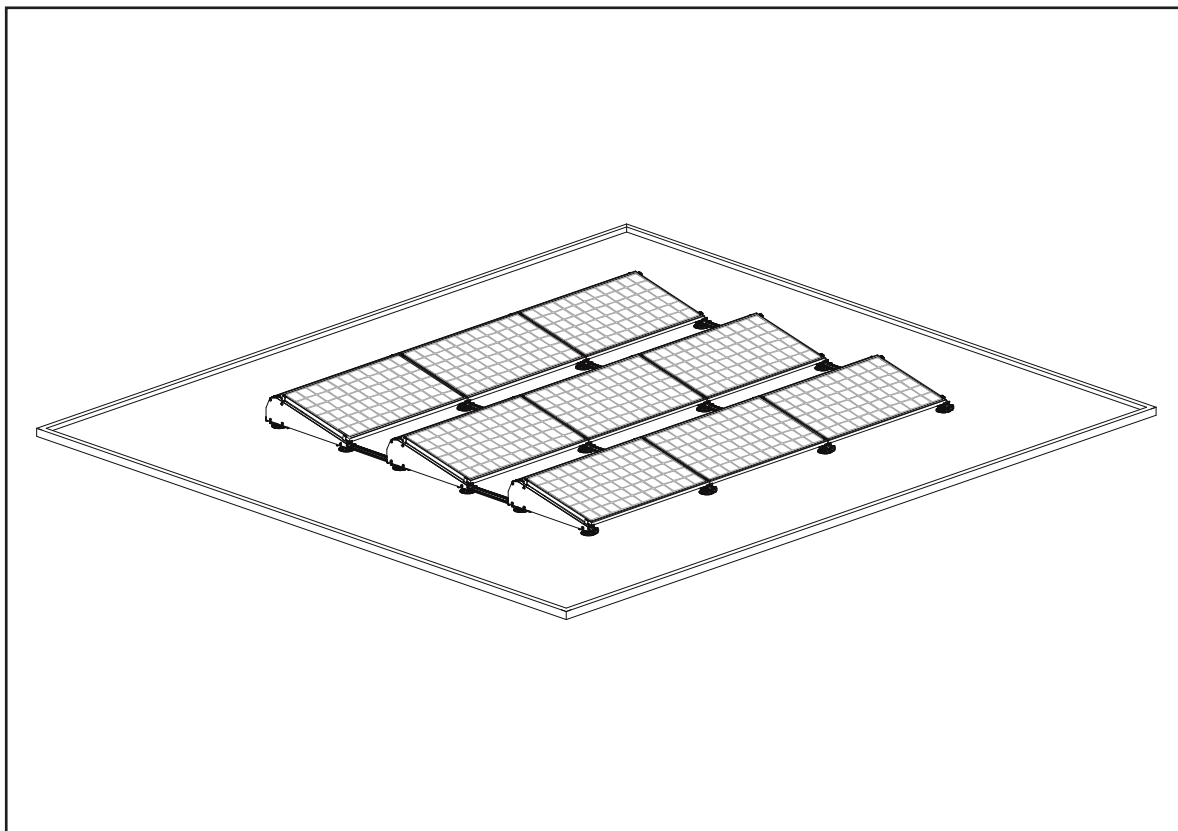


PROJECT SPECIFICATIONS

FLATFIX FUSION MOUNTING SYSTEM FOR FLAT ROOFS



Project: MS_U_Stadionu
Date: 27-3-2020
Client:
Reference:

Paderbornstraat 4
7418 BP Deventer
The Netherlands

| | |
|-------|------------------|
| Phone | +31 570 624 177 |
| Fax | +31 570 621 485 |
| Mail | info@clickfit.nl |

Flatfix Fusion is a product of Esdec B.V.
Flatfix Fusion ist ein Produkt von Esdec B.V.
Flatfix Fusion is een product van Esdec B.V.

CLICKFIT.NL



PROJECT SPECIFICATIONS

FLATFIX FUSION MOUNTING SYSTEM FOR FLAT ROOFS

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Project specifications

| | |
|-----------|--------------------------------|
| Date | vrijdag 27 maart 2020 12:59:24 |
| Client | |
| Reference | |

Location

| | |
|---------------------|----------------------|
| Location | |
| Terrain | Terrain category III |
| Consequences class | CC1 |
| V _{bo} | 25 |
| C _{dir} | 1 |
| C _{season} | 1 |
| C _{r(z)} | 1 |
| ρ | 1.25 |
| Wind pressure | 547 N/m ² |
| Height | 6 m |
| Edge zone | 656 mm |
| Parapet | 200 |
| Roof angle | 0°* |
| Roofing | 0,45 (PVC/TPO) |
| Membrane fastening | Fully burned |
| Segment count | 1 |

*At roof angles beyond 3 degrees on bitumen and EPDM roofs or beyond 2 degrees on PVC and other roof types the system must be glued or fastened mechanically.

System specifications

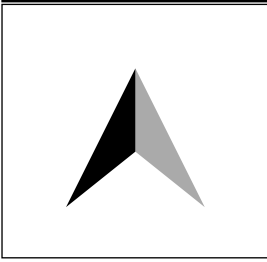
| | |
|--|----------------|
| Panel type | Axitec 325Wp |
| Panel dimensions | 1675x992x35mm |
| Panel weight | 18.5 kg |
| Panel power | 325 Wp |
| Panelcount | 20 st |
| Total power | 6500 Wp |
| Mounting angle | 13° |
| Configuration | Single |
| Row distance | 1700 mm |
| Orientation (West=90, South=0, East=-90) | 0° |
| Average return indication (Kwh/year) | 5850 Kwh/jaar* |
| Average return indication (Kwh/Kwp) | 0.90 Kwh/Kwp* |

*Based on PVGIS, location De Bilt, Netherlands with a shadowfree setup using a row distance of 1700mm. No rights can be derived from this information.

Ballast options

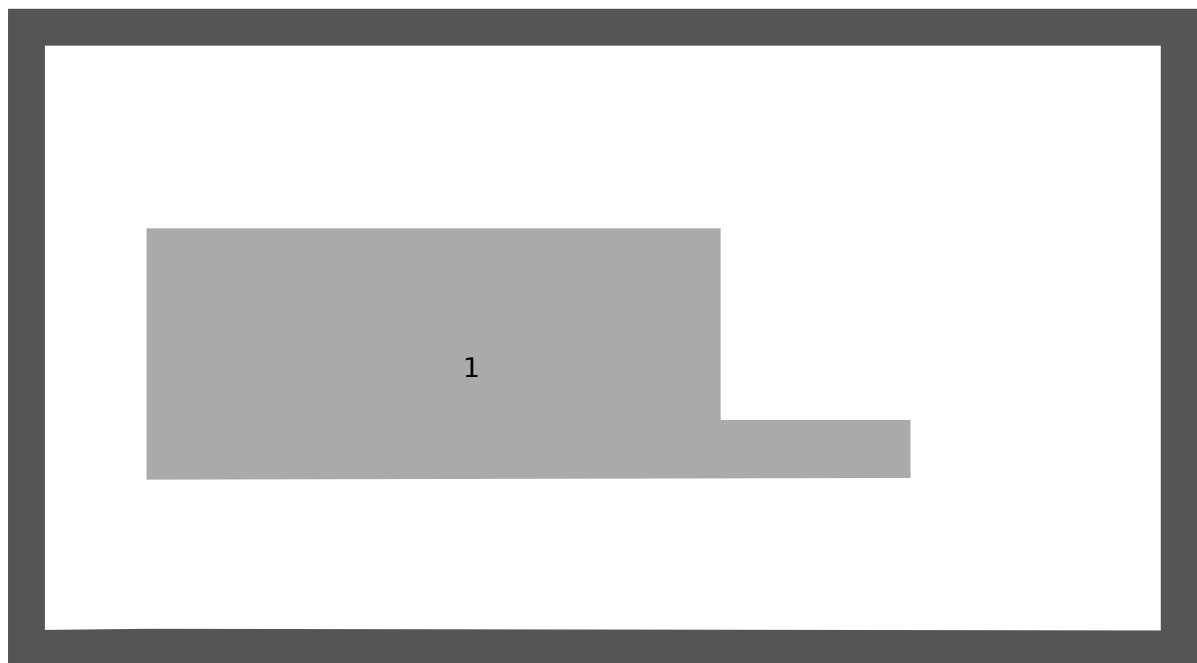
| | |
|--|----------------------|
| concrete slab(210x100x80mm, 4kg/st) | 60 st |
| Gravel(diameter 3cm, 1600kg/m ³) | 0.150 m ³ |

Complete overview Roof A



■ Panels

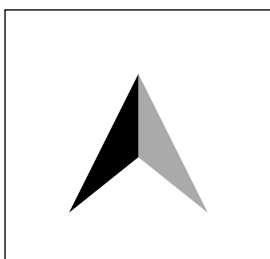
■ Area to be kept free



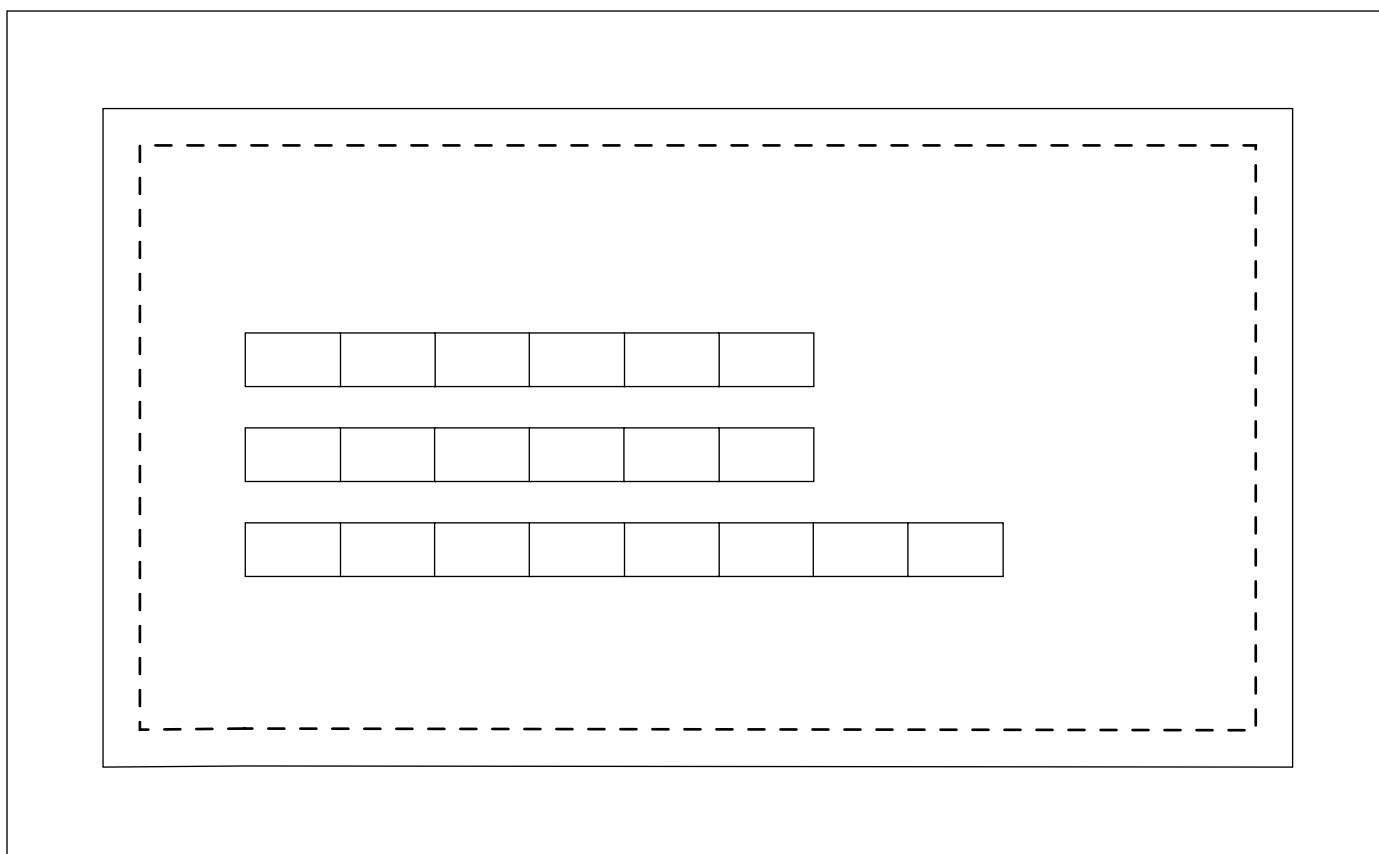
Roof load(static)

| | |
|--|-------------|
| Weight panels | 370 kg |
| Weight Flatfix fusion | 136 kg |
| Weight Ballast | 240 kg |
| Total weight | 746 kg |
| Roof area(gross) | 250 m2 |
| System area(projected area) | 55.09 m2 |
| Average roof load over system area | 13.55 kg/m2 |
| Average roof load over roof area | 2.98 kg/m2 |
| Roof load over ballasted area | 26.65 kg/m2 |
| Roof load over unballasted area | 9.20 kg/m2 |
| Average point pressure (at base plate) | 7.7 kPa* |
| Max. point pressure (at base plate) | 15.7 kPa* |
| Min. point pressure (at base plate) | 3.5 kPa* |

*Irregularities in the roof can cause deviating point pressures



--- Edge zone

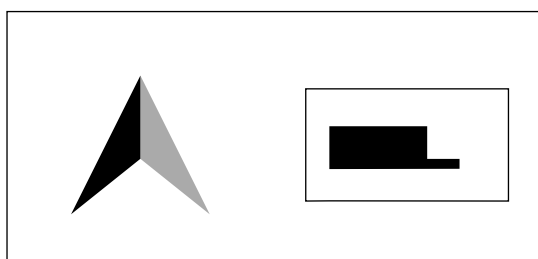


System specifications: Roof A, Segment 1

System specifications

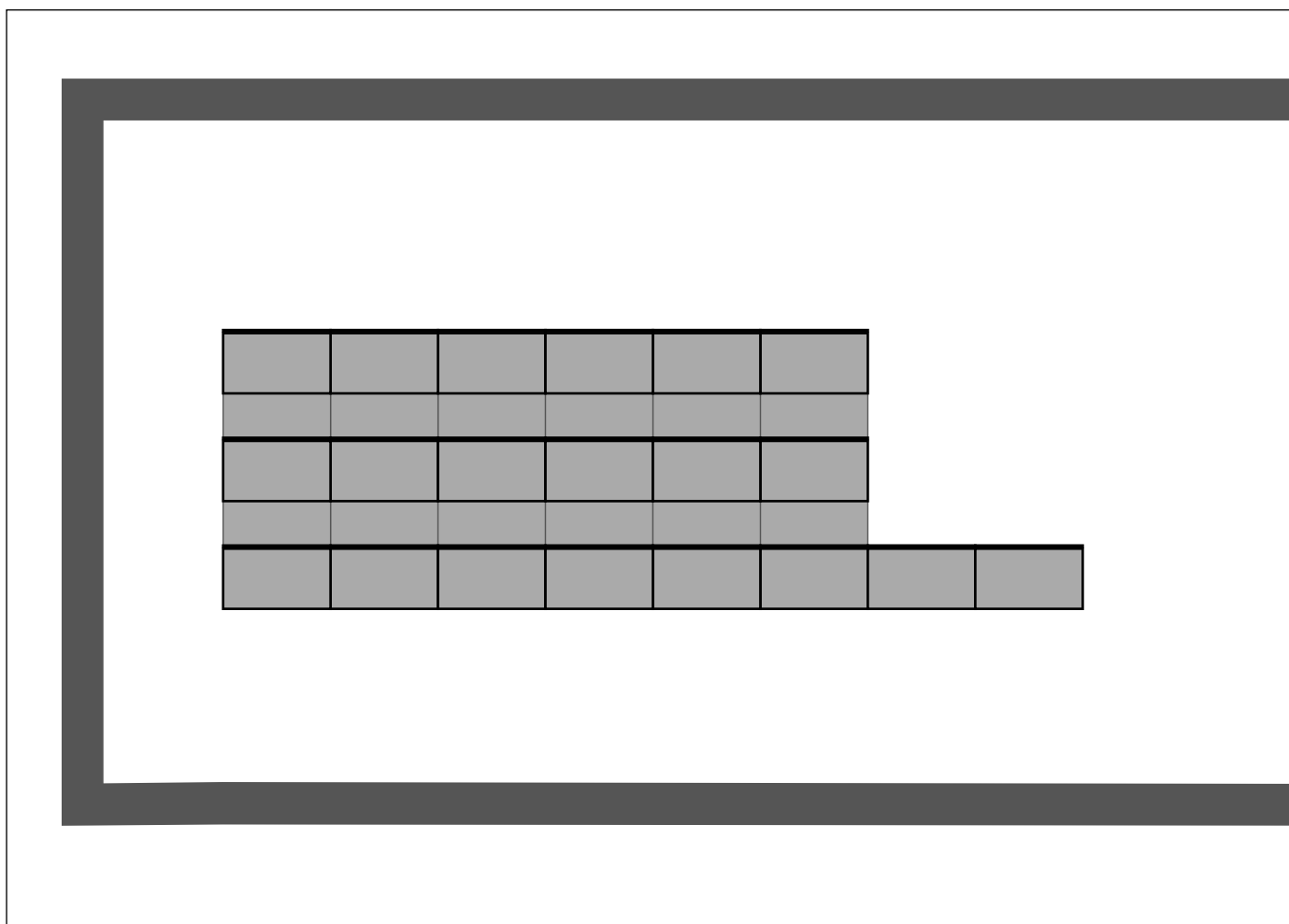
| | |
|--|----------------|
| Panelcount | 20 st |
| Total power | 6500 Wp |
| Configuration | Single |
| Row distance | 1700 mm |
| Orientation (West=90, South=0, East=-90) | 0° |
| Average return indication (Kwh/year) | 5850 Kwh/year* |
| Average return indication (Kwh/Kwp) | 0.72 Kwh/Kwp* |

*Based on PVGIS, location De Bilt, Netherlands with a shadowfree setup using a row distance of 1700mm. No rights can be derived from this information.



■ Panels

■ Area to be kept free



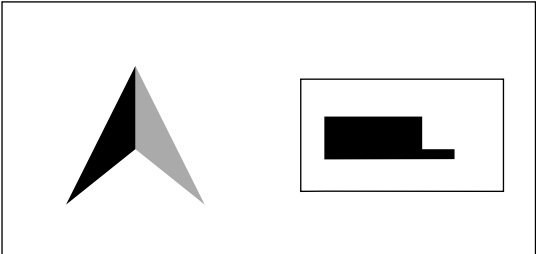
Ballast weight: Roof A, Segment 1

Ballast weight

| | |
|----------------|--------|
| Ballasted | 8 st |
| Weight Ballast | 240 kg |

Ballast options

| | |
|-------------------------------------|----------|
| concrete slab(210x100x80mm, 4kg/st) | 60 st |
| Gravel(diameter 3cm, 1600kg/m3) | 0.150 m3 |



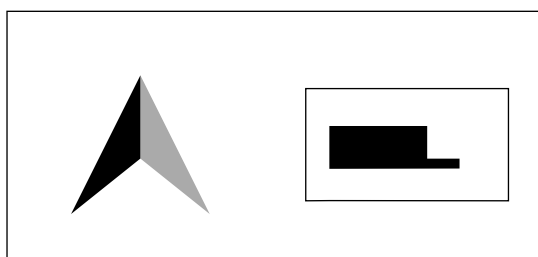
| | | | | | | | |
|------|--|------|--|--|------|------|------|
| 32kg | | 24kg | | | 32kg | | |
| | | | | | | | |
| | | | | | 32kg | | |
| | | | | | | | |
| 24kg | | 24kg | | | | 32kg | 40kg |

Roof load: Roof A, Segment 1

Roof load(static)

| | |
|--|-------------|
| Weight panels | 370 kg |
| Weight Flatfix fusion | 136 kg |
| Weight Ballast | 240 kg |
| Total weight | 746 kg |
| System area(projected area) | 55.09 m2 |
| Average roof load over system area | 13.55 kg/m2 |
| Average point pressure (at base plate) | 7.7 kPa* |
| Max. point pressure (at base plate) | 15.7 kPa* |
| Min. point pressure (at base plate) | 3.5 kPa* |

*Irregularities in the roof can cause deviating point pressures



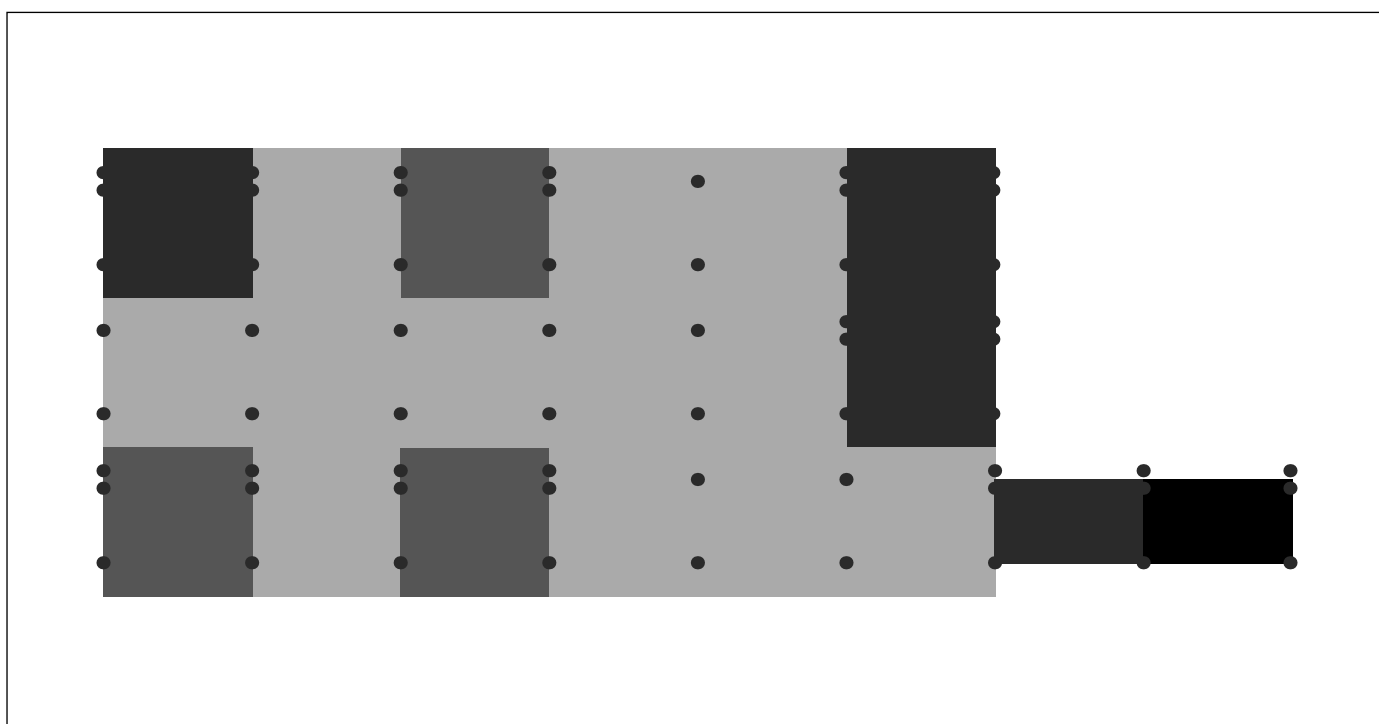
● Base plates

■ 8.20kg/m2

■ 18.08kg/m2

■ 36.22kg/m2

■ 42.36kg/m2

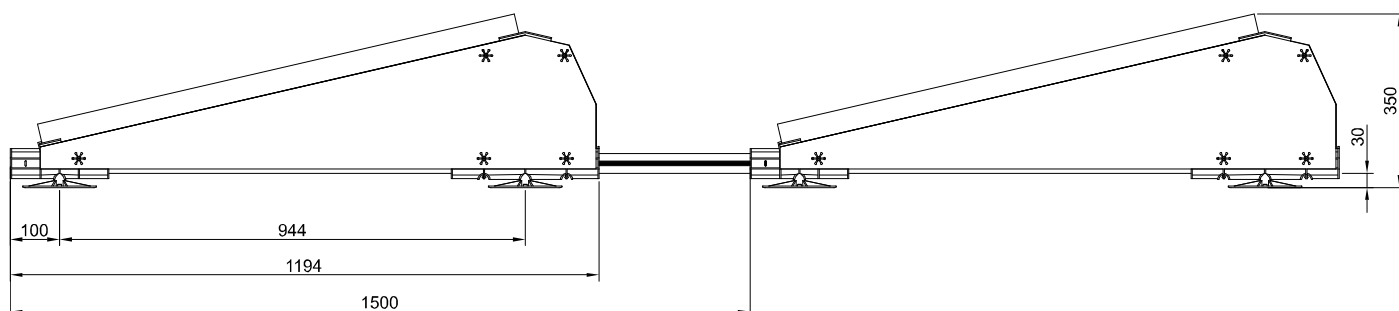


Materials: Roof A, Segment 1

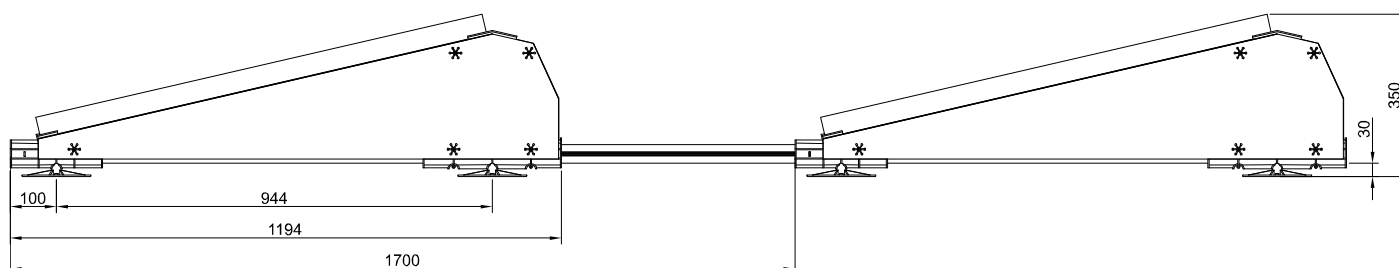
Materials

| Article nr | Amount | Description |
|------------|--------|---------------------------------------|
| 100-7012 | 61st | Base plate or (100-7010) |
| 100-7021 | 23st | Low base |
| 100-7030 | 23st | High base |
| 100-7041 | 20st | Cable clip optimizer ready |
| 100-7201 | 20st | Winddeflector rear 1600 (or 100-7050) |
| 100-7204 | 3st | Winddeflector left (or 100-7055) |
| 100-7205 | 3st | Winddeflector right (or 100-7056) |
| 100-7202 | 8st | Ballast container 1600 (or 100-7060) |
| 100-7175 | 14st | Base profile 750mm |
| 100-7194 | 23st | Base profile 940mm |
| 100-6519 | 46st | Mounting screw 6,5x19 |
| 100-6563 | 46st | Mounting screw 6,5x63 |
| 100-3010 | 12st | Self-tapping screw 6,0x25 |
| 100-3022 | 34st | Module clamp |
| 100-4135 | 12st | Endclamp 35mm |

Single setup with a row distance of 1500mm



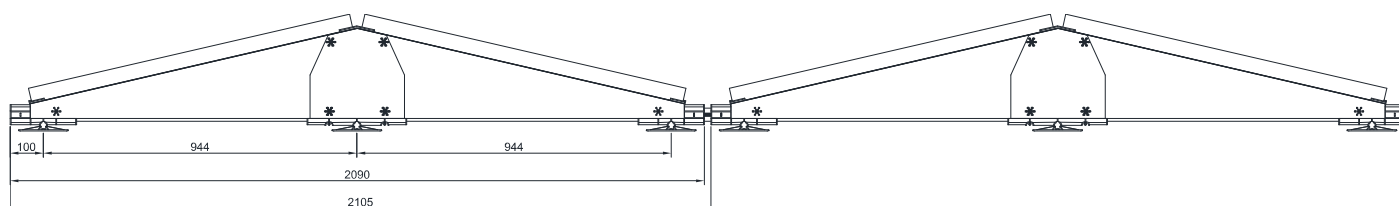
Single setup with a row distance of 1700mm



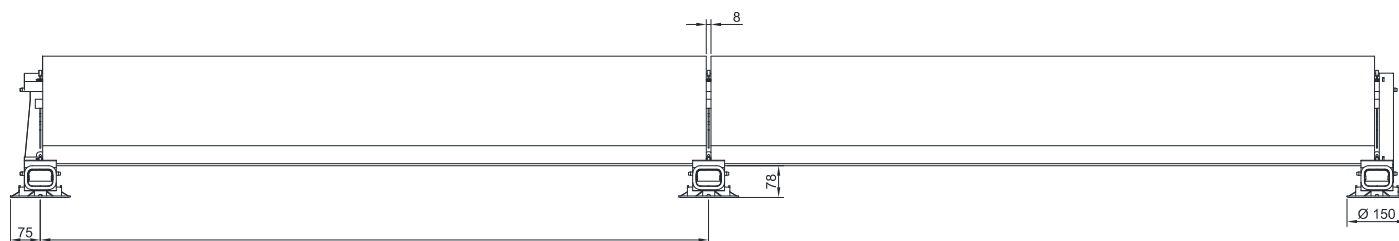
Single setup with a row distance of 1890mm



Dual setup



Back view



PROJECT SPECIFICATIONS

FLATFIX FUSION MOUNTING SYSTEM FOR FLAT ROOFS

Disclaimer: The installation of a PV system, or to an existing building, the hitherto existing building loads (eg snow / wind.) Or changing the building constructions. To avoid personal injury and / or property damage, it is necessary static calculations of the existing building to be reviewed by a qualified technician. Here one must observe the current regulations and in particular the NEN6702, NEN7250, NEN1991-1-1-4 A1 + C2 / NB. It does not check the static calculation of the building, it can in the worst case, lead to failure of the load-bearing structure of the building. Consultation with the insurer is required in the event of structural changes. Among others, the following should be considered controlled architectural and good: The occurring charges as a result of the additional weight of the complete PV system on the building. The occurring charges as a result of the changed geometry of the roof on the building. The occurring charges as a result of the dynamic wind pressure and possible accumulation of precipitation on the building. The loads occurring during installation on the building, roofing and insulation. The compatibility of the insulation and roofing material at the location of the contact points of the supporting structure of the long-term PV-system as a result of the pressure point. The compatibility of the roofing material in combination with the support structure at the location of the contact points. The effect of thermal performance of the building and the PV system on each other. The effect of any movement and vibrations of the roof and the PV system on each other. Despite the fact that the calculations are carried out carefully in the software, no rights can be derived. Prices in the software are indicative and may change due to possibly rising commodity prices. The drawing and the dimensions in the software are indicative, no rights can be derived.