Solar systems from Schweizer

Tender specifications PV mounting system Green roof MSP-FR-G

Tender specification long for PV mounting system MSP-FR-G with tested lightning current carrying capacity

Type of photovoltaic mounting system:

Mounting system for the attachment of nominally 10° elevated photovoltaic modules in east and west orientation on extensively used green roofs. Can be used from 0.15 m roof edge distance (distance measured from parapet). All components made of aluminium, stainless steel, ZM-coated steel (protective layer with polyester fleece - only required on request). Tested lightning current carrying capacity.

Fulfils the equipotential bonding of the holding frame (module frame) and the mounting system of the PV system as required by DIN (VDE 0100-712). The mounting system must be installed on the roof with as little additional ballast as possible and without penetrating the roof cladding, taking into account the maximum permissible ceiling load. The roof water drainage must not be disturbed by metal rails resting on and passing through the roof cladding, even after a longer period of time (sinking into the insulation), regardless of the orientation. The design documentation of the mounting system manufacturer provides information about the area load of the actually occupied roof surface and shows the max. point load to be expected including snow load.

All components of the mounting system and all connecting materials must be made of stainless material (aluminium, stainless steel or ZM-coated steel).The bearing pressure between the insulation material installed in the flat roof and the additional load of the photovoltaic system plus the snow load to be applied sk must be checked before the order is placed and provided in writing by the mounting system manufacturer. It should be possible to adapt the support surface of the mounting system to the condition of the roof insulation material (min. permanent compressive strength at max. 2 % compression).

The modules are clamped to the mounting system by means of a universal end or middle clamp, which is suitable for all module frame heights of 28-45 mm. The mounting system must be able to be mounted by one person independently of the modules. Single-tool assembly (Torx 30).

Additional drilling and cutting work on metal parts is not permitted on site during the entire construction phase. Occupancy changes and associated changes to the ballasting during the construction phase are to be tracked promptly by using design software and kept for the system documentation. The standards DIN EN 18195-1:2008-11 Water-proofing of buildings - Part 2: Materials, DIN VDE 0100-712 (VDE 0100-712), DIN EN 1990:2010-12, DIN EN 1991-1-1:2002-10, DIN EN 1991-1-3:2010-12, DIN EN 1991-1-4:2010-12, DIN EN 1999-1-1:2010-05 and the aerodynamic study according to WTG guidelines must be complied with.

Consisting of:

- Support deep, MSP-FR-EW in SL8 and SL10 and S in SL8 and SL10
  or equivalent, supply and assemble
- Support high, MSP-FR-EW-SH
  or equivalent, supply and assemble
- Adapter support MSP-FR-G-AS
- Base profile MSP-FR-EW-BP
  BP300, BP450, BP600, BP900 or BP1200
  or equivalent, supply and assemble
- on special request: protective layer fleece MSP-FR-EW-PSF
  PSF300, PSF450, PSF600, PSF900, PSF1200
  or equivalent, supply and assemble
- Connecting rail MSP-FR-EW-C, various lengths
  or equivalent, supply and assemble
- Ballast tray holder new MSP-FR-BT/ Clamp new BC/ Initial flashing ballast tray holder new BS
  or equivalent, supply and assemble

- optional ballast tray MSP-FR-S-WD
  or equivalent, supply and assemble
- and optionally ballast tray carrier MSP-FR-S-SB
  or equivalent, supply and assemble
- Optional gravel tray aluminium 1620 – 1749 mm (Art. No. 21744) / 1750 – 1849 mm (Art. No. 21876)
- Ballast stones (to be supplied by customer) according to dimensioning / sizing as per SPT issue
- Screws
  MSP-FR-S 6x16,
  MSP-FR-TS 6.3x22 for lightning current carrying substructure
  and MSP-FR-GS 6x60
  or equivalent, supply and assemble
- Connecting channel MSP-FR-C
  or equivalent, supply and assemble
- Cable holder with edge clip MSP-FR-CHE
  or equivalent, supply and assemble
- Module clamps
  Middle clamp MSP-PR-MC 28-45 mm, MSP-PR-MCG 28-45 mm (conductive)
  Middle clamp MSP-PR-MCB 28-45 mm (black), MSP-PR-MCBG 28-45 mm (black, conductive)
  and
  End clamp MSP-PR-EC 28-45 mm, MSP-PR-ECG 28-45 mm (conductive)
  End clamp MSP-PR-ECB 28-45 mm (black), MSP-PR-ECBG 28-45 mm (black, conductive)
  or equivalent, supply and installation
- Supply and install additional clamp low MSP-FR-LC or additional clamp high MSP-FR-HC
  or equivalent.
- Supply and fit Cable holder with edge clip MSP-FR-CHE for cable mounting (made of PA6.6) or equivalent.

Solar systems from Schweizer

Tender specifications PV mounting system
Green roof MSP-FR-G

Tender specification text short for PV mounting system MSP-FR-G with tested lightning current carrying capacity

Type of photovoltaic mounting system:

Elevation:	Nominal 10°
Module orientation:	East/west
Roof edge distance:	Minimum 0.15 m (check)
Fastening:	Without any roof penetration, only with additional ballast.
Documentation of the manufacturer:	Static proof of the stability of the entire system, ballast plan, occupancy plan, 3D total occupancy overview, area load per occupied area, max. point load incl. snow load, test of the bearing pressure.
Material:	Aluminium, stainless steel, ZM-coated steel and polyester fleece
System features:	Extendable support surface by choice of longer base plates, universal clamps 28-45 mm,
Roof installation properties:	Pre-installation possible without module, installation possible with only one person, single-tool installation (Torx 30), no drilling or cutting work necessary, max. block size (thermal break): 14 m x 14 m, undisturbed roof drainage.
Electrical properties:	Tested lightning current ampacity, earthing of module and frame possible with special earthing screw
Design flexibility:	Fast response due to design software
Standards/guidelines to be complied with:	DIN EN 18195-1:2008-11 Water-proofing of buildings - Part 2: Materials, DIN VDE 0100-712 (VDE 0100-712), DIN EN 1990:2010-12, DIN EN 1991-1-1:2002-10, DIN EN 1991-1-3:2010-12, DIN EN 1991-1-4:2010-12, DIN EN 1999-1-1:2010-05 and the aerodynamic study according to WTG guidelines must be complied with
Certificates:	TÜV certified

Consisting of:

- Support deep, MSP-FR-EW in SL8 and SL10 and S in SL8 and SL10
  or equivalent, supply and assemble
- Support high, MSP-FR-EW-SH
  or equivalent, supply and assemble
- Adapter support MSP-FR-G-AS
- Base profile MSP-FR-EW-BP
  BP300, BP450, BP600, BP900 or BP1200
  or equivalent, supply and assemble
- On special request: protective layer fleece MSP-FR-EW-PSF
  PSF300, PSF450, PSF600, PSF900, PSF1200
  or equivalent, supply and assemble
- Connecting channel MSP-FR-EW-C, various lengths
  or equivalent, supply and install
- Ballast tray holder new MSP-FR-BT/ Clamp new BC/ Initial flashing ballast tray holder new BS
  or equivalent, supply and assemble

- Optional ballast tray MSP-FR-S-WD
  or equivalent, supply and assemble
- and optionally ballast tray carrier MSP-FR-S-SB
  or equivalent, supply and assemble
- Optional gravel tray aluminium 1620 – 1749 mm (Art. No. 21744) / 1750 – 1849 mm (Art. No. 21876)
- Ballast stones (to be supplied by customer) according to dimensioning / sizing as per SPT issue
- Screws
  MSP-FR-S 6x16,
  MSP-FR-TS 6.3x22 for lightning current carrying substructure
  and MSP-FR-GS 6x60
  or equivalent, supply and assemble
- Connecting rail MSP-FR-C
  or equivalent, supply and assemble
- Cable holder with edge clip MSP-FR-CHE
  or equivalent, supply and assemble
- Module clamps
  Middle clamp MSP-PR-MC 28-45 mm, MSP-PR-MCG 28-45 mm (conductive)
  Middle clamp MSP-PR-MCB 28-45 mm (black), MSP-PR-MCBG 28-45 mm (black, conductive)
  and
  End clamp MSP-PR-EC 28-45 mm, MSP-PR-ECG 28-45 mm (conductive)
  End clamp MSP-PR-ECB 28-45 mm (black), MSP-PR-ECBG 28-45 mm (black, conductive)
  or equivalent, supply and installation
- Supply and install additional clamp low MSP-FR-LC or additional clamp high MSP-FR-HC
  or equivalent, supply and assemble.
- Supply and fit Cable holder with edge clip MSP-FR-CHE for cable mounting (made of PA6.6)
  or equivalent, supply and assemble.

If you have any questions about the PV mounting system MSP-FR-G or the system components described above, please contact our sales representatives.
You can find the sales team at: [Sales advice - Ernst Schweizer Solar Systems]