Solar Panel Project

Place: Green FabLab, Kamp-Lintfort.

Photovoltaic (PV) modules:
IBC PySol 270 GX4
Item number = 2204400014

Technical data:
Module dimensions (mm) = 1654 x 989 x 40
Module weight = 18.2Kg

PV modules available = 20units

The current idea is to install two systems:
- Fixed system: 2 sets of 5 PV modules each on top of the roof, using an Angle mounting system.
- Mobile system: 2 sets of 5 PV modules each on the green area, using a Flat mounting system on mobile platform mechanism that allows us to tilt the PV modules.

Photovoltaic system layout

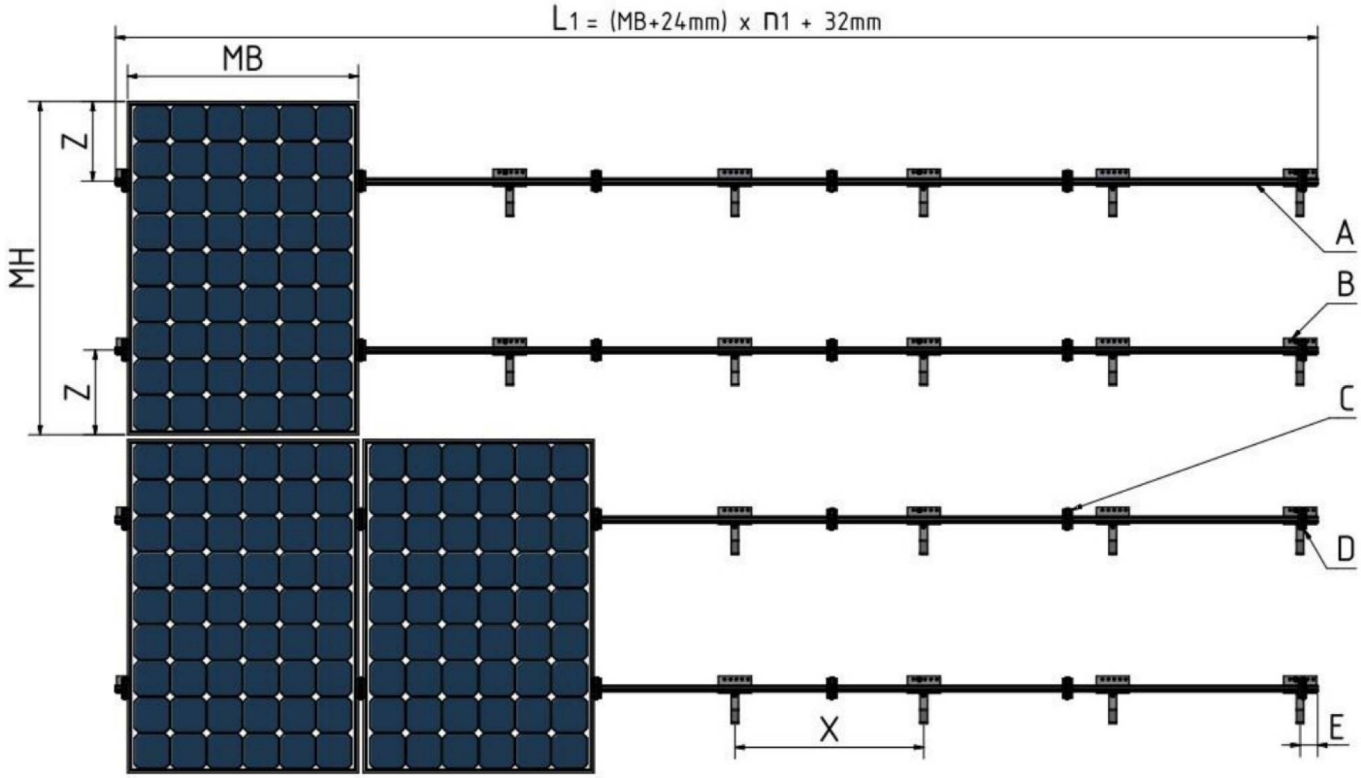

Image: Layout of the IBC TopFix 200 mounting system. taken from the Installation instructions - IBC TopFix 200

	Description
L = (M.B + 24 mm) × n + 32 mm	Carrier rail length = (M.B + 24 mm) × number of modules per row + 32 mm
M.B	Module width

M.H	Module height
A	Type TF50+/TF50m/TF60 carrier rail
B	Roof hooks
C	Middle clamp
D	Outside clamp
E	Max. 400mm
X	X – selected fixing interval (dimensioned using PV Manager software)
Z	Max. ¼ of M.H (please observe module manufacturer specifications)

> Note: “Carrier rail” is also called “Support rail” in the manual.

Mobile system

Flat mounting system

List of components

According to the Installation instructions - IBC TopFix 200:

Support rail length = (M.B + 24 mm) × number of modules per row + 32 mm = (989mm + 24 mm) × 5 + 32 mm = 1013 x 5 + 32 mm = 5097mm

There are two lengths: 5200mm and 2100mm, then we use the 5200mm one.

Item	Amount per set	Item number
Support rail TF60, 5200mm	2	6800100020
End cap Adapter (33-46mm)	4	6700400161
Rail end cap	4	6700300045
Middle Clamp (G4 33-46mm)	12	6700400144
Socket cap screw (M8x16 A2)	20	6900100013
Universal connector AeroFlat	8	6101100057