

# FLAT-ROOF MOUNTING SYSTEMS SUN 301.25 H

## Technical datasheet Nr 103

These mounting systems are designed to install rows of 1 to 6<sup>(1)</sup> collectors SUN 301.25 H on flat-roof or on ground with frames tilted at 20°, 40° and 60° depending on your needs.

### • TECHNICAL SPECIFICATIONS:

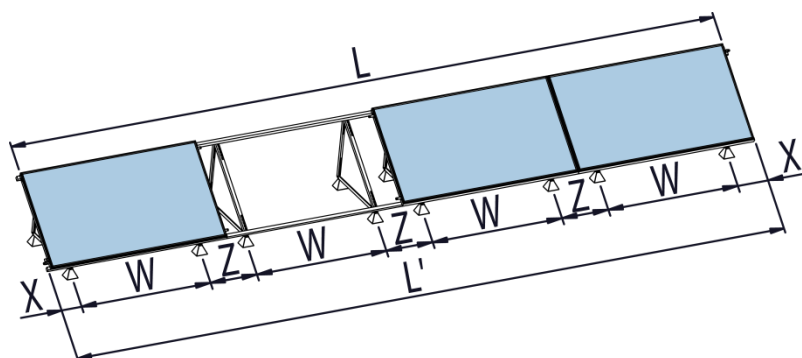
Number of collectors	References		Dimensions <sup>(3)</sup> (mm)				
	20°	40° / 60°	L	L'	X <sup>(2)</sup> (180-400)	W <sup>(2)</sup> (1400-1800)	Z <sup>(2)</sup> (372-772)
1	50070201400	50070201416	2 162	2 216	308	1 600	= 2 172 - W = 572
2	50070201401	50070201417	4 334	4 388			
3	50070201402	50070201418	6 506	6 560			
4	50070201403	50070201419	8 678	8 732			
5 <sup>(1)</sup>	50070201404	50070201420	10 850	10 904			
6 <sup>(1)</sup>	50070201405	50070201421	13 022	13 076			

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

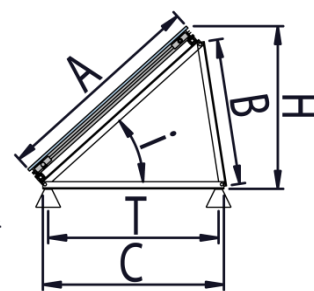
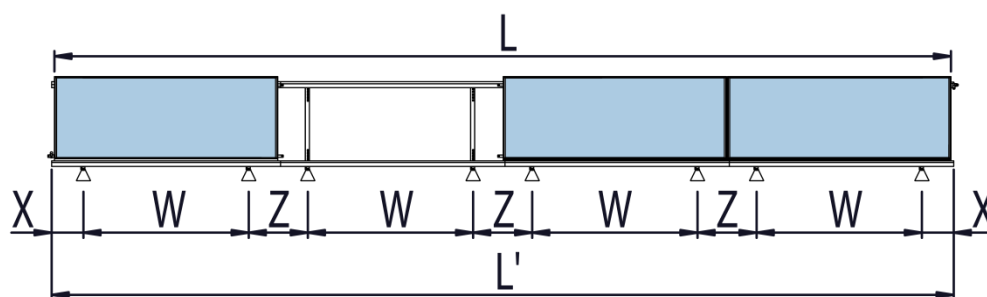
(2) Detailed quotation with range of tolerance available in our installation manual or on request.

(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 301.25 H ( $H_{ht} = 1182\text{mm}$ ) located at Poitiers (Latitude =  $46.6^\circ$ ) with an inclination of  $60^\circ$ :

- $\beta = 90^\circ - 23.5^\circ - 46.6^\circ = 19.9^\circ$
- $z = 1.182 \times [ \cos(60) + \sin(60) / \tan(19.9) ] = 3.42\text{m}$
- $d = 3.42 - 1.182 \times \cos(60) = 2.83\text{m}$

