



**METALOUMIN**  
ALUMINIUM SYSTEMS SINCE 1969

MOUNTING SYSTEM WITH HANGER BOLTS  
TILED ROOF APPLICATIONS

M-TR-600L



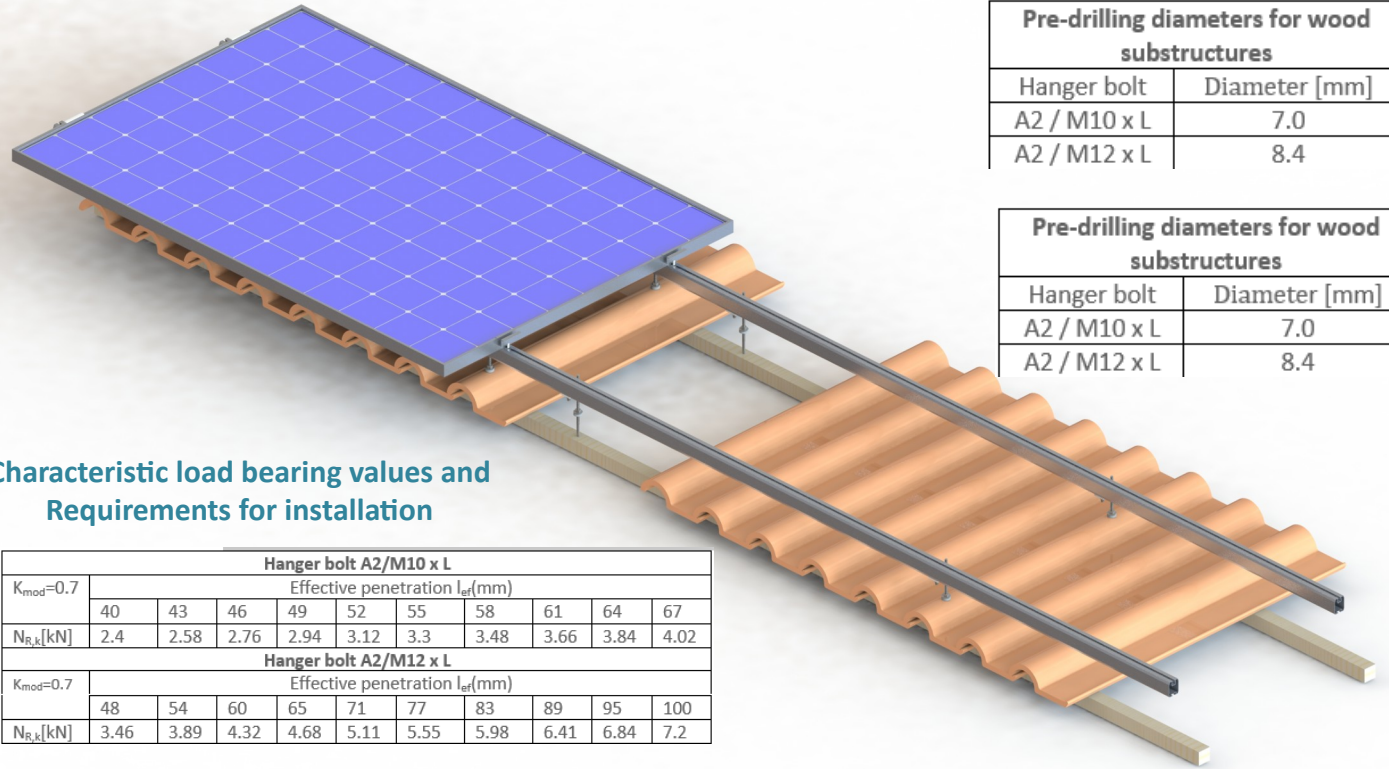
Landscape Layout

## TECHNICAL FEATURES

<i>Application</i>	Tiled roof installations
<i>Material</i>	Aluminum
<i>Accessories</i>	High Quality INOX or aluminum
<i>Mounting Type</i>	Hanger Bolts M10 or M12
<i>Orientation</i>	Landscape
<i>Inclination</i>	Parallel to the roof
<i>Standards</i>	Eurocodes & National Annexes
<i>Wind load limit</i>	33 m/s (Terrain Category I)
<i>Snow load limit</i>	1.7 kN/m <sup>2</sup> (Zone C)

## MOUNTING SYSTEM WITH HANGER BOLTS TILED ROOF APPLICATIONS

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**Pre-drilling diameters for wood substructures**

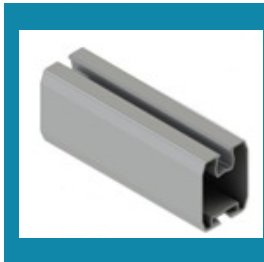
Hanger bolt	Diameter [mm]
A2 / M10 x L	7.0
A2 / M12 x L	8.4

**Pre-drilling diameters for wood substructures**

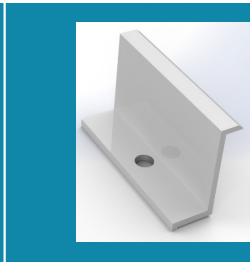
Hanger bolt	Diameter [mm]
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### Characteristic load bearing values and Requirements for installation

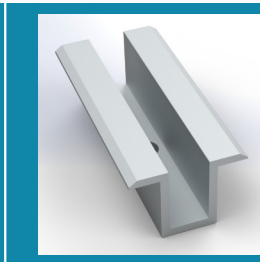
Hanger bolt A2/M10 x L										
K <sub>mod</sub> =0.7	Effective penetration l <sub>ef</sub> (mm)									
	40	43	46	49	52	55	58	61	64	67
N <sub>R,k</sub> [kN]	2.4	2.58	2.76	2.94	3.12	3.3	3.48	3.66	3.84	4.02
Hanger bolt A2/M12 x L										
K <sub>mod</sub> =0.7	Effective penetration l <sub>ef</sub> (mm)									
	48	54	60	65	71	77	83	89	95	100
N <sub>R,k</sub> [kN]	3.46	3.89	4.32	4.68	5.11	5.55	5.98	6.41	6.84	7.2



**PV RAIL**



**END CLAMP**



**MIDDLE CLAMP**



**HANGER BOLT**

