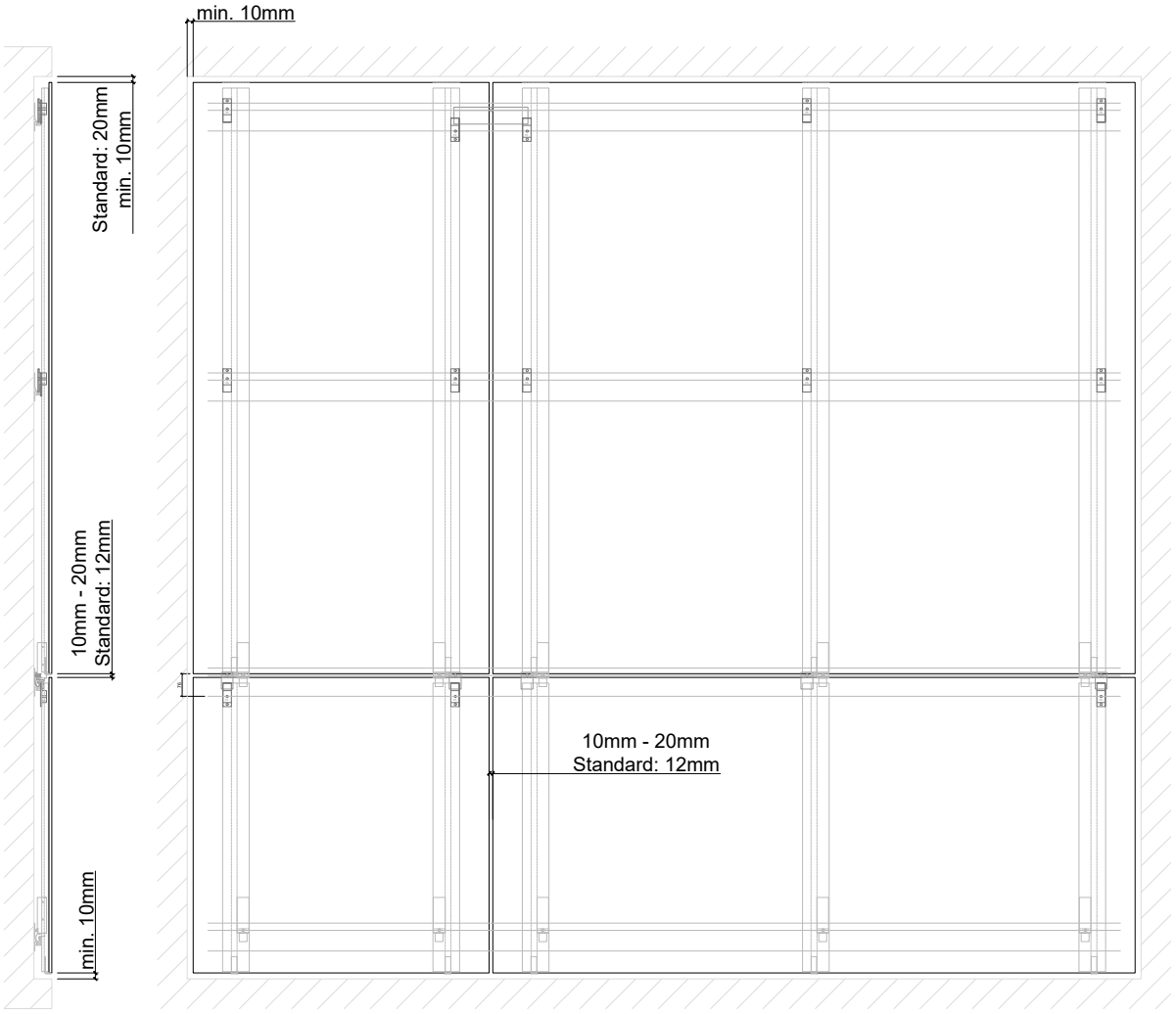
The thickness of 51mm will increase to 55mm for high modules (approx. from 1.7m).

Design example

A4 | 1:25 | V22.12

The FAST 2 Facade system can be individually designed and laid out. The number of FAST 2 horizontal profiles and FAST 2 backrails depends on the module size and on-site requirements. This means that even storey-high modules can be installed efficiently and safely.

Dimensions in the drawing: recommended minimum distances from obstacles
(frames, walls, terminations, etc.) and joint dimensions



Notice:
The FAST 2 Facade system is designed on a project-specific basis.
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When using FAST 2 hanging brackets, a joint of 20mm above the module field is assumed as standard so that the modules can be hung in. This dimension can be reduced for specific projects.

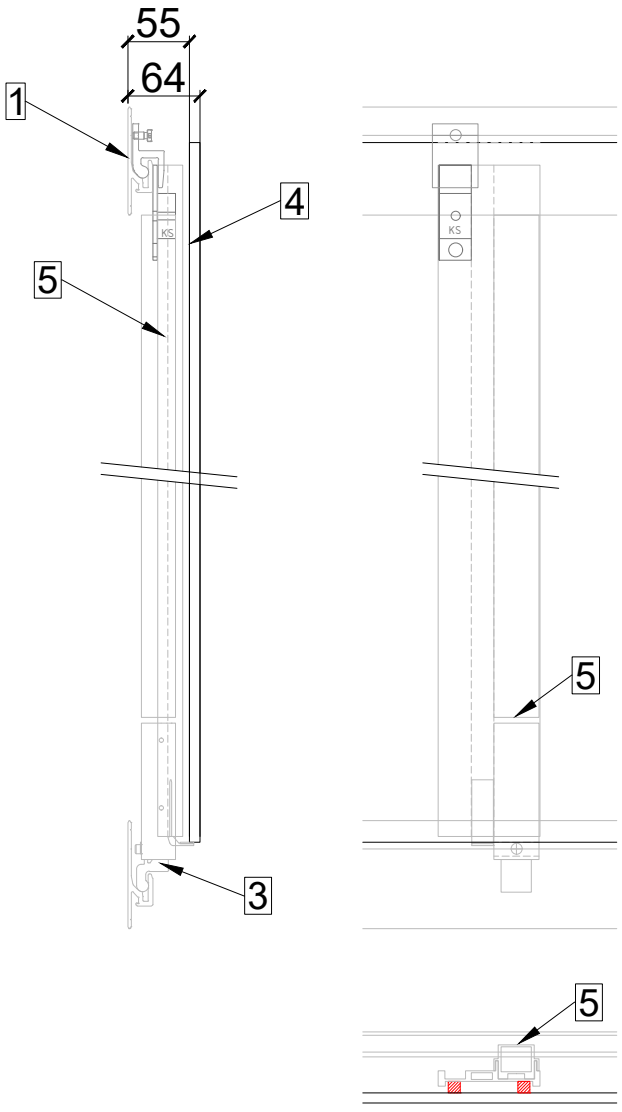
Description and dimensions

A4 | 1:7 | V22.12

High modules (approx. from 1.7m, depending on wind forces, glass thickness and module format) can be designed with reinforced backrails. This can replace additional horizontal profiles in the middle of the module.

The thickness of 51mm will increase to 55mm for high modules (approx. from 1.7m).

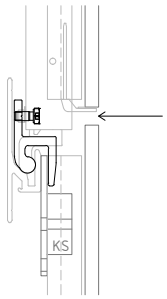
1 FAST 2 Horizontal profile
2 FAST 2 Backrail
3 FAST 2 Adjustment
4 Megasol GG module
5 Backrail reinforcement



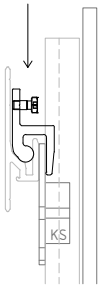
Module fuse

A4 | 1:5, 1:2 | V22.12

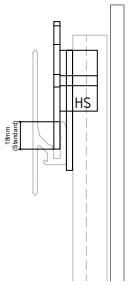
from front
in horizontal joint



from above
behind the module

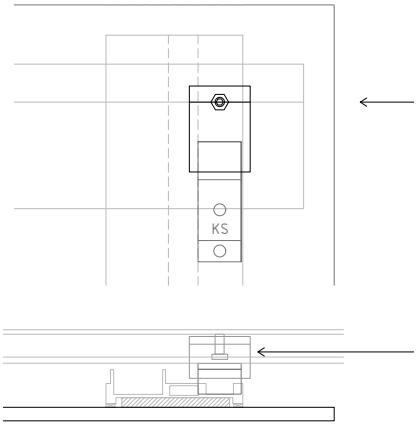


hanging
in horizontal profile
with hanging bracket

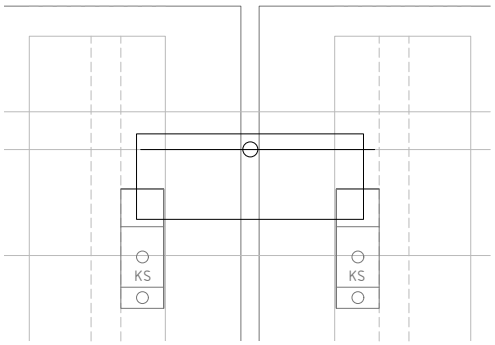


At least 20mm space required for inserting the hanging bracket. (Less is also possible depending on the project)

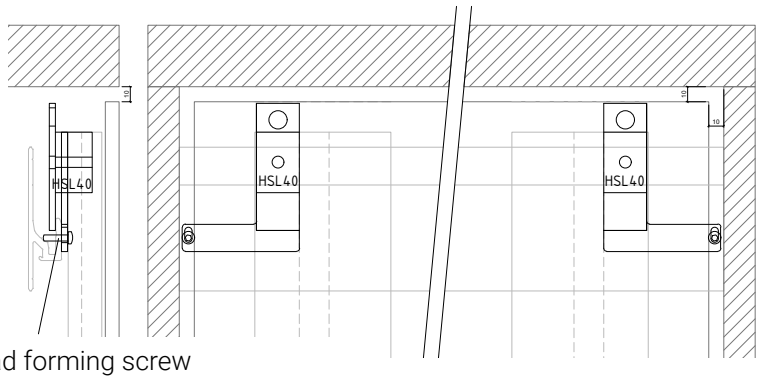
from the side
behind the module



from front
in vertical joint

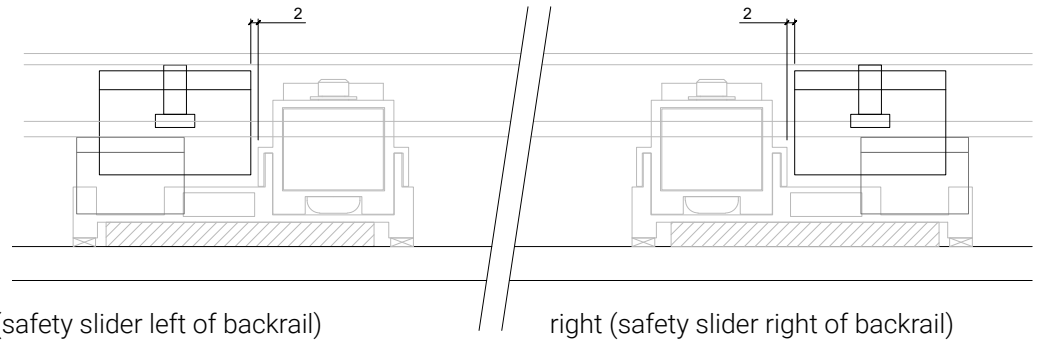


laterally with self-tapping screw
in vertical joint with min. distance to obstacle



Thread forming screw
M4x16mm Inox A2 (3.5mm predrill in the lower part of the oblong hole)

Migration fuse
Push the safety slider up to 2 mm against the backrails or the adjustment.



left (safety slider left of backrail) right (safety slider right of backrail)

Connection to on-site substructure

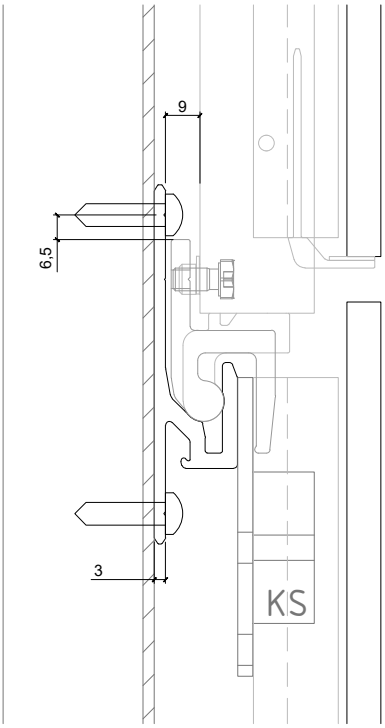
| A4 | 1:2 | V22.12 |

The FAST 2 Facade system is basically fastened to a vertically laid substructure made of wooden battens or aluminum profiles (Z or L profile). The distance of the vertical substructure can be calculated using the following tables. Larger distances as well as other substructures can also be realized.

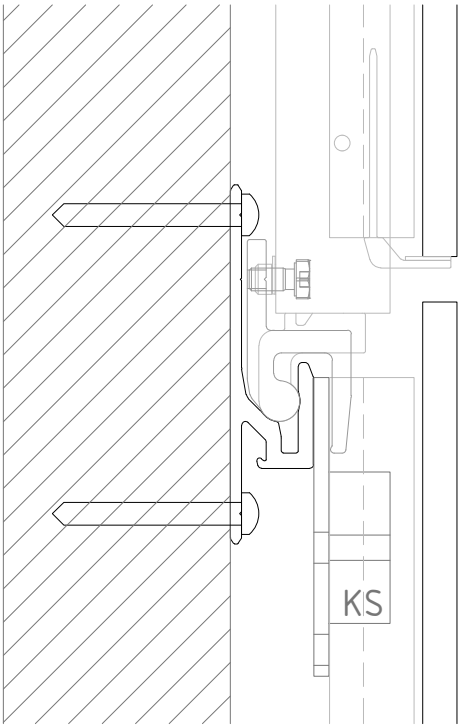
Part of the rear ventilation cross-section is between the backrails (27 mm).
This can be extended by the vertical battens.

The choice and quantity of fasteners (screws / rivets) depends on the requirements and must be designed by the customer.

Example on aluminum L-profile
Hexagonal drilling screw 5.5x19 mm Inox A2



Example on wooden lath
Pan head screw 6x60 mm Inox A2



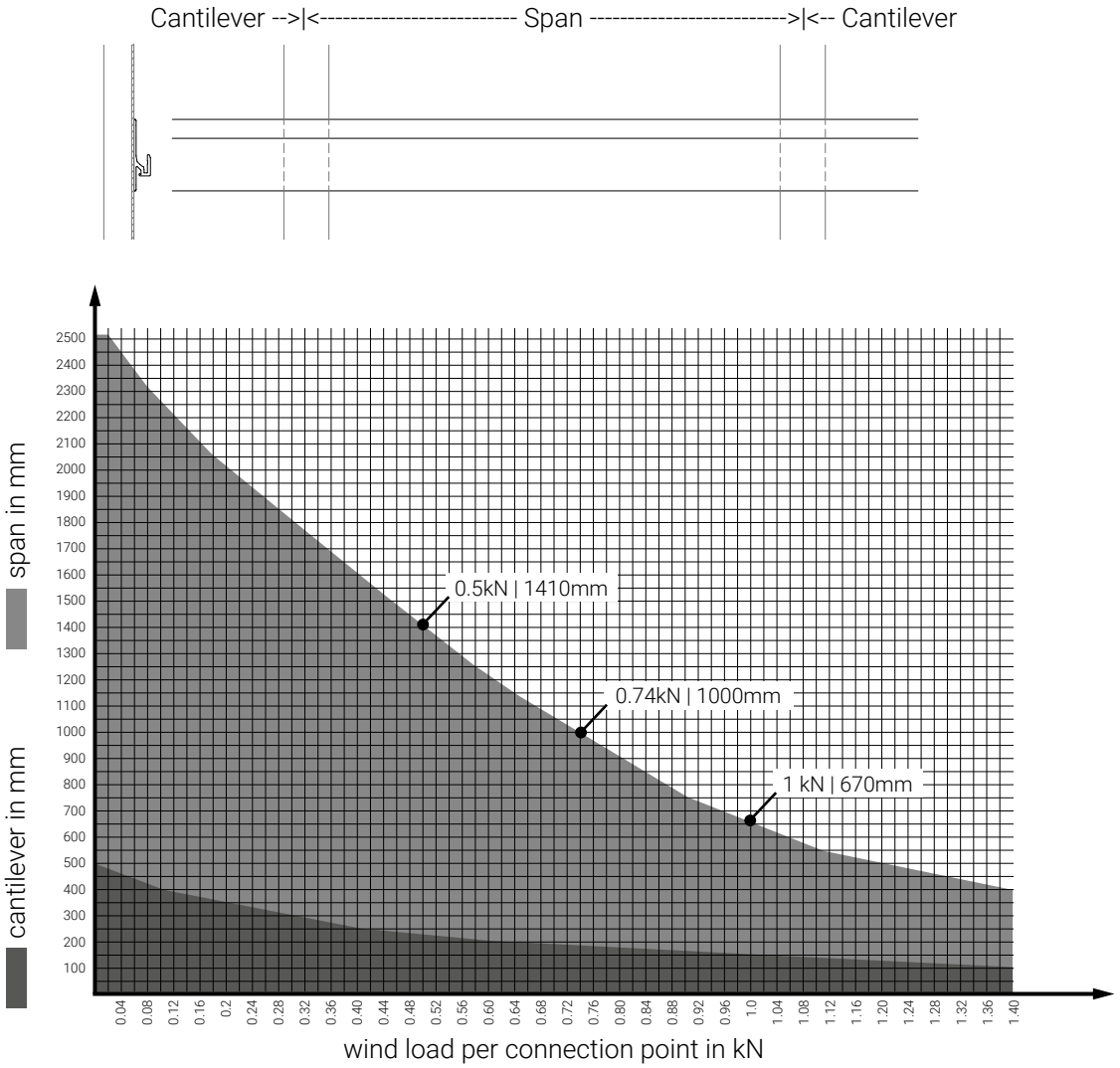
The design and fastening of the FAST 2 horizontal profiles to the on-site substructure and the structural substructure as well as the structural analysis is the responsibility of the contractor.

Horizontal Profile Span & Cantilever | V22.12 |

Calculation according to SN EN1999-1-1 with reduced cross-section according to standard

Load table for surcharge per backrail from 0.11 - 0.2 kN

- Span/Cantilever in millimeters
- Wind load per anchor point in kN, char. value without load coefficients
- The FAST 2 horizontal profiles must be mounted on a substructure that is designed to withstand the corresponding mechanical loads of wind and dead weight of the solar modules
- Module weight per m²: 2x 4mm glass approx. 22kg; 2x 6mm glass approx. 33kg
- Depending on the project, the span width can be extended.
- If the module mounting points are closer to the vertical connection, the span width can be increased.



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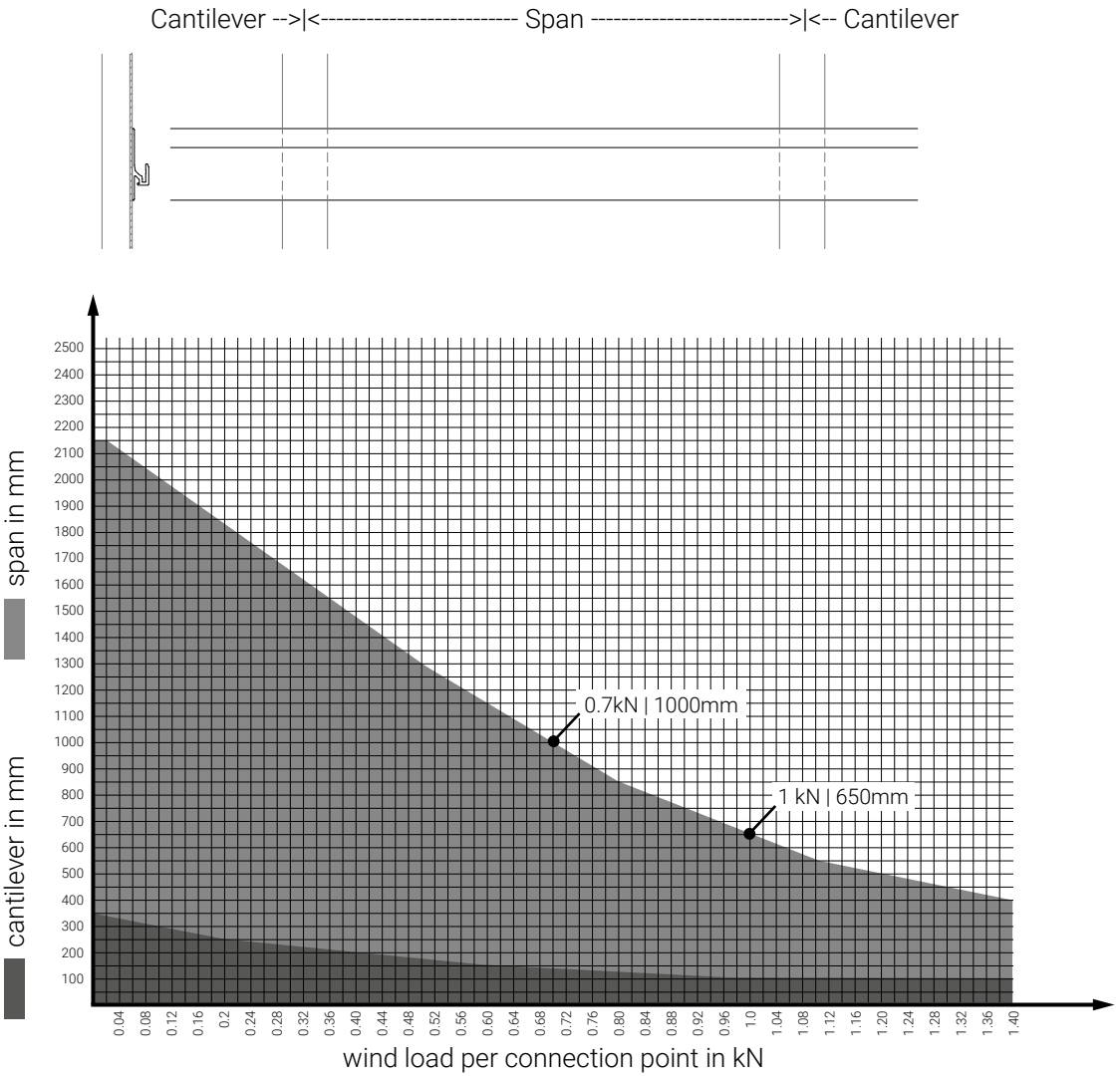
Horizontal Profile Span & Cantilever | V22.12 |

Calculation according to SN EN1999-1-1 with reduced cross-section according to standard

Load table for surcharge per backrail from 0.21 - 0.3 kN

- Span/Cantilever in millimeters
- Wind load per anchor point in kN, char. Value without load coefficients
- The FAST 2 horizontal profiles must be mounted on a substructure that is designed to withstand the corresponding mechanical loads of wind and dead weight of the solar modules
- Module weight per m²: 2x 4mm glass approx. 22kg; 2x 6mm glass approx. 33kg;
- Depending on the project, the span width can be extended.
- If the module mounting points are closer to the vertical connection, the span width can be increased.



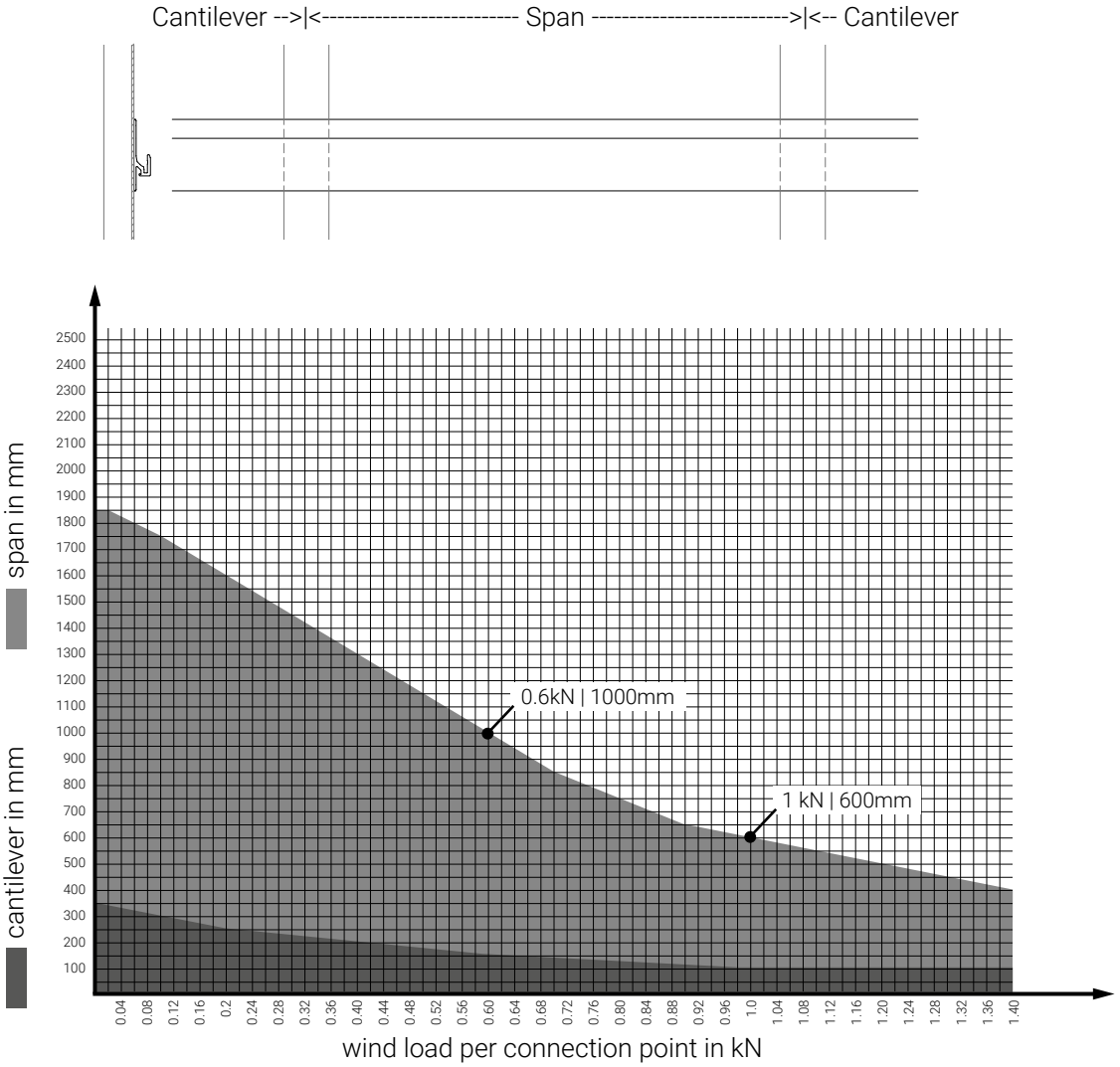
The design and fastening of the FAST 2 horizontal profiles to the on-site substructure and the structural substructure as well as the structural analysis is the responsibility of the contractor.

Horizontal Profile Span & Cantilever | V22.12 |

Calculation according to SN EN1999-1-1 with reduced cross-section according to standard

Load table for surcharge per backrail from 0.31 - 0.4 kN

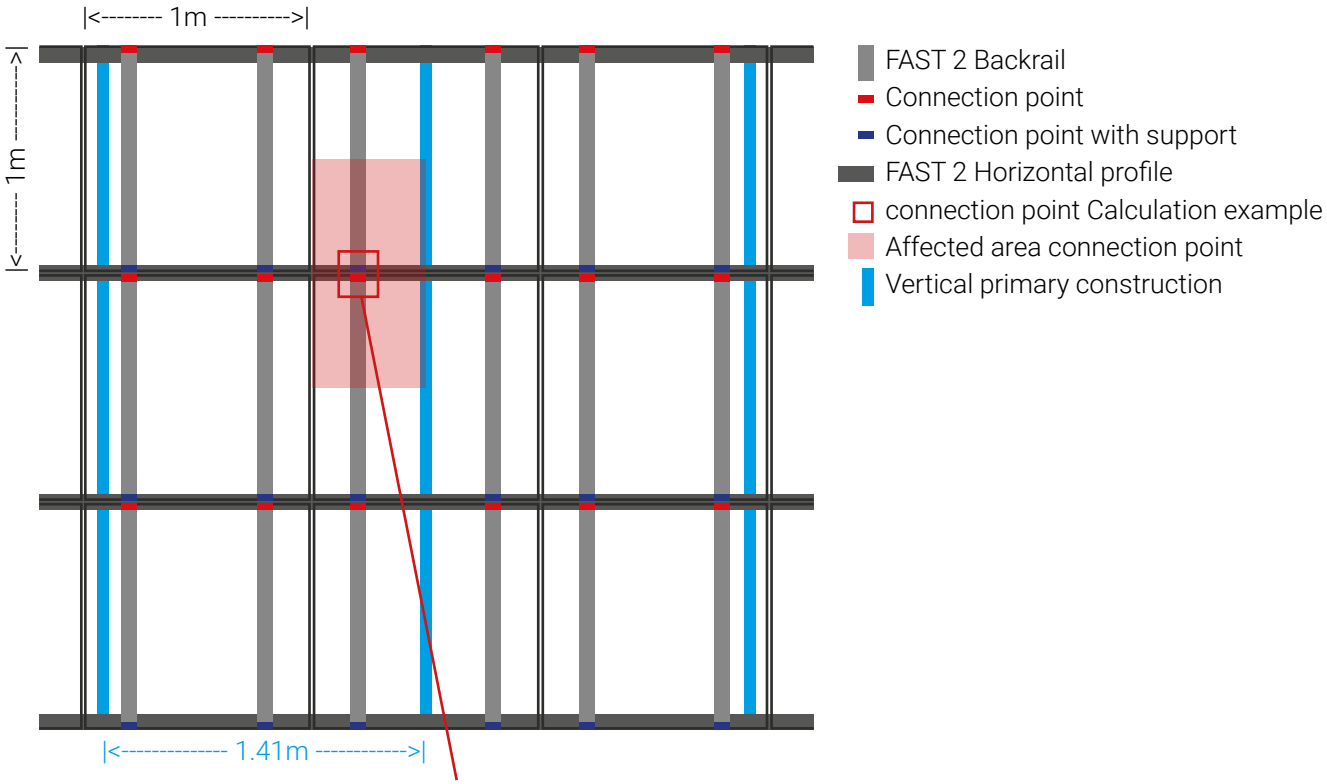
- Span/Cantilever in millimeters
- Wind load per anchor point in kN, char. Value without load coefficients
- The FAST 2 horizontal profiles must be mounted on a substructure that is designed to withstand the corresponding mechanical loads of wind and dead weight of the solar modules
- Module weight per m²: 2x 4mm glass approx. 22kg; 2x 6mm glass approx. 33kg;
- Depending on the project, the span width can be extended.
- If the module mounting points are closer to the vertical connection, the span width can be increased.



The design and fastening of the FAST 2 horizontal profiles to the on-site substructure and the structural substructure as well as the structural analysis is the responsibility of the contractor.

Connection to on-site substructure | V22.12

Calculation example



Calculation example of one connection point
(Connection module with backrails to FAST 2 horizontal profile).

Effect of wind:

Reference value of dynamic pressure q_{p0}	0.9 kN/m² (depending on wind load zone)
Profile coefficient c_h	1.4 (depending on terrain category and building height)
pressure coefficient c_{pe}	0.8 (depending on building shape and field or edge area)
char. Wind pressure q_{ek}	0.9 kN/m² x 0.8 x 1.4 = 1 kN/m²

Force per support:

module weight	22 kg (2x4mm glass, 1m²)
Force per support	22 kg : 2 (supports) = 11kg (corresponds to approx. 0.11kN)

Force on anchor point:

Affected area on anchor point	0.5m²
Force on anchor point	1 kN/m² x 0.5m2 = **0.5 kN**

Span according to table: 1410mm

The design and fastening of the FAST 2 horizontal profiles to the on-site substructure and the structural substructure as well as the structural analysis is the responsibility of the contractor.