

## TPA-A

### PRODUCT DESCRIPTION

- Pre-assembled aluminium opened triangle

### CHARACTERISTICS

- Inclined structure for installation of roof-mounted solar panels.
- Pre-assembled product.
- Includes 4 long profiles that make up the structure, an upper section, two lower sections, and a base, all manufactured from EN AW 6063-T6 extruded aluminium.
- Includes two base support sections, both manufactured from EN AW 6005-T6 extruded aluminium.
- Includes 2 **DIN-6921 M8x50** bolts, 2 **DIN-6923 M8** nuts, 2 **DIN-6921 M8x18** bolts, 2 **DIN 125** plain washer and 1 **M8x30** coupling nut in A2-70 stainless steel.
- For outside use.
- Designed for **triangular aluminium systems** with **PSE-C** format continuous profiles.
- Wide range of inclination available: 5°, 10°, 15°, 20°, 25°, 30° y 35°.
- Secure folding position with incorporated fixture.
- Option of vertically mounting solar panels to a height of up to two metres.
- Central upper profile groove compatible with SW13 hexagonal socket.
- Option for triangles in sizes manufactured to order on request.



### APPLICATIONS/MOUNTING ACCESSORIES



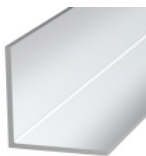
PSE-C



KFSFCM08

These are used in **triangular aluminium installation systems** as an inclined structural element onto which continuous **PSE-C** profiles can be mounted. Solar panels are finally attached to and supported by these profiles.

To attach **PSE-C** profiles to triangles, two **KFSFCM08** “cross connector for lateral fixing” are used.



TPA-P



ABEI5519

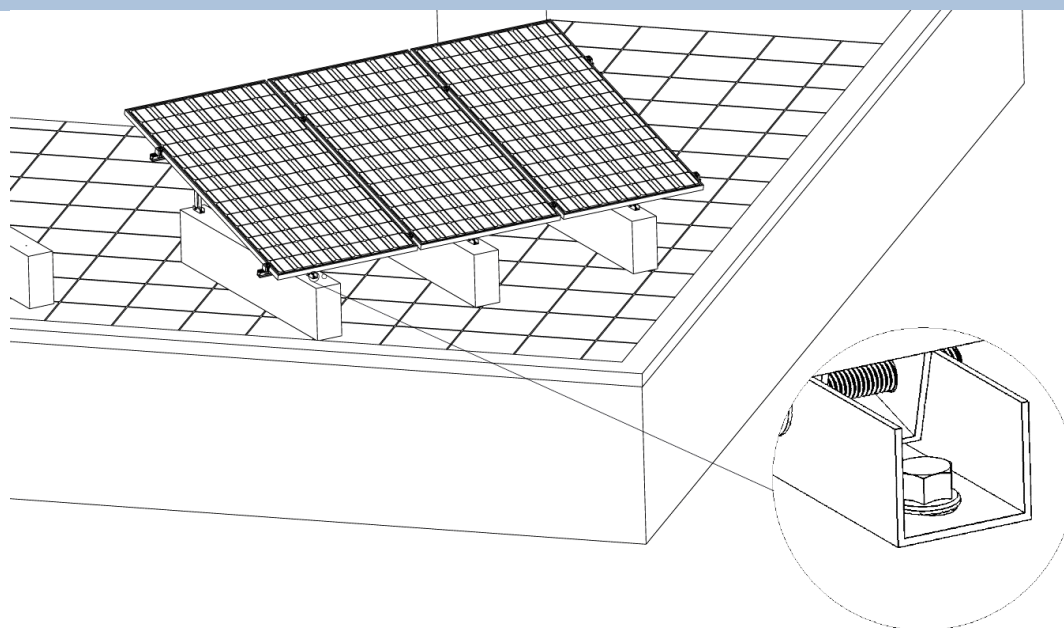
If it is necessary to install braces between adjoining triangles, **TPA-P** “strut profiles for pre-assembled aluminium triangles” should be used. Strut profiles are diagonally attached to profile bars of the two corresponding triangles using **ABEI5519** A2-70 stainless steel self-drilling screws.

### BASE MATERIAL/DIRECT MOUNTING

See technical data sheet:

- ST-PTA: Opened triangular aluminium mounting system. Assembled fixing

APPLICATION EXAMPLES



Application example 1: Mounting on concrete roof

1. RANGE

ITEM	CODE	PHOTO	DESCRIPTION	ANGLE	LENGTH	MATERIAL
1	TPAA051230		Pre-assembled aluminium opened triangle	5°	1230 mm	EN AW 6063-T6
						A2-70
2	TPAA051750		Pre-assembled aluminium opened triangle	5°	1750 mm	EN AW 6063-T6
						A2-70
3	TPAA101230		Pre-assembled aluminium opened triangle	10°	1230 mm	EN AW 6063-T6
						A2-70
4	TPAA101750		Pre-assembled aluminium opened triangle	10°	1750 mm	EN AW 6063-T6
						A2-70
5	TPAA151230		Pre-assembled aluminium opened triangle	15°	1230 mm	EN AW 6063-T6
						A2-70
6	TPAA151750		Pre-assembled aluminium opened triangle	15°	1750 mm	EN AW 6063-T6
						A2-70
7	TPAA201230		Pre-assembled aluminium opened triangle	20°	1230 mm	EN AW 6063-T6
						A2-70

8	TPAA201750		Pre-assembled aluminium opened triangle	20°	1750 mm	EN AW 6063-T6
						A2-70
9	TPAA251230		Pre-assembled aluminium opened triangle	25°	1230 mm	EN AW 6063-T6
						A2-70
10	TPAA251750		Pre-assembled aluminium opened triangle	25°	1750 mm	EN AW 6063-T6
						A2-70
11	TPAA301230		Pre-assembled aluminium opened triangle	30°	1230 mm	EN AW 6063-T6
						A2-70
12	TPAA301750		Pre-assembled aluminium opened triangle	30°	1750 mm	EN AW 6063-T6
						A2-70
13	TPAA351230		Pre-assembled aluminium opened triangle	35°	1230 mm	EN AW 6063-T6
						A2-70
14	TPAA351750		Pre-assembled aluminium opened triangle	35°	1750 mm	EN AW 6063-T6
						A2-70

## 2. INSTALLATION INFORMATION

### 2.1 TPA-A

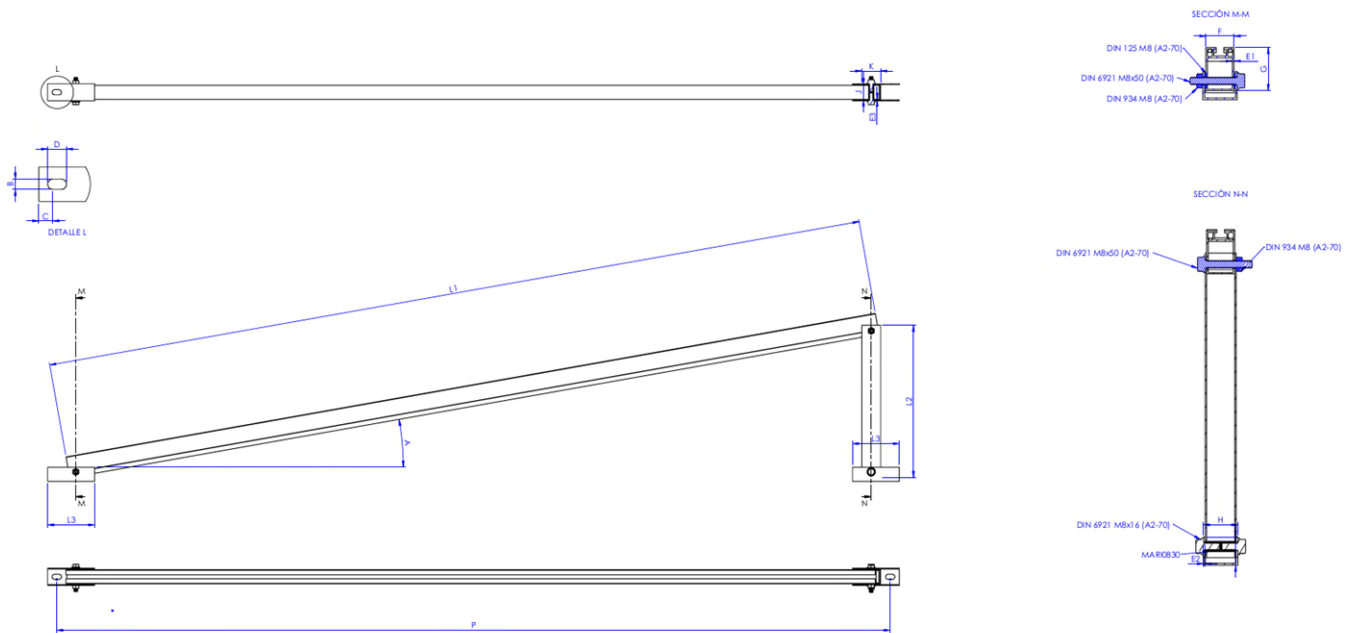
### Pre-assembled aluminium opened triangle

	Materials		Compatible	Assembly accessories	
	EN AW 6063-T6	A2-70			
			<b>PSE-C</b> Aluminium profile for assembled fixing.	<b>KFSFLC08</b> Cross connector for lateral fixing.	<b>ABE15519</b> A2 DIN-7504K stainless steel
<b>TPA-P</b> Strut profile for TPA-R					
BASE MATERIAL/FIXING					
See technical data sheet:					
<ul style="list-style-type: none"> <li><b>ST-PTA:</b> Opened triangular aluminium mounting system. Assembled fixing</li> </ul>					

Measurement table 1

Code	A (°)	L1 (mm)	L2 (mm)	L3 (mm)	E1 (mm)	E2 (mm)	E3 (mm)	F (mm)	G (mm)	H (mm)	I (mm)	J (mm)	K (mm)	L (mm)
TPAA051230	5	1230	174	100	1,8	1,8	1,5	30	45	36,6	30	33	40	1275
TPAA051750	5	1750	174	100	1,8	1,8	1,5	30	45	36,6	30	33	40	1795
TPAA101230	10	1230	324	100	1,8	1,8	1,5	30	45	36,6	30	33	40	1265
TPAA101750	10	1750	324	100	1,8	1,8	1,5	30	45	36,6	30	33	40	1775
TPAA151230	15	1230	470	100	1,8	1,8	1,5	30	45	36,6	30	33	40	1240
TPAA151750	15	1750	470	100	1,8	1,8	1,5	30	45	36,6	30	33	40	1740
TPAA201230	20	1230	613	100	1,8	1,8	1,5	30	45	36,6	30	33	40	1210
TPAA201750	20	1750	613	100	1,8	1,8	1,5	30	45	36,6	30	33	40	1700
TPAA251230	25	1230	752	100	1,8	1,8	1,5	30	45	36,6	30	33	40	1170
TPAA251750	25	1750	752	100	1,8	1,8	1,5	30	45	36,6	30	33	40	1640
TPAA301230	30	1230	884	100	1,8	1,8	1,5	30	45	36,6	30	33	40	1120
TPAA301750	30	1750	884	100	1,8	1,8	1,5	30	45	36,6	30	33	40	1570
TPAA351230	35	1230	1012	100	1,8	1,8	1,5	30	45	36,6	30	33	40	1065
TPAA351750	35	1750	1012	100	1,8	1,8	1,5	30	45	36,6	30	33	40	1490

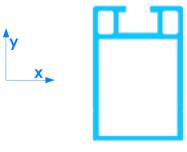

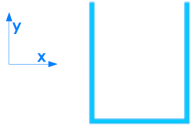
Drawing



Mechanical properties of the material

	Yield strength $F_{y0.2}$ (N/mm <sup>2</sup> )	Ultimate load $F_u$ (N/mm <sup>2</sup> )	Elastic modulus E (N/mm <sup>2</sup> )	Transverse elastic modulus G (N/mm <sup>2</sup> )	Linear expansion coefficient $\alpha$ ( $\mu\text{m}/\text{C}^\circ$ )	Specific weight $\rho$ (kg/m <sup>3</sup> )
A2-70 stainless steel	450	700	210,000	81,000	17.3	7,850
EN AW-6063-T6 aluminium	170	215	69.500	26.100	23,5	2.700

**Mechanical properties of the profile.**

	Area S (cm <sup>2</sup> )	Moment of inertia I <sub>x</sub> (cm <sup>4</sup> )	Moment of inertia I <sub>y</sub> (cm <sup>4</sup> )	Linear weight W (kg/m)
 Upper profile	2,95	3,96	7,00	0,80
 Lower profile	1,74	1,62	3,87	0,46
 Profile bar	1,65	2,81	3,32	0,45