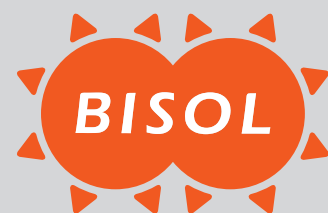


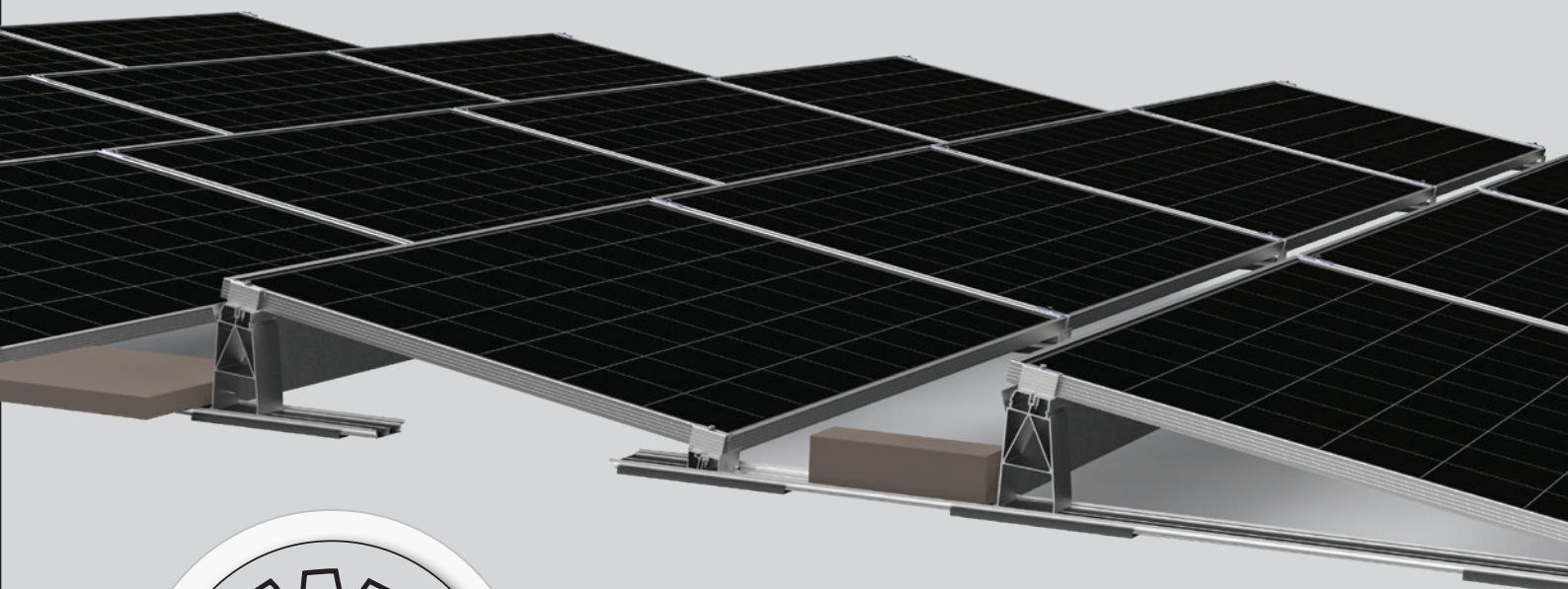
Installation Manual

BISOL EasyMount™

Slim BASE



Solar company!



The **sunny** side of **life!**



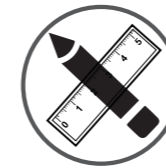
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GENERAL REQUIREMENTS

The sole purpose of this installation manual is to demonstrate the installation of BISOL EasyMount™ mounting systems, therefore PV module installation guidelines and related safety precautions are not a part of this manual. For guidelines on how to safely and effectively install BISOL PV modules please refer to the PV installation manual, published on www.bisol.com.



PV design:

The installer carries all responsibility for PV system dimensioning, static calculations of the roof, weather and environmental conditions at location, proper selection and use of components and their mounting. The installer is responsible for the mechanical durability and water tightness of the installed interface connections at the building surface. All safety warnings outlined in this manual are to be closely considered.



Roof:

The continual pressure loading capacity (point load) of the insulation and the roofing material must be checked thoroughly and found to be sound before installation. If the compression strength of the roof surface is not sufficient, extra support surfaces must be added.

The roof must be in good condition and strong enough to bear the weight of the solar panels, including associated materials, ballast, wind and snow load. The customer is responsible to check the stability of the roof structure and, when necessary, employ a builder to correct it.

The customer is responsible to check the compatibility of EasyMount™ Slim BASE mounting materials with local climate conditions (salt, acidity, sulphates etc.) and roof materials. The types of materials used in the Slim BASE are stated in the product datasheets.



Installation work:

All installation work must be carried out by a specialised company with qualified personnel. Strict safety and accident prevention measures as defined by relevant regulations must be carried out and should be known by the installer. Appropriate protective equipment for work at height must be used throughout the installation process.



Electrical work:

Although electrical connections are strictly not part of this manual, some safety warnings are in place. PV modules and mounting structure must be grounded even when the site is already equipped with lightning protection. PV modules are under high voltage and generate electrical current even in low light conditions. When modules are connected in series, life-threatening voltage is present at the end of the terminals. Open circuited branches can cause electric arc when in touch with conductive surface. Electrical installations must not be carried out in case of dampness.

BISOL Production Ltd. does not accept responsibility and expressly disclaims liability for loss, damage, or expense arising out of or in any way connected to PV system design and dimensioning, installation work, operation, use or maintenance. A failure to adhere to the guidelines stated in this document and/or in the construction plan may void all guarantee and liability claims for the product. The information in this manual is based on BISOL Productin's knowledge and experience; but such information, including product specification (without limitations), and suggestions do not constitute a guarantee, express or implied. BISOL Production reserves the right to change the installation manual as well as product specifications without prior notice.

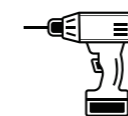
COMPONENTS OVERVIEW

	Component	ID Code	Component description
1		SEK-BTP_1020	Bottom profile length 1020
2		SEK-BTP_1680	Bottom profile length 1680
3		SEK-BTP_2040	Bottom profile length 2040
4		SEK-ABFL_10	Alu Base Front leg 10
5		SEK-ABFL_20	Alu Base Front leg 20
6		SEK-ABBL_10	Alu Base Back leg 10
7		SEK-ABBA_20	Alu Base Back annex 20
8		EM-CLA.E_35S.2	Clamp end EasyMount™ 35 mm Direct
9		EM-CLA.E_35B.2	Clamp end EasyMount™ Black 35 mm Direct
10		EM-CLA.M_40S.2	Clamp middle EasyMount™ Direct
11		EM-CLA.M_40B.2	Clamp middle EasyMount™ Black Direct
12		SEK-PT_6_12	Screw self-tapping 6.0 x 12 mm PT
13		SEK-PT_6_45	Screw self-tapping 6.0 x 45 mm PT
14		SEK-PT_6_50	Screw self-tapping 6.0 x 50 mm PT
15		SEK-PT_6_55	Screw self-tapping 6.0 x 55 mm PT
16		SEK-WD10_175	Wind deflector 10
17		SEK-WD10_210	Wind deflector 10, 2100 mm
18		SEK-WD10_217	Wind deflector 10, 2170 mm
19		SEK-WD20_175	Wind deflector 20
20		SEK-WD20_210	Wind deflector 20, 2100 mm
21		SEK-WD20_217	Wind deflector 20, 2170 mm
22		SEK-JF3_48_19	Screw self-drilling 4.8 x 19 mm JF3 - 2
23		SEK-PREPDM	EPDM protective rubber 300 mm
24		SEK-EMBP	Ballast pan EasyMount™
25		SEK-LOAD_CP15	Load concrete plate 40/40/3.8 cm (13.5 kg)
26		SEK-LOAD_CP36	Load concrete plate 50/50/3.8 cm (21 kg)

TOOLS REQUIRED



Measuring tool



Electric drill



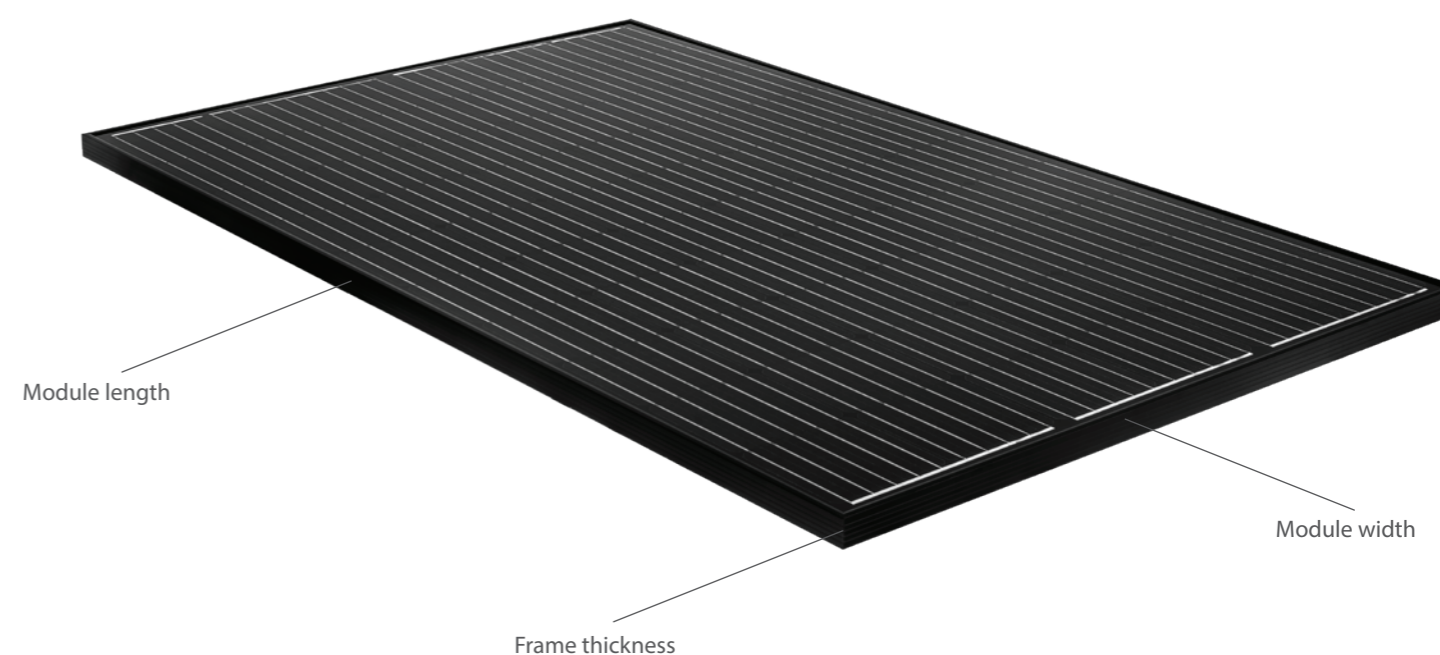
Torque wrench



Torx T30 socket

PLANNING THE PV LAYOUT

Project Design



Designing the PV Module Layout

Minimal horizontal roof space required:

a = number of modules
 * (module length + 20 mm) + 60 mm

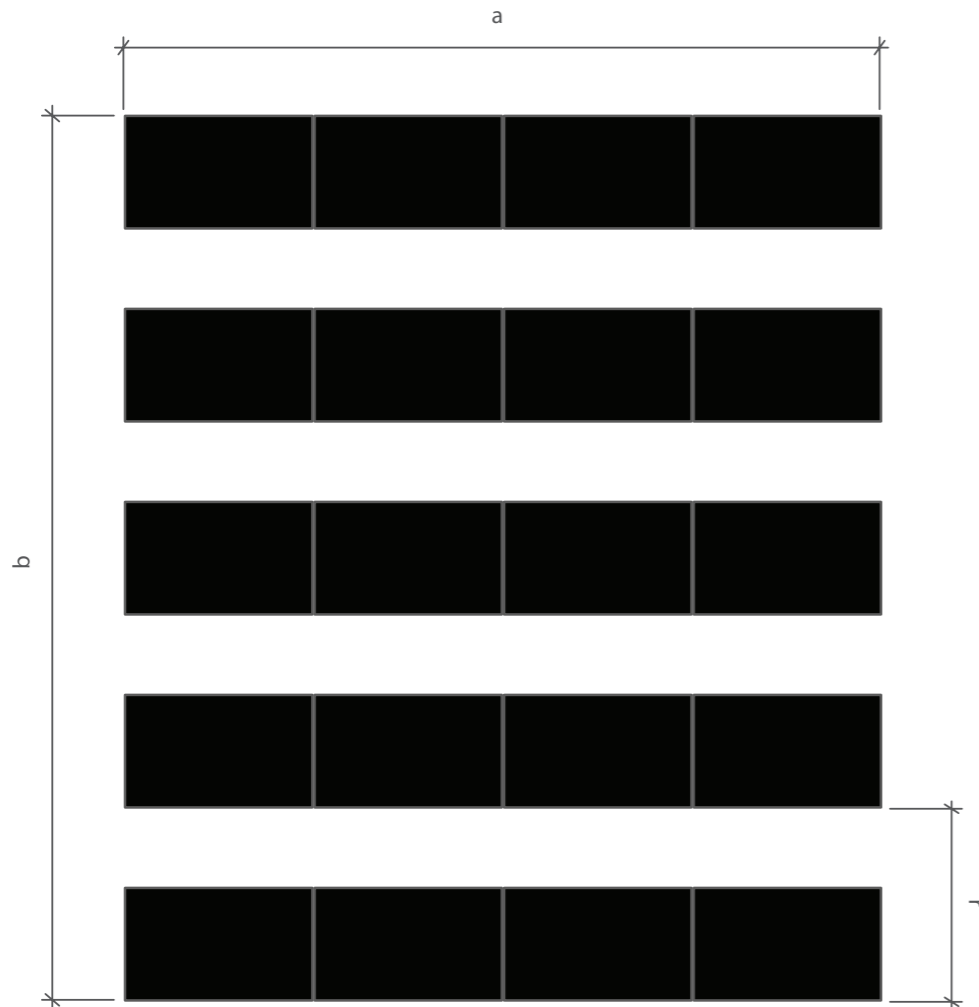
Minimal vertical roof space required:

b = number of rows * r – (r – module width)

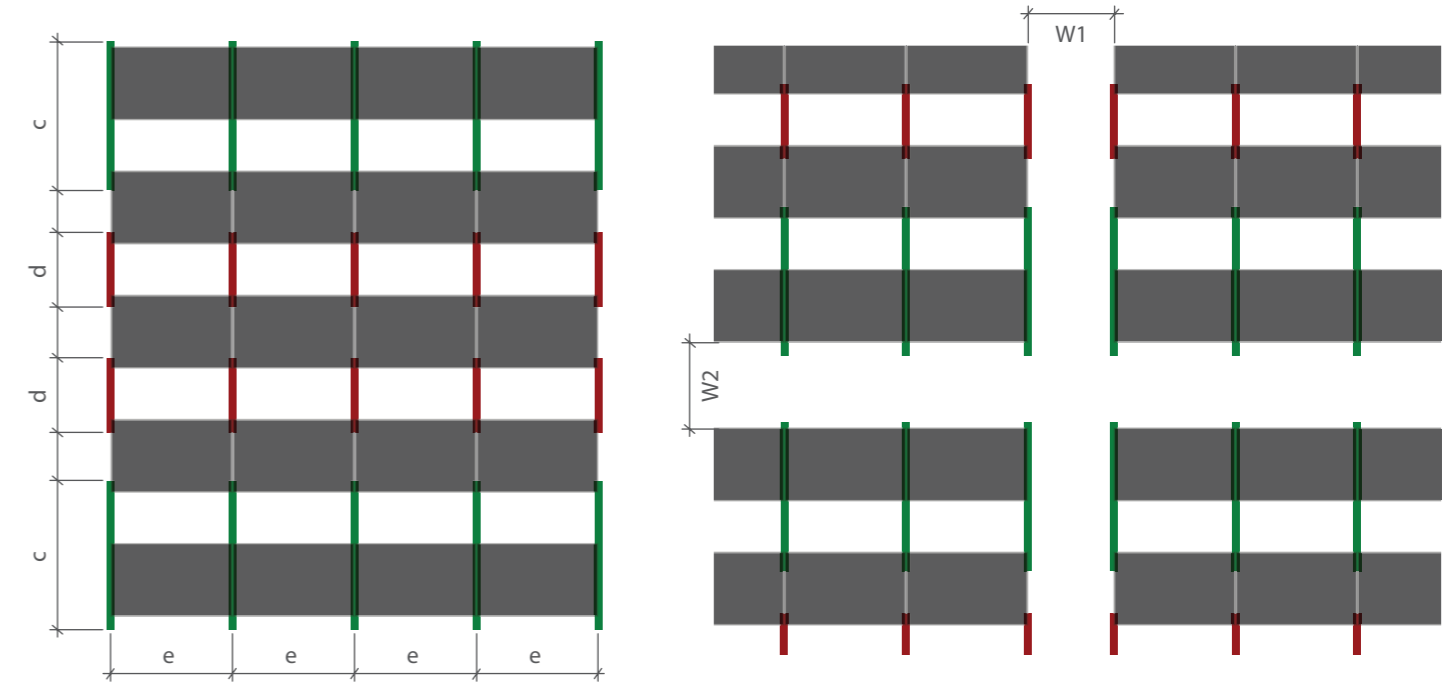
Maximum row distance, 10°: 1.58 m

Maximum row distance, 20°: 1.84 m

Additional distances available upon request.



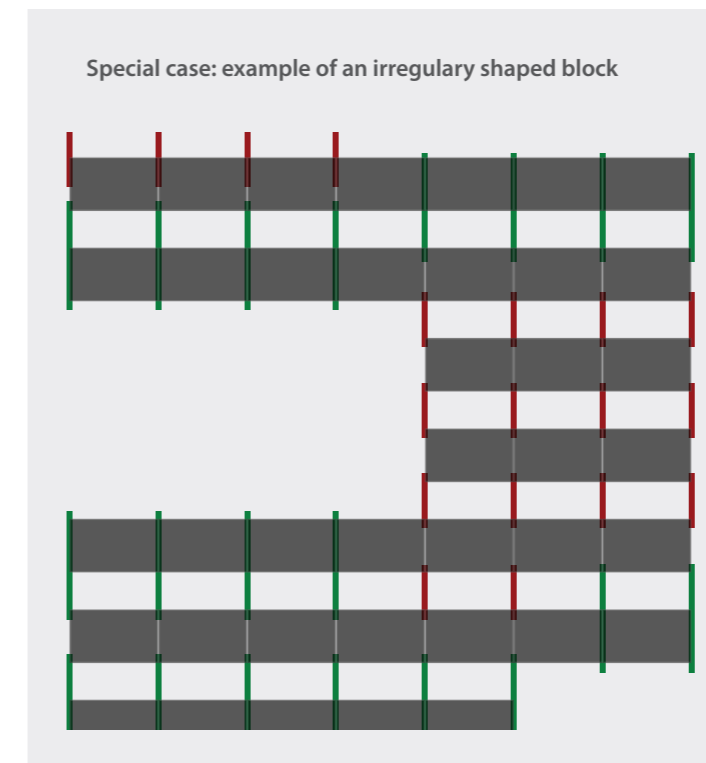
Designing the Bottom Rail Positions



c = 1 (1,680 mm, 2,040 mm)
 d = 1 (1,020 mm)
 e = module length + 20 mm

W1 ≥ 140 mm
 W2 ≥ 140 mm
 max. 16 m

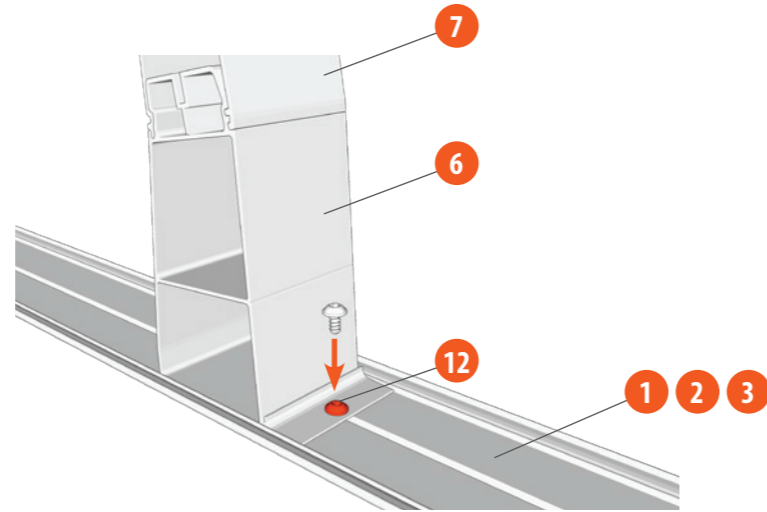
Important dimensions for module fields and thermal separations



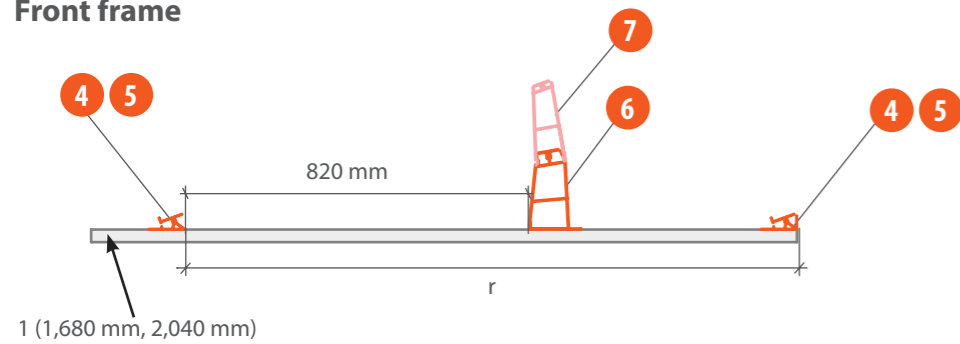
ASSEMBLY

STEP 1: Assembling the Frames

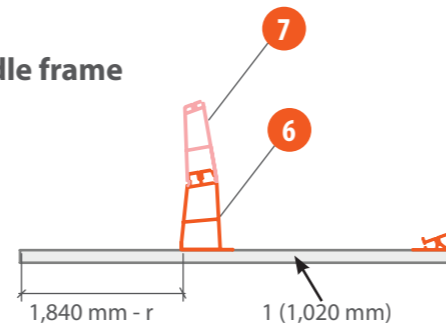
Attach the Slim BASE's front and back legs to the bottom profile based on the project design described in previous chapter and the distances in the next step.



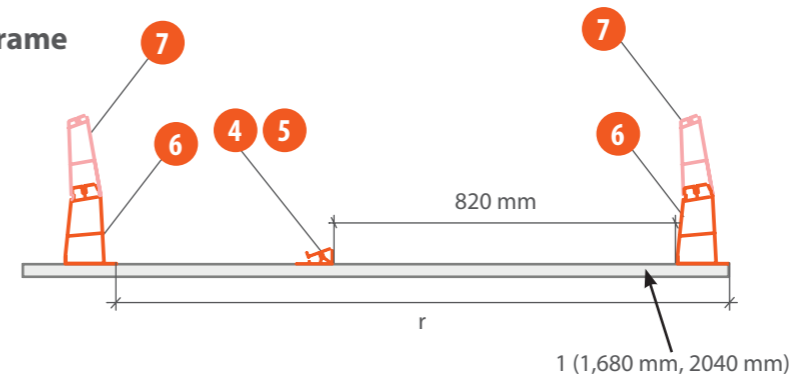
Front frame



Middle frame

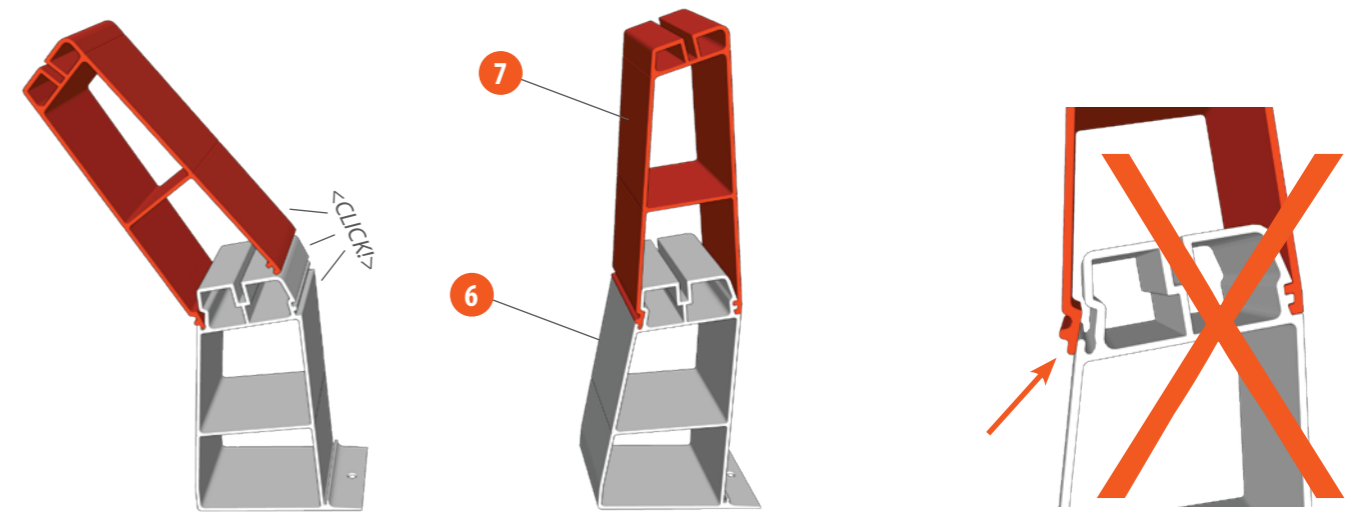


Back frame



If there are only two rows in an array, the last frame used is the one marked as MIDDLE FRAME.

OPTION 1:

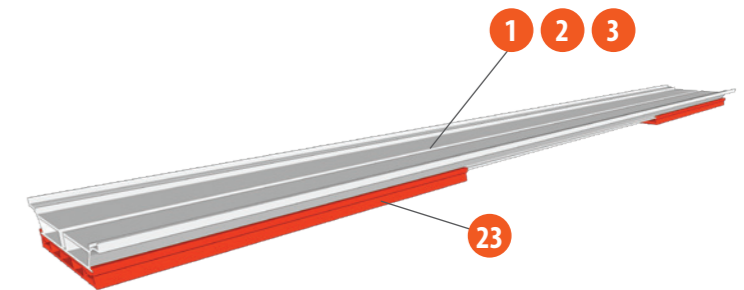


For the 20-degree option, snap on the extra inclination annex.

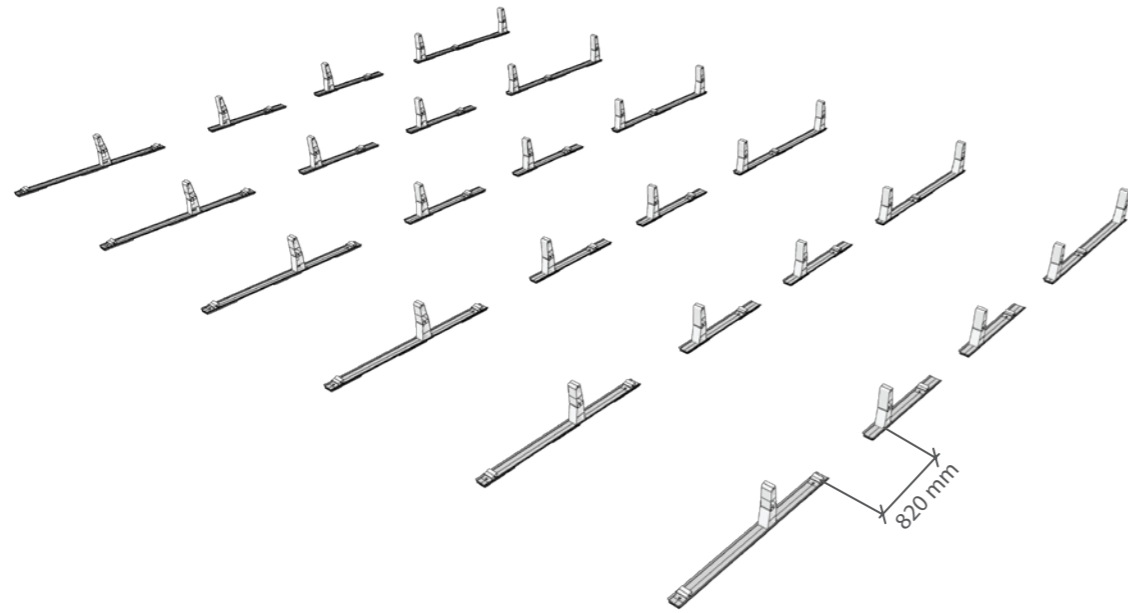
OPTION 2:

For extra roof protection, add EPDM protective rubber to the bottom profiles.

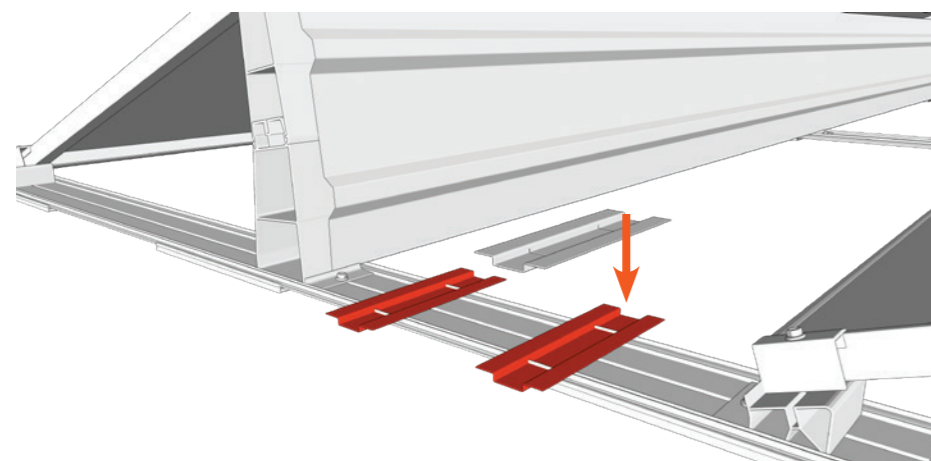
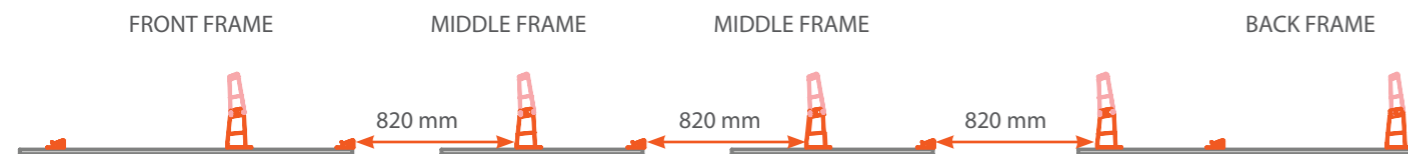
- 2x rubber at the edges of bottom profiles for $l = 1,020$ mm
- 3x rubber: two at the edges and one in the middle for $l = 1,680$ mm and 2,040 mm profile



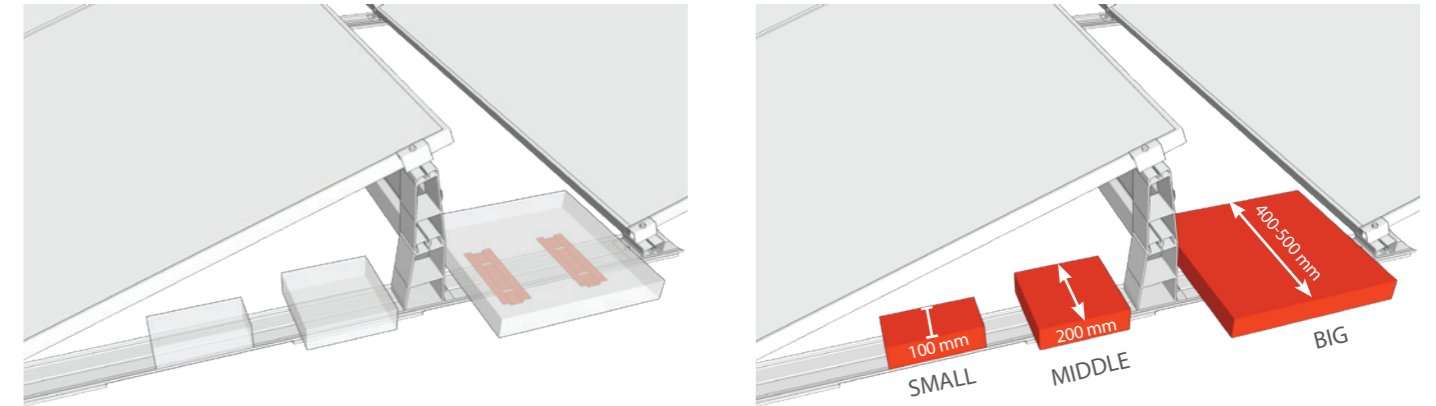
STEP 2: Laying Out the Frames



Based on the project design, lay the assembled frames.



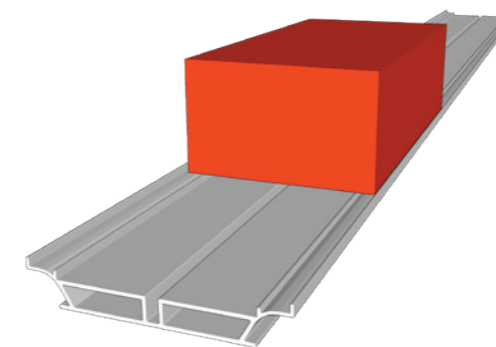
STEP 3: Adding the ballast



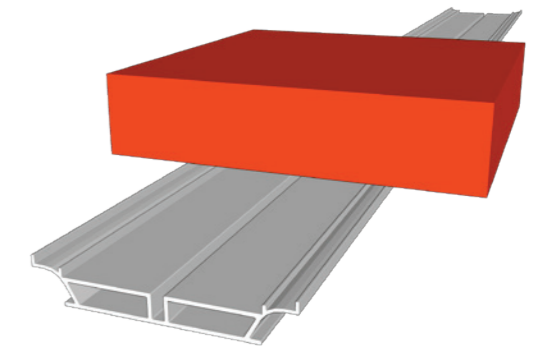
All ballast calculations must be approved by a local engineer following local building codes. For ballast recommendation and report, please contact BISOL Sales Team, however even BISOL's reports need local engineer's confirmation.

Different concrete ballast block sizes can be used on Slim BASE mounting system.

1. **BIG:** Concrete ballast block with the longest side between 200 and 500 mm must be used with ballast pans.
2. **MIDDLE:** Concrete ballast block with the shortest side maximum 200 mm long can be used without ballast pan and can be simply put on the profile.
3. **SMALL:** Concrete ballast block with the shortest side maximum 100 mm should be positioned into the profile.



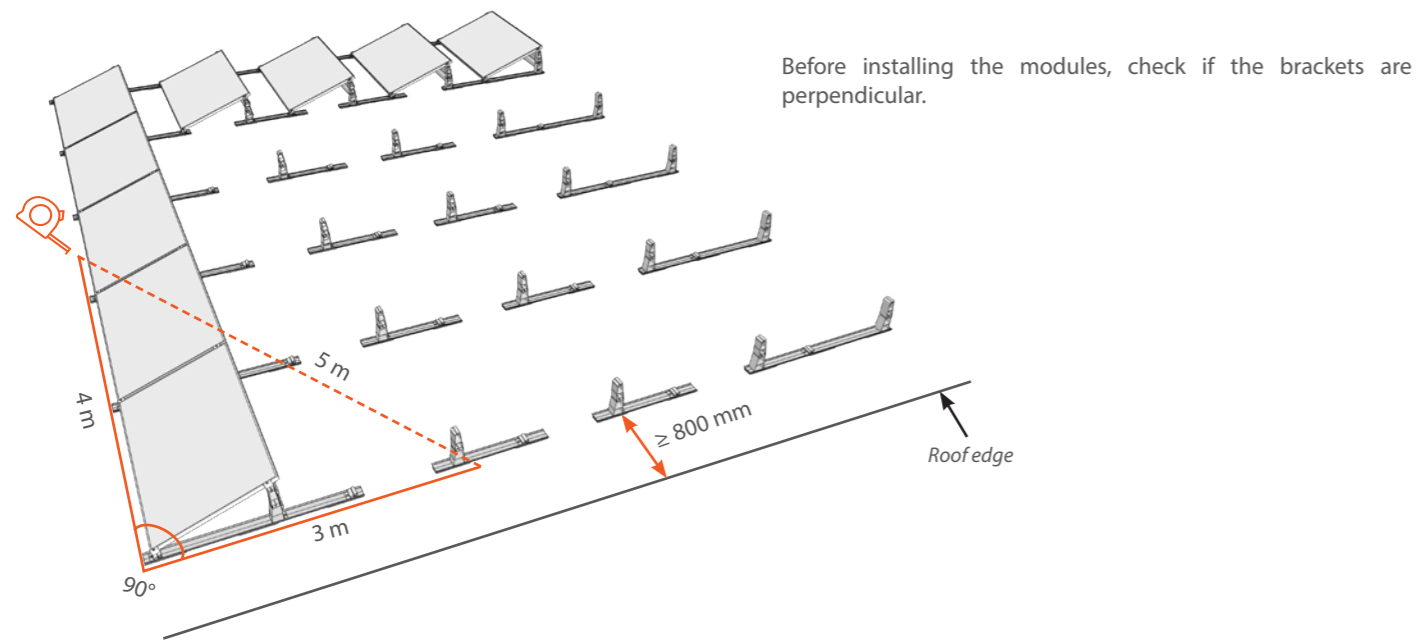
Small concrete ballast block



Middle concrete ballast block

Due to roof vibrations that may occur, yearly check-ups of the concrete ballast blocks positioning are strongly recommended.

STEP 4: Attaching PV Modules



Attach the PV modules with clamps using 9 Nm torque. Use the end clamp on the edges and the middle clamp between two PV modules.

STEP 5: Attaching Wind Deflectors



To improve the aerodynamics of the system, attach the wind deflectors using drilling machine with 6 mm hexagon head.

TERMS AND CONDITIONS

BISOL Production Ltd. as manufacturer of BISOL EasyMount™ mounting solutions in connection with their installation takes no responsibility for the design solutions of individual designers, also assumes no responsibility in connection with the installation of BISOL EasyMount™ mounting solutions by a third party and contrary to these instructions, as well as for the choice of mounting structure in this regard.

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Failure to follow the guidelines set out in this document and / or in the construction plan may invalidate all claims for product guarantees and liabilities.

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In addition, our General Sales Terms and Conditions for Supply of Goods and Services (GSTC) as well as Standard Limited Guarantee terms and conditions for mounting systems, both published on the website www.bisol.com, apply.



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