

KL-SUR



ASSESSMENTS

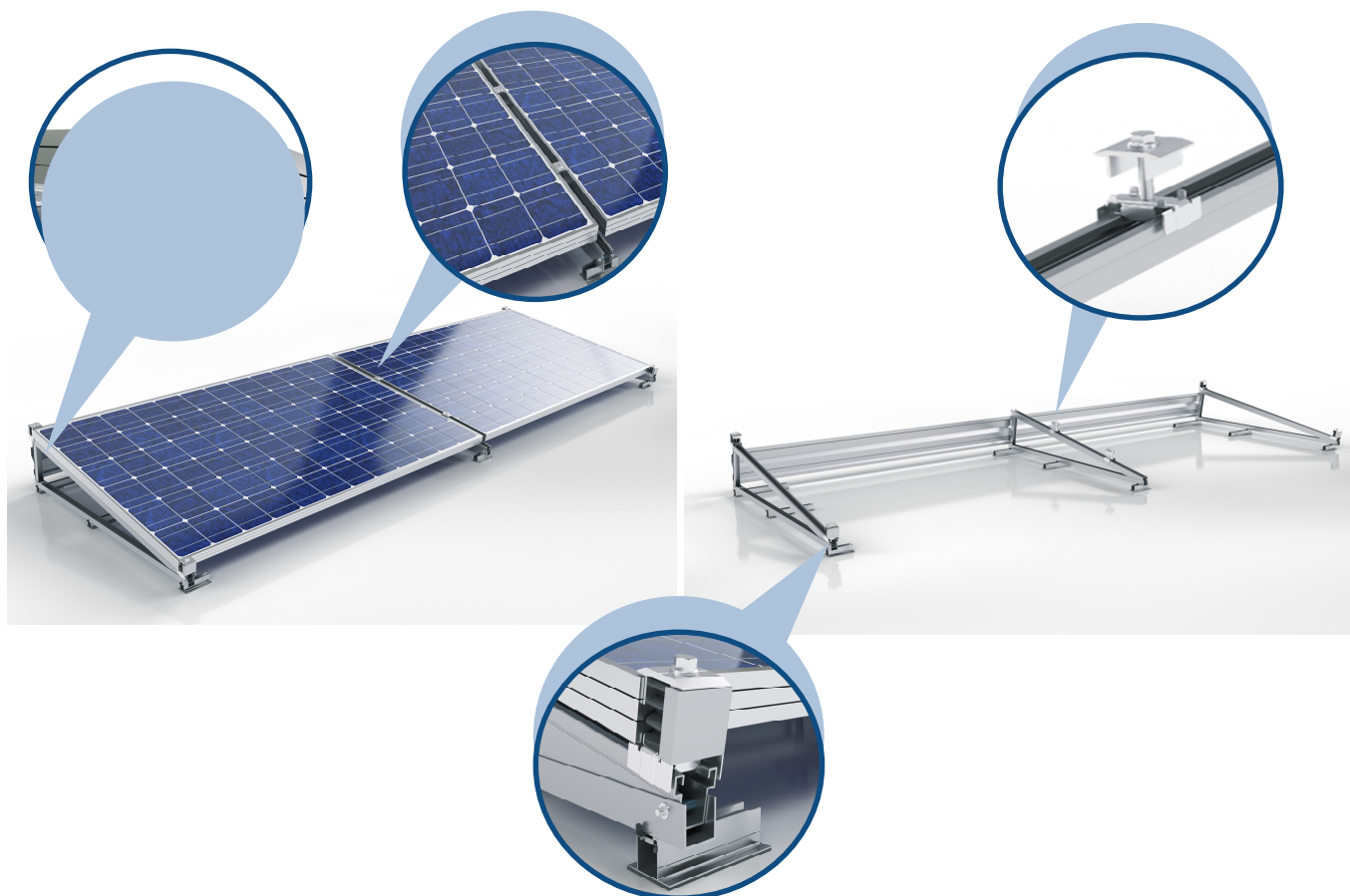


PRODUCT DESCRIPTION

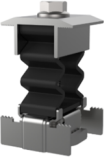
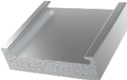
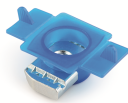
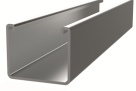
Kit make up of aluminium profiles, for ballasted system south orientation.

CHARACTERISTICS

- Assembly kit that brings together all the necessary components for the installation of a given number of photovoltaic modules.
- Installation according to **SL-SUR** for mounting ballasted systems.
- Includes quick-fixing clamps for modules ref. **KFRSC3050**. *(Only for A y B1 components)*.
- Includes **GM-A** macro gauges, available at height of 30, 35 or 40mm. *(Only for A y B1 components)*.
- Includes aluminium profiles with wings and EPDM for **PSA-AE** ballasted systems.
- Includes quick-fixing nut **TU-RX A2** for fixing PSA-AE profiles with wings to the lower ballasted profile PLI.
- Includes different elements to fix the profiles such as screws **DIN-6921 A2**, stainless steel bushing **CA-RI**, nut **DIN-6923 A2** and washers **DIN-125 A2**.
- Includes **PSA-UN** union profiles and self-drilling screws **DIN-7504-K A2** with hexagonal head in A2 stainless steel to fix them. *(Only for B1 component)*.



COMPONENTS

Quick-fixing clamp	Aluminium gauge for macro	Quick-fixing guide nut A2	Aluminium profile with wings and EPDM	Stainless steel solar bushing	Stainless steel screw DIN-6921 A2	Union for aluminium profiles
						
KFR-SC	GM-A	TU-RX A2	PSA-AE	CA-RI	DIN-6921 A2	PSA-UN
Upper ballasted profile	Lower ballasted profile	Base ballasted profile	Nut DIN-6923 A2	Washer DIN-125 A2	Self-drilling screw	Middle narrow clamp
						
PLS	PLI	PLA	DIN-6923 A2	DIN-125 A2	DIN-7504-K A2	PGS-E

APPLICATIONS

- Mounting solar panels in an inclined position with respect to the roof surface, on flat roof.
- Installation in all types of flat roof, on triangles fixed with ballasted at an inclination of 10° o 15°.
- For plates with 30, 35 or 40mm frame high.
- Modules up to 1150 mm wide.
- Horizontal orientation of the mounting plates.
- Ballasted system over the roof, consult the specifications on the assembly manual **FTA_GS_M_SL-SUR**.

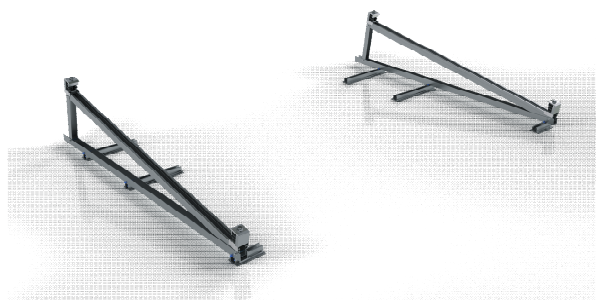
1.RANGE

ITEM	COMPONENT	CODE	PHOTO	DESCRIPTION	MATERIAL		
1	A	KLASU		Side ballasted kit with aluminum profiles and inclined 10° or 15°	 Aluminium	 AISI-304	 EPDM
2	B	KLBSU		Middle ballasted kit with aluminum profiles and inclined 10° or 15°	 Aluminium	 AISI-304	 EPDM
3	B1	KLBSU1		Side ballasted kit with aluminum profiles and inclined 10° or 15°	 Aluminium	 AISI-304	 EPDM

2.INSTALLATION DATA

2.1 KLASU

Ballasted kit with aluminium profiles. Component A (1 module)



 1 module Reference	Kit Components										
	Quick-fixing clamp	Aluminium gauge for macro	Quick-fixing guide nut A2	Aluminium profile with wings and EPDM	Stainless steel solar bushing	Stainless steel screw DIN-6921 A2	Upper ballasted profile	Lower ballasted profile	Base ballasted profile	Nut DIN-6923 A2	Washer DIN-125 A2
KLASU1030 (H=30mm) (β=10°)	KFRSC3050 4 units	GMA030 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921I08020 6 units	PLS001225 2 units	PLI101300 2 units	PLA100232 2 units	D6923IM08 6 units	D125IM08 4 units
				PSAAE0400 4 units	CARI0823 4 units	6921I08050 6 units					
KLASU1035 (H=35mm) (β=10°)	KFRSC3050 4 units	GMA035 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921I08020 6 units	PLS001225 2 units	PLI101300 2 units	PLA100232 2 units	D6923IM08 6 units	D125IM08 4 units
				PSAAE0400 4 units	CARI0823 4 units	6921I08050 6 units					
KLASU1040 (H=40mm) (β=10°)	KFRSC3050 4 units	GMA040 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921I08020 6 units	PLS001225 2 units	PLI101300 2 units	PLA100232 2 units	D6923IM08 6 units	D125IM08 4 units
				PSAAE0400 4 units	CARI0823 4 units	6921I08050 6 units					
KLASU1530 (H=30mm) (β=15°)	KFRSC3050 4 units	GMA030 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921I08020 6 units	PLS001225 2 units	PLI151277 2 units	PLA150334 2 units	D6923IM08 6 units	D125IM08 4 units
				PSAAE0400 4 units	CARI0823 4 units	6921I08050 6 units					
KLASU1535 (H=35mm) (β=15°)	KFRSC3050 4 units	GMA035 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921I08020 6 units	PLS001225 2 units	PLI151277 2 units	PLA150334 2 units	D6923IM08 6 units	D125IM08 4 units
				PSAAE0400 4 units	CARI0823 4 units	6921I08050 6 units					
KLASU1540 (H=40mm) (β=15°)	KFRSC3050 4 units	GMA040 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921I08020 6 units	PLS001225 2 units	PLI151277 2 units	PLA150334 2 units	D6923IM08 6 units	D125IM08 4 units
				PSAAE0400 4 units	CARI0823 4 units	6921I08050 6 units					

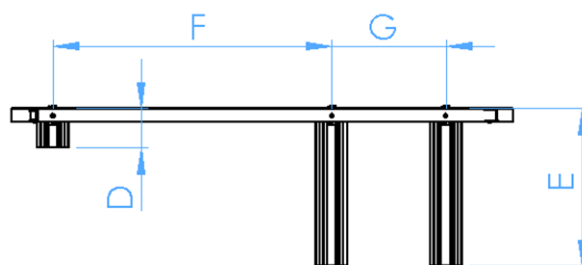
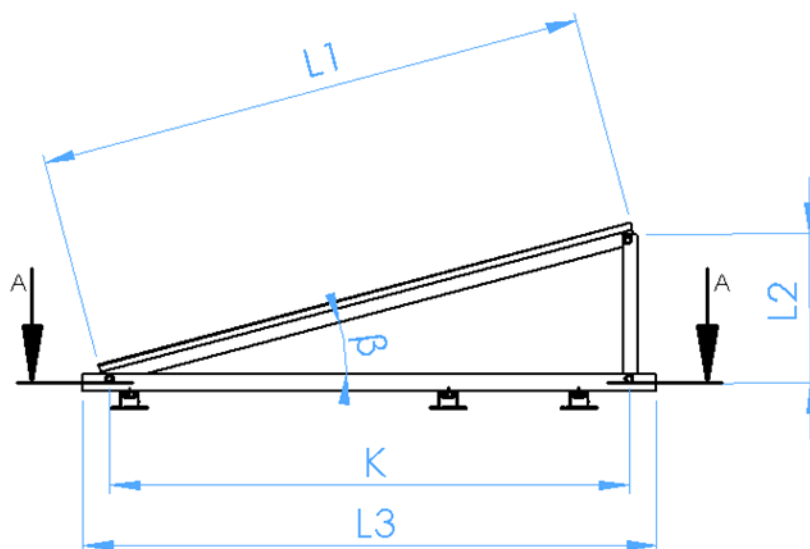
Roof

Consult technical data sheet corresponding to the FTA_GS_M_SL-SUR assembly system.

Measurement table

Code	β (°)	L1 (mm)	L2 (mm)	L3 (mm)	D (mm)	E (mm)	F (mm)	G (mm)	J (mm)	K (mm)
KLASU1030	10	1225	232	1300	100	400	710	290	60	1180
KLASU1035	10	1225	232	1300	100	400	710	290	60	1180
KLASU1040	10	1225	232	1300	100	400	710	290	60	1180
KLASU1530	15	1225	334	1277	100	400	710	290	60	1157
KLASU1535	15	1225	334	1277	100	400	710	290	60	1157
KLASU1540	15	1225	334	1277	100	400	710	290	60	1157

Drawing



SECCIÓN A-A

2.2 KLBSU

Ballasted kit with aluminium profiles. Component B (2 modules)



Reference	Kit Components									
	Upper ballasted profile	Lower ballasted profile	Base ballasted profile	Aluminium profile with wings and EPDM	Stainless steel solar bushing	Stainless screw DIN-6921 A2	Quick-fixing guide nut A2	Middle narrow clamp	Nut DIN-6923 A2	Washer DIN-125 A2
KLBSU010	PLS001225 1 unit	PLI101300 1 unit	PLA100232 1 unit	PSAAE0100 1 unit	CARI0825 1 unit	6921I08020 3 units	TURXA208 5 units	PGSE14 2 units	D6923IM08 3 units	D125IM08 2 units
				PSAAE0400 2 units	CARI0823 2 units	6921I08050 3 units				
KLBSU015	PLS001225 1 unit	PLI151277 1 unit	PLA150334 1 unit	PSAAE0100 1 unit	CARI0825 1 unit	6921I08020 3 units	TURXA208 5 units	PGSE14 2 units	D6923IM08 3 units	D125IM08 2 units
				PSAAE0400 2 units	CARI0823 2 units	6921I08050 3 units				

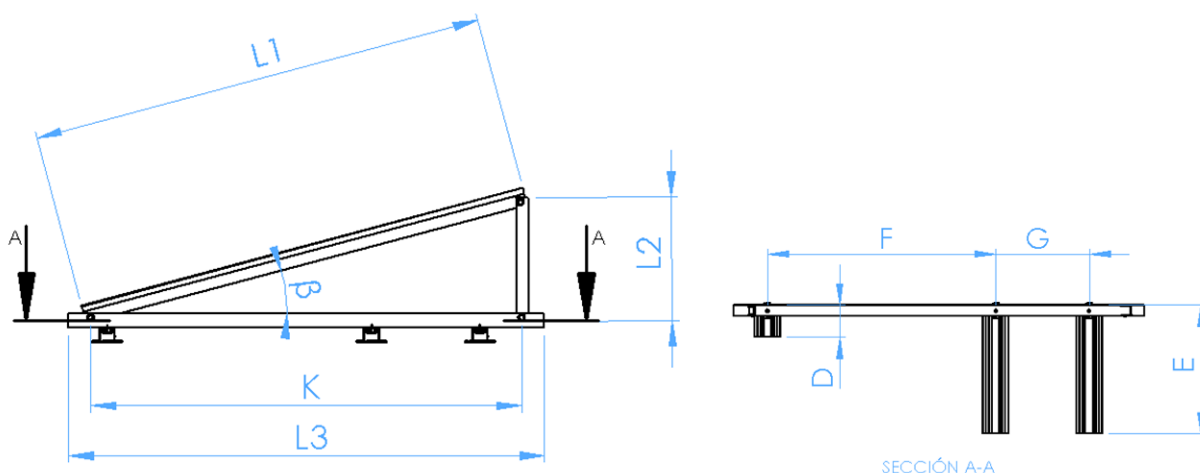
Roof

Consult technical data sheet corresponding to the FTA_GS_M_SL-SUR assembly system.

Measurement table

Code	β (°)	L1 (mm)	L2 (mm)	L3 (mm)	D (mm)	E (mm)	F (mm)	G (mm)	J (mm)	K (mm)
KLBSU010	10	1225	232	1300	100	400	710	290	60	1180
KLBSU015	15	1225	334	1277	100	400	710	290	60	1157

Drawing



2.3 KLBSU1

Ballasted kit with aluminium profiles. Component B1 (1 module)



Kit Components													
Reference	Quick-fixing clamp	Aluminium gauge for macro	Quick-fixing guide nut A2	Aluminium profile with wings and EPDM	Stainless steel solar bushing	Stainless screw DIN-6921 A2	Upper ballasted profile	Lower ballasted profile	Base ballasted profile	Nut DIN-6923 A2	Washer DIN-125 A2	Union for aluminium profiles	Self-drilling screw
KLBSU1030 (H=30mm) (β=10°)	KFRSC3050 4 units	GMA030 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921I08020 6 units	PLS001225 2 units	PLI101300 2 units	PLA100232 2 units	D6923IM08 6 units	DIN125IM08 4 units	PSAUN200 2 units	ABEI5519 8 units
				PSAAE0400 4 units	CARI0823 4 units	6921I08050 6 units							
KLBSU1035 (H=35mm) (β=10°)	KFRSC3050 4 units	GMA035 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921I08020 6 units	PLS001225 2 units	PLI101300 2 units	PLA100232 2 units	D6923IM08 6 units	DIN125IM08 4 units	PSAUN200 2 units	ABEI5519 8 units
				PSAAE0400 4 units	CARI0823 4 units	6921I08050 6 units							
KLBSU1040 (H=40mm) (β=10°)	KFRSC3050 4 units	GMA040 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921I08020 6 units	PLS001225 2 units	PLI101300 2 units	PLA100232 2 units	D6923IM08 6 units	DIN125IM08 4 units	PSAUN200 2 units	ABEI5519 8 units
				PSAAE0400 4 units	CARI0823 4 units	6921I08050 6 units							
KLBSU1530 (H=30mm) (β=15°)	KFRSC3050 4 units	GMA030 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921I08020 6 units	PLS001225 2 units	PLI151277 2 units	PLA150334 2 units	D6923IM08 6 units	DIN125IM08 4 units	PSAUN200 2 units	ABEI5519 8 units
				PSAAE0400 4 units	CARI0823 4 units	6921I08050 6 units							
KLBSU1535 (H=35mm) (β=15°)	KFRSC3050 4 units	GMA035 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921I08020 6 units	PLS001225 2 units	PLI151277 2 units	PLA150334 2 units	D6923IM08 6 units	DIN125IM08 4 units	PSAUN200 2 units	ABEI5519 8 units
				PSAAE0400 4 units	CARI0823 4 units	6921I08050 6 units							
KLBSU1540 (H=40mm) (β=15°)	KFRSC3050 4 units	GMA040 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921I08020 6 units	PLS001225 2 units	PLI151277 2 units	PLA150334 2 units	D6923IM08 6 units	DIN125IM08 4 units	PSAUN200 2 units	ABEI5519 8 units
				PSAAE0400 4 units	CARI0823 4 units	6921I08050 6 units							
Roof													
Consult technical data sheet corresponding to the FTA_GS_M_SL-SUR assembly system.													

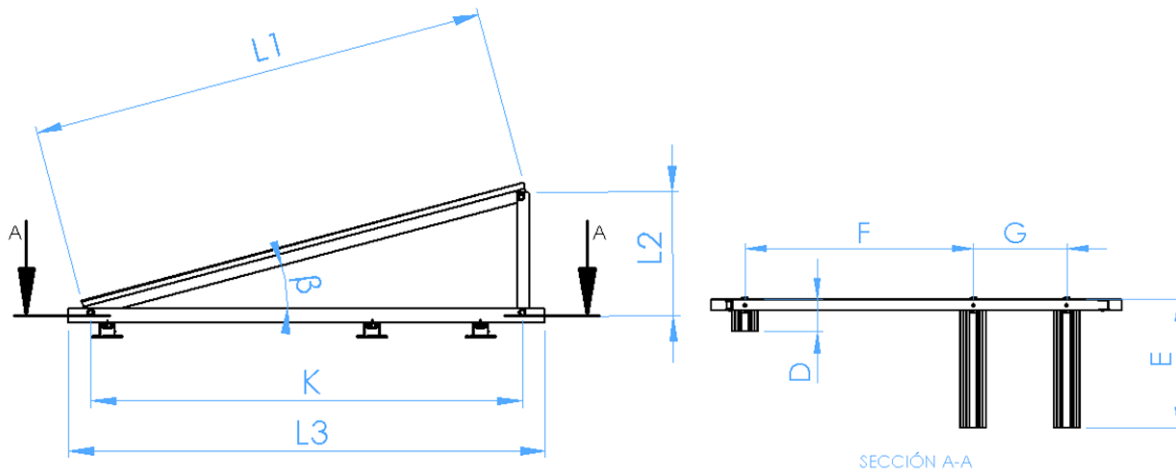
TECHNICAL DATA SHEET:

Solar range / Solar panel installation kits

Measurement table

Code	β (°)	L1 (mm)	L2 (mm)	L3 (mm)	D (mm)	E (mm)	F (mm)	G (mm)	K (mm)
KLBSU1030	10	1225	232	1300	100	400	710	290	1180
KLBSU1035	10	1225	232	1300	100	400	710	290	1180
KLBSU1040	10	1225	232	1300	100	400	710	290	1180
KLBSU1530	15	1225	334	1277	100	400	710	290	1157
KLBSU1535	15	1225	334	1277	100	400	710	290	1157
KLBSU1540	15	1225	334	1277	100	400	710	290	1157

Drawing



Kit Components

	Quick-fixing clamp	Aluminium gauge for macro	Quick-fixing guide nut A2	Aluminium profile with wings and EPDM	Stainless steel solar bushing	Stainless screw DIN-6921 A2	Upper ballasted profile	Lower ballasted profile	Base ballasted profile	Nut DIN-6923 A2	Washer DIN-125 A2	Union for aluminium profiles	Self-drilling screw
1 module Reference													
KLBSU1030 (H=30mm) ($\beta=10^\circ$)	KFRSC3050 4 units	GMA030 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921I08020 6 units	PLS001225 2 units	PLI101300 2 units	PLA100232 2 units	D6923IM08 6 units	DIN125IM08 4 units	PSAUN200 2 units	ABEI5519 8 units
				PSAAE0400 4 units	CARI0823 4 units	6921I08050 6 units							
KLBSU1035 (H=35mm) ($\beta=10^\circ$)	KFRSC3050 4 units	GMA035 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921I08020 6 units	PLS001225 2 units	PLI101300 2 units	PLA100232 2 units	D6923IM08 6 units	DIN125IM08 4 units	PSAUN200 2 units	ABEI5519 8 units
				PSAAE0400 4 units	CARI0823 4 units	6921I08050 6 units							
KLBSU1040 (H=40mm) ($\beta=10^\circ$)	KFRSC3050 4 units	GMA040 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921I08020 6 units	PLS001225 2 units	PLI101300 2 units	PLA100232 2 units	D6923IM08 6 units	DIN125IM08 4 units	PSAUN200 2 units	ABEI5519 8 units
				PSAAE0400 4 units	CARI0823 4 units	6921I08050 6 units							
KLBSU1530 (H=30mm) ($\beta=15^\circ$)	KFRSC3050 4 units	GMA030 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921I08020 6 units	PLS001225 2 units	PLI151277 2 units	PLA150334 2 units	D6923IM08 6 units	DIN125IM08 4 units	PSAUN200 2 units	ABEI5519 8 units
				PSAAE0400 4 units	CARI0823 4 units	6921I08050 6 units							

TECHNICAL DATA SHEET:

Solar range / Solar panel installation kits

KLBSU1535 (H=35mm) (β=15°)	KFRSC3050 4 units	GMA035 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921108020 6 units	PLS001225 2 units	PLI151277 2 units	PLA150334 2 units	D6923IM08 6 units	DIN125IM08 4 units	PSAUN200 2 units	ABEI5519 8 units
				PSAAE0400 4 units	CARI0823 4 units	6921108050 6 units							
KLBSU1540 (H=40mm) (β=15°)	KFRSC3050 4 units	GMA040 4 units	TURXA208 6 units	PSAAE0100 2 units	CARI0825 2 units	6921108020 6 units	PLS001225 2 units	PLI151277 2 units	PLA150334 2 units	D6923IM08 6 units	DIN125IM08 4 units	PSAUN200 2 units	ABEI5519 8 units
				PSAAE0400 4 units	CARI0823 4 units	6921108050 6 units							

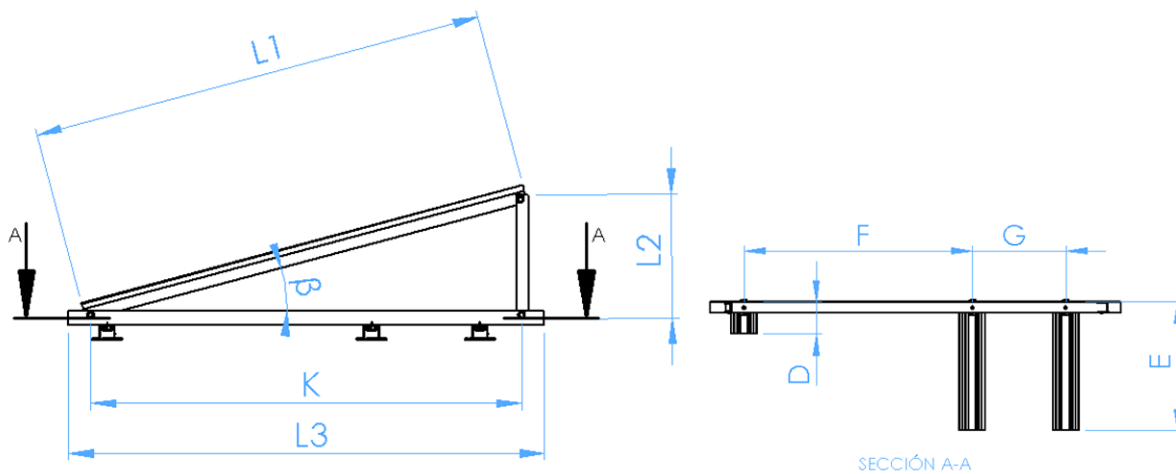
Roof

Consult technical data sheet corresponding to the FTA_GS_M_SL-SUR assembly system.

Measurement table

Code	β (°)	L1 (mm)	L2 (mm)	L3 (mm)	D (mm)	E (mm)	F (mm)	G (mm)	K (mm)
KLBSU1030	10	1225	232	1300	100	400	710	290	1180
KLBSU1035	10	1225	232	1300	100	400	710	290	1180
KLBSU1040	10	1225	232	1300	100	400	710	290	1180
KLBSU1530	15	1225	334	1277	100	400	710	290	1157
KLBSU1535	15	1225	334	1277	100	400	710	290	1157
KLBSU1540	15	1225	334	1277	100	400	710	290	1157

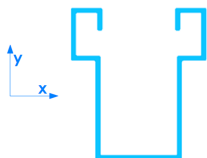
Drawing



Mechanical properties of the material

	Yield strength F _{0,2} (N/mm ²)	Breaking load F _u (N/mm ²)	Elastic modulus E (N/mm ²)	Transverse elastic modulus G (N/mm ²)	Linear coef. of expansion α _L (μ m / C°)	Specific Weight ρ (Kg/m ³)
Aluminium EN AW-6063-T6	170	215	69.500	26.100	23,5	2.700

Mechanical properties of the profiles

	Area S (cm ²)	Moment of inertia I _x (cm ⁴)	Moment of inertia I _y (cm ⁴)	Linear weight W (kg/m)
 Upper ballasted profile	2,38	3,93	7,78	0,64 (plano)

TECHNICAL DATA SHEET:
Solar range / Solar panel installation kits

 Lower ballasted profile	2,11	3,71	3,51	0,59
 Base ballasted profile	1,81	2,02	4,01	0,48