

# FLAT-ROOF MOUNTING SYSTEMS SUN 301.20 H

## Technical datasheet Nr 102

These mounting systems are designed to install rows of 1 to 6<sup>(1)</sup> collectors SUN 301.20 H on flat-roof or on ground with frames tilted at 20°, 40° and 60° depending on your needs.

### • TECHNICAL SPECIFICATIONS:

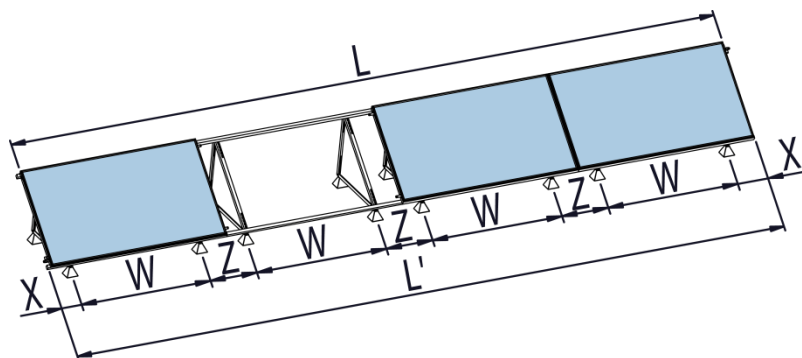
Number of collectors	References		Dimensions <sup>(3)</sup> (mm)				
	20°	40° / 60°	L	L'	X <sup>(2)</sup> (180-380)	W <sup>(2)</sup> (1000-1400)	Z <sup>(2)</sup> (312-712)
1	50070201394	50070201410	1 702	1 756	278	1 200	= 1 712 - W = 512
2	50070201395	50070201411	3 414	3 468			
3	50070201396	50070201412	5 126	5 180			
4	50070201397	50070201413	6 838	6 892			
5 <sup>(1)</sup>	50070201398	50070201414	8 550	8 604			
6 <sup>(1)</sup>	50070201399	50070201415	10 262	10 316			

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

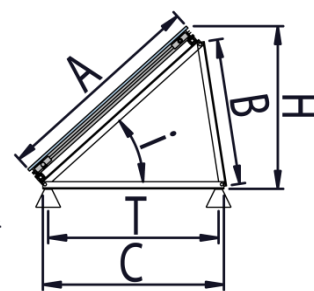
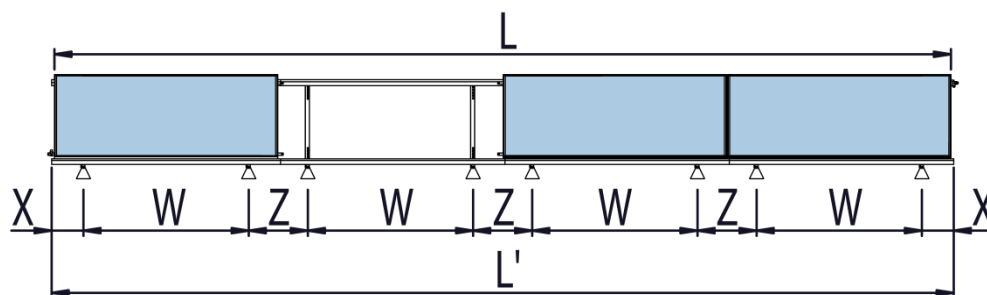
(2) Detailed quotation with range of tolerance available in our installation manual or on request.

(3) Dimensions defined according a standard load of 150 kN/m<sup>2</sup>. At elevated load, additional frames and brackets (anchors)<sup>(4)</sup> must be add.

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



Angle i (°)	Dimensions <sup>(3)</sup> (mm)				
	A	B	C	H	T <sup>(2)</sup>
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:

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

Example:

Field of collectors SUN 301.20 H ( $H_{ht} = 1182\text{mm}$ ) located at Biarritz (Latitude =  $43.5^\circ$ ) with an inclination of  $20^\circ$ :

- $\beta = 90^\circ - 23.5^\circ - 43.5^\circ = 23.0^\circ$
- $z = 1.182 \times [ \cos(20) + \sin(20) / \tan(23.0) ] = 2.06\text{m}$
- $d = 2.06 - 1.182 \times \cos(20) = 0.95\text{m}$

