

FLAT-ROOF MOUNTING SYSTEMS SUN 301.33 H

Technical datasheet Nr 104

These mounting systems are designed to install rows of 1 to 4⁽¹⁾ collectors SUN 301.33 H on flat-roof or on ground with frames tilted at 20°, 40° and 60° depending on your needs.

• TECHNICAL SPECIFICATIONS:

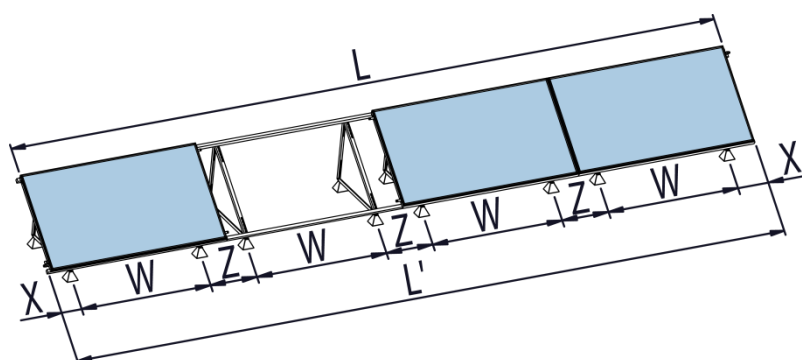
Number of collectors	References		Dimensions ⁽³⁾ (mm)				
	20°	40° / 60°	L	L'	X ⁽²⁾ (400-570)	W ⁽²⁾ (1700-2000)	Z ⁽²⁾ (812-1112)
1	50070201406	50070201422	2 802	2 856	503	1 850	= 2 812 – W = 962
2	50070201407	50070201423	5 614	5 668			
3 ⁽¹⁾	50070201408	50070201424	8 426	8 480			
4 ⁽¹⁾	50070201409	50070201425	11 238	11 292			

(1) Maximum number of collectors per row under certain conditions.

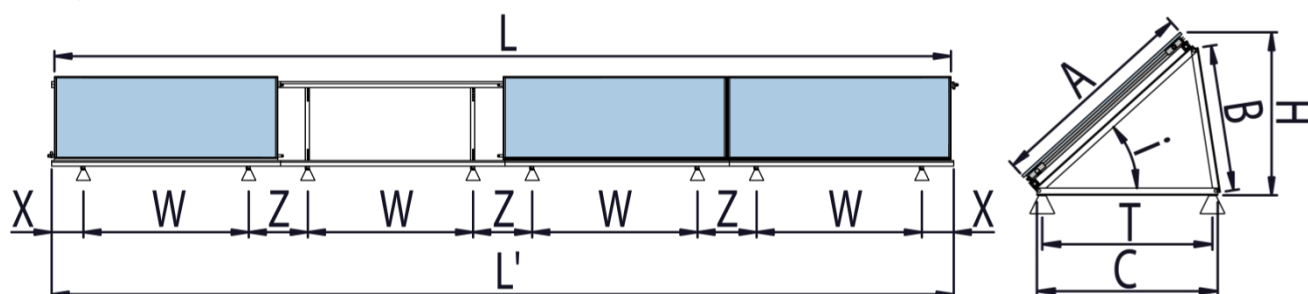
(2) Detailed quotation with range of tolerance available in our installation manual or on request.

(3) Dimensions defined according a standard load of 150 kN/m². At elevated load, additional frames and brackets (anchors)⁽⁴⁾ must be add.

(4) Please see the technical datasheets of brackets (anchors).



Angle i (°)	Dimensions ⁽³⁾ (mm)				
	A	B	C	H	T ⁽²⁾
20	1 180	420	1 180	540	925 (710-1140)
40	1 180	810	1 000	910	745 (530-960)
60	1 180	1 000	810	1 070	555 (340-770)



Calculus of the distance between collector rows to avoid shadows:

- $\beta = 90^\circ - 23.5^\circ - L$
- $z = H_{ht} \times [\cos(\alpha) + \sin(\alpha) / \tan(\beta)]$
- $d = z - H_{ht} \times \cos(\alpha)$

Where:

- β = Angle of the position of the sun
- L = Latitude of the place considered
- z = Spacing between rows of collectors
- α = Tilt angle of the collectors
- H_{ht} = Overall height of the collector

Example:

Field of collectors SUN 301.33 H ($H_{ht} = 1182\text{mm}$) located at Montélimar (Latitude = 44.58°) with an inclination of 40°:

- $\beta = 90^\circ - 23.5^\circ - 44.58^\circ = 21.9^\circ$
- $z = 1.182 \times [\cos(40) + \sin(40) / \tan(21.9)] = 2.79\text{m}$
- $d = 2.79 - 1.182 \times \cos(40) = 1.89\text{m}$

