

FLAT-ROOF MOUNTING SYSTEMS SUN 301.20 V

Technical datasheet Nr 99

These mounting systems are designed to install rows of 1 to 10⁽¹⁾ collectors SUN 301.20 V on flat-roof or on ground with frames tilted at 20°, 40° and 60° depending on your needs.

• TECHNICAL SPECIFICATIONS:

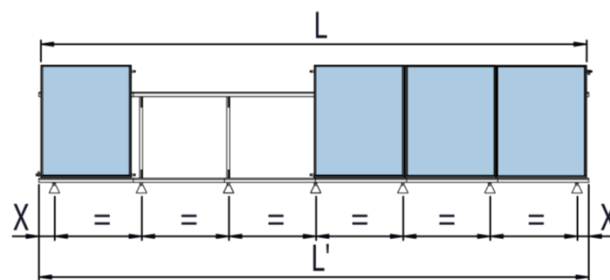
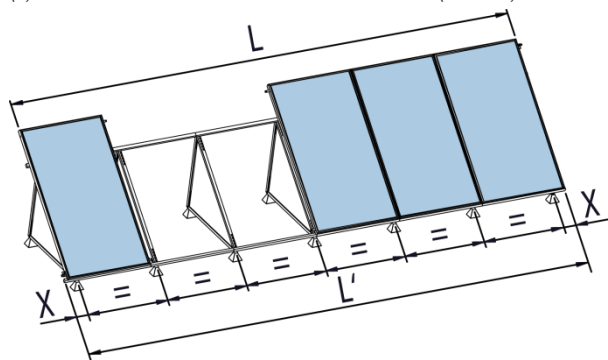
Number of collectors	References		Dimensions ⁽³⁾ (mm)			
	20°	40° / 60°	L	L'	X ⁽²⁾ (100-250)	= ⁽²⁾
1	50070201354	50070201374	1 182	1 236	173	890
2	50070201355	50070201375	2 374	2 428	174	1 040
3	50070201356	50070201376	3 566	3 620	175	1 090
4	50070201357	50070201377	4 758	4 812	166	1 120
5 ⁽¹⁾	50070201358	50070201378	5 950	6 004	177	1 130
6 ⁽¹⁾	50070201359	50070201379	7 142	7 196	178	1 140
7 ⁽¹⁾	50070201360	50070201380	8 334	8 388	169	1 150
8 ⁽¹⁾	50070201361	50070201381	9 526	9 580	190	1 150
9 ⁽¹⁾	50070201362	50070201382	10 718	10 772	166	1 160
10 ⁽¹⁾	50070201363	50070201383	11 910	11 964	182	1 160

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

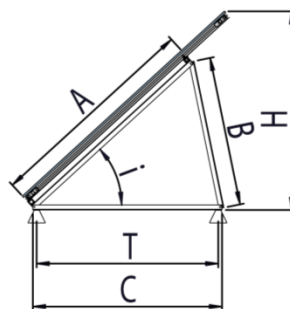
(2) Detailed quotation with range of tolerance available in our installation manual or on request.

(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	1 700	600	1 700	720	1 440 (1230-1650)
40	1 700	1 180	1 490	1 260	1 235 (1020-1450)
60	1 700	1 490	1 180	1 540	925 (710-1140)



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 301.20 V ($H_{ht} = 1702\text{mm}$) located at Paris (Latitude = 49°) with an inclination of 40°:

- $\beta = 90^\circ - 23.5^\circ - 49^\circ = 17.5^\circ$
- $z = 1.702 \times [\cos(40) + \sin(40) / \tan(17.5)] = 4.77\text{m}$
- $d = 4.77 - 1.702 \times \cos(40) = 3.46\text{m}$

