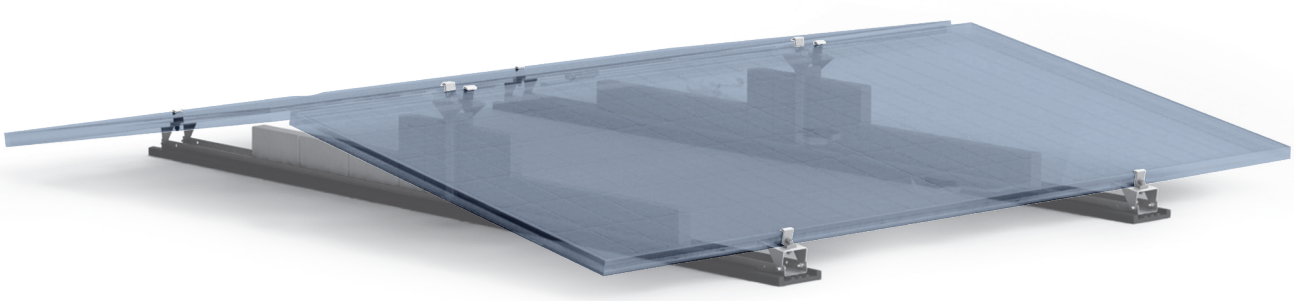
KNESS PV

PVMSR

Photovoltaic Mounting Structure for Rooftops

PVMSR-MB-DCF



ALL-PURPOSE SOLUTION

For all types of membrane roofs

BUDGET SOLUTION

Use of galvanized steel instead of aluminium

10-YEAR WARRANTY

Warranty against through corrosion of metal structures

GENERAL SPECIFICATIONS AND ADVANTAGES

+ Supply package includes all the necessary items for PV modules installation- supporting structure, rubber underlay, fasteners, metal hardware and ballast
+ The structure is designed for use on membrane roofing
+ The structure is mounted on rubber underlay which keeps the membrane coating undamaged
+ Maximum long-term local load pressure on the roof is less than 25 kPa, thus allowing the use on all types of membrane coatings
+ By means of the detailed calculation of wind loads for each specific roof, it is possible to reduce the total weight of ballast by up to 50% by using lightweight ballast blocks, and therefore reduce the total load pressure on the roof
+ Design provides for the laying of a solar cable so that the contact connections remain accessible for visual and thermal imaging inspection
+ Pre-assembled design ensures high installation speed
+ The construction adapts to the roof type
+ Resistance to atmospheric loads (wind, snow)
+ Anti-corrosion coating on casing components applying hot-dip galvanization in accordance with ISO1461:2009

Photovoltaic mounting structure for rooftops with membrane coating, which is fixed by ballast, dome arrangement of PV modules (framed type) with the use of clamps

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TECHNICAL DATA

PV MODULES PARAMETERS

Length	up to 2384 mm
Width	up to 1303 mm
Height	35-40 mm
Weight	up to 40 kg

STRUCTURE PARAMETERS

Type	rooftop
Roof mounting system	ballast
Arrangement of PV modules	dome
Fastening PV modules to the structure	clamps
Allowable wind load	550 Pa
Allowable snow load	1800 Pa

OPERATION CONDITIONS

Temperature	-40...+45 °C
Relative humidity	5-100 %
Maximum long-term local pressure on the insulation*	25 kPa
Maximum long-term distributed pressure on the roof*	2 kPa

*Taking into account the snow load of 1800 Pa.
Design solutions on the use of this construction should include the calculation of the building's (roof's) load capacity, where PV modules are installed taking into account wind and snow loads for a particular region in accordance with applicable regulations.

COMPLIANCE:

DBN A.3.2-2-2009	Occupational and Industrial Safety in Construction. Main Provisions.
DBN V.2.6-198:2014	Steel Structures. Design Standards.
DSTU B V.2.6-200:2014	Steel Construction Structures. Installation Requirements.
NPAOP 0.00-1.15-07	Rules of Occupational Safety during Work at Heights.
DSTU B V.2.6-75:2008	Designs of Buildings and Structures. Steel Construction Structures. General Technical Requirements.
DSTU-N B V.2.6-186:2013	Guidance for the Protection of Construction Designs of Buildings and Structures from Corrosion.
DSTU-N B A.3.1-21:2013	Guidance for the Implementation Mounting Joints of Steel Building Structures on High-Tensile Bolts