

Flat Roof Mounting System

Installation Guide

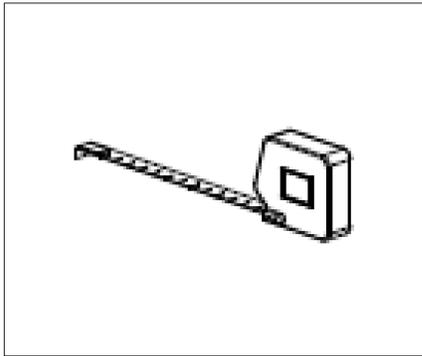
- ISOFLAT D13 V2

Contents

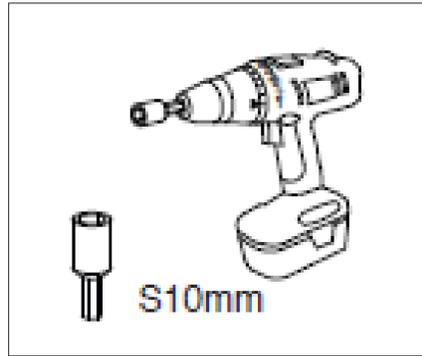
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Required Tools

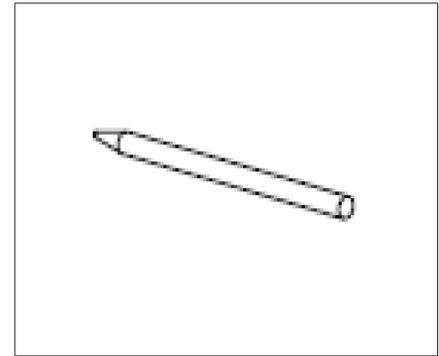
Tape measure



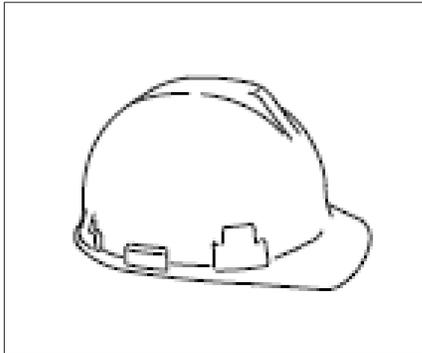
Electric Screwdriver



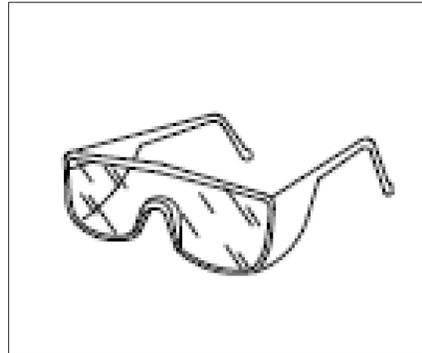
Marker



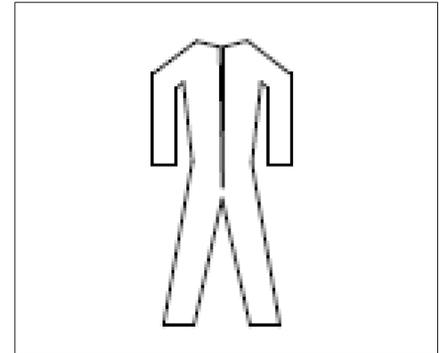
Helmet



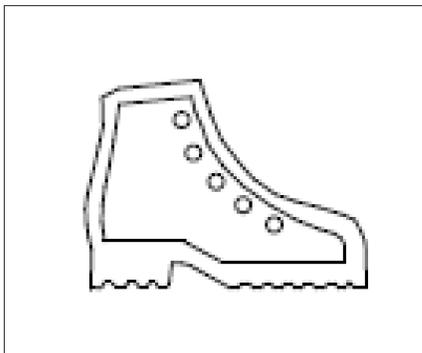
Safety Glasses



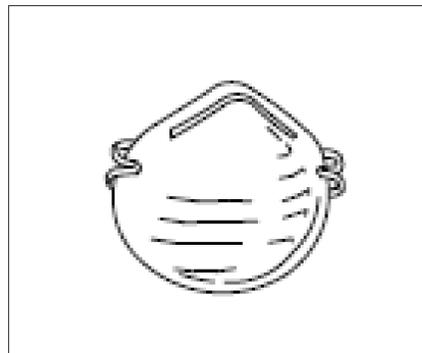
Protective Clothing



Safety Shoes



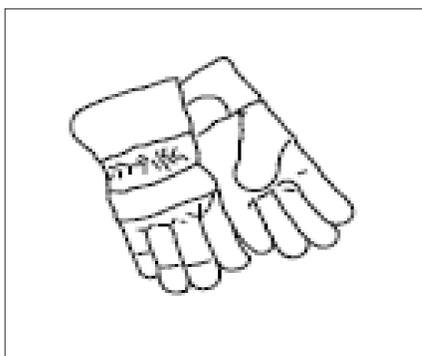
Mask



Earpiece



Protective Gloves



General Assembly and Maintenance Instructions

- Systems may only be assembled and commissioned by persons who can guarantee proper implementation based on their specialised suitability (e.g. training or profession) or experience.
- Before assembly it must be checked if the product complies with the structural requirements on site. For roof systems, the load carrying capacity of the building must always be checked.
- National and site-specific building codes, standards and environmental regulations must strictly be adhered to.
- Occupational safety and accident prevention regulations, relevant standards as well as regulations of professional associations must be complied with.

The following must be particularly paid attention to:

- Protective clothing must be worn (especially safety helmet, work boots and gloves).
- For roof works the regulations on “Roof working” must be adhered to (e.g. the use of: fall protection, Scaffolding with fall-arresting device from an eaves height of 3 meters, etc.).
- Two persons must be present during the entire assembly process, in order to ensure rapid assistance in case of an accident.
- The assembly instructions of the module manufacturer must be adhered to.
- Equipotential bonding between individual system components must be performed in compliance with the respective national regulations.
- During the entire assembly time it must be ensured that at least one copy of the assembly instruction is available at the construction site.

- Failure to observe our installation regulations and installation instructions and non-use of all system components, as well as the installation and removal of components that were not purchased through us, results in us not being liable for any resulting defects or damage. In these cases our warranty will not be valid.
- In cases where material supplied by ISOTEC Enerji San. Ve Tic. Ltd. Şti. is re-cut to size on site, please ensure that the cut corners and edges are burr-free to rule out any risk of injury from sharp corners and edges.
- In case of disregard of our general safety instructions and assembly or mounting of components purchased from competitors, ISOTEC Enerji San. Ve Tic. Ltd. Şti. reserves the right of exclusion of liability.
- If all safety instructions have been adhered to and the system is properly installed, the product warranty is 12 years! Please note our warranty conditions.
- The system must undergo proper technical checks, maintenance and servicing.
This includes regular visual inspections. We recommend an annual visual inspection including:
 - Checking all system parts for damage, for example, caused by the effects of weather, animals, dirt, deposits, adhesions, vegetation, roof penetrations, seals, stability or corrosion. In addition, it is necessary to check that the screw connections are tight and, if necessary, tighten them in accordance with the torques specified in the assembly instructions.
 - An inspection is always to be carried out on the system after exceptionally extreme conditions (e.g. caused by earthquakes, heavy snowfalls, storms, etc.). This inspection is to be carried out by qualified specialist companies or experts. It is important to check whether the system has any visible or hidden defects, which will no longer adequately ensure the load-bearing capacity, stability and functionality of the system in the future.
- The dismantling of the system is based on the assembly steps in reverse order.

General Information

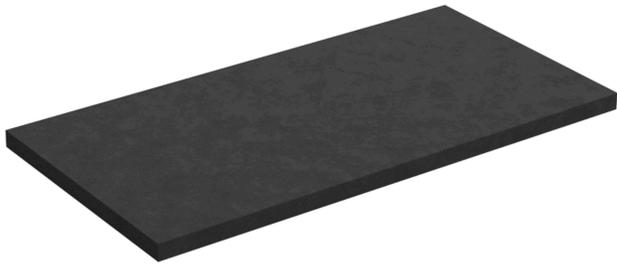
- It can be applied without damaging your roof covering.
- ISOFLAT D13 V2 can be fixed differently depending on the material of the roofs and the needs.
- It is very light through to high strength aluminum components.
- It is applied with minimum weight through to aerodynamic optimization.
- It can be applied on all flat roofs.
- It is possible to assemble the entire system with a single hand tool.
- Through to aluminum-coated SBR rubber, it does not show softening effect on membrane roofs and does not damage your membrane roof.
- It does not prevent water flow in accordance with DIN 1986-100 norm.
- The tightening torque of all panel clamp bolts (M8) is 14-17Nm.

ISOFLAT D13 V2 COMPONENTS



FBS

- ▶ FBS Foot and floor rail are fixed via interlocking structure
- ▶ Used with SBR Adhesive floor protector
- ▶ Raw material: Aluminum ENW 6063 T66



Surface protection SBR

- ▶ Used to provide better grip to the roof covering and not to damage the roof covering.
- ▶ Adhesive aluminum sub-base for membrane roofs.
- ▶ It is chemically compatible with all membrane types.
- ▶ Flame retardant (hard burning) - BROof (t1) classification according to DIN EN EN501-5, can be supplied according to DIN V ENV 1187 test.



ISOBEAM TFX

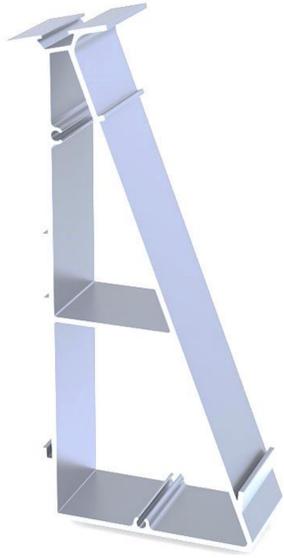
- ▶ Ground Rail
- ▶ Compatible with M8 stainless steel T-head bolts
- ▶ Raw material: Aluminum ENW 6063 T66



ISOFLAT FS.2

- ▶ Front support
- ▶ Fixed on the Isobeam TFX rail without any screw
- ▶ Raw material: Aluminum ENW 6063 T66

ISOFLAT D13 V2 COMPONENTS



ISOFLAT BS.2

- ▶ Back support
- ▶ Fixed on the Isobeam TFX rail without any screw
- ▶ Raw material: Aluminum ENW 6063 T66



EasyClamp End U60

- ▶ Delivered pre-assembled with integrated nut and spring. Can reduce pv module installation time up to 15%
- ▶ Universal clamps work with framed pv modules between 35 - 45 mm height.



ISOBEAM TFX CONNECTOR

- ▶ Used for connection of Isobeam TFX rails
- ▶ Fixed with M8 stainless steel bolt and square nut
- ▶ Raw Material: Aluminum ENW 6063 T66



Allen Head Bolt & Square Nut

- ▶ Size: M8x40
- ▶ Quality: Stainless A2-70

ISOFLAT D13 V2 COMPONENTS



XCLAMP

- ▶ Used for fixing the Isobeam TFX1200 rail with the main rail
- ▶ Fixed with M8x20 T-head bolt and M8 flanged nut
- ▶ Raw material: Aluminum ENW 6063 T66



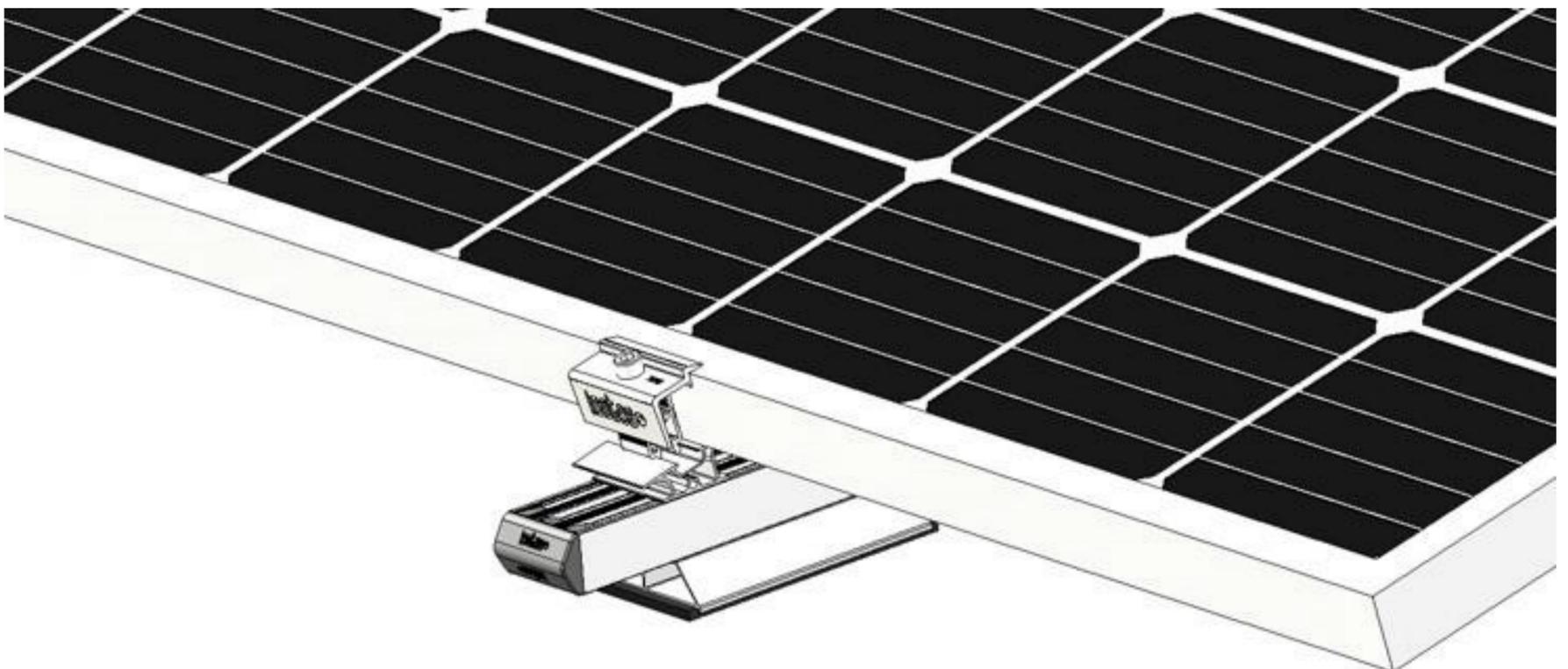
T Head Bolt & Flange Nut

- ▶ Size: M8
- ▶ Quality: Stainless A2-70



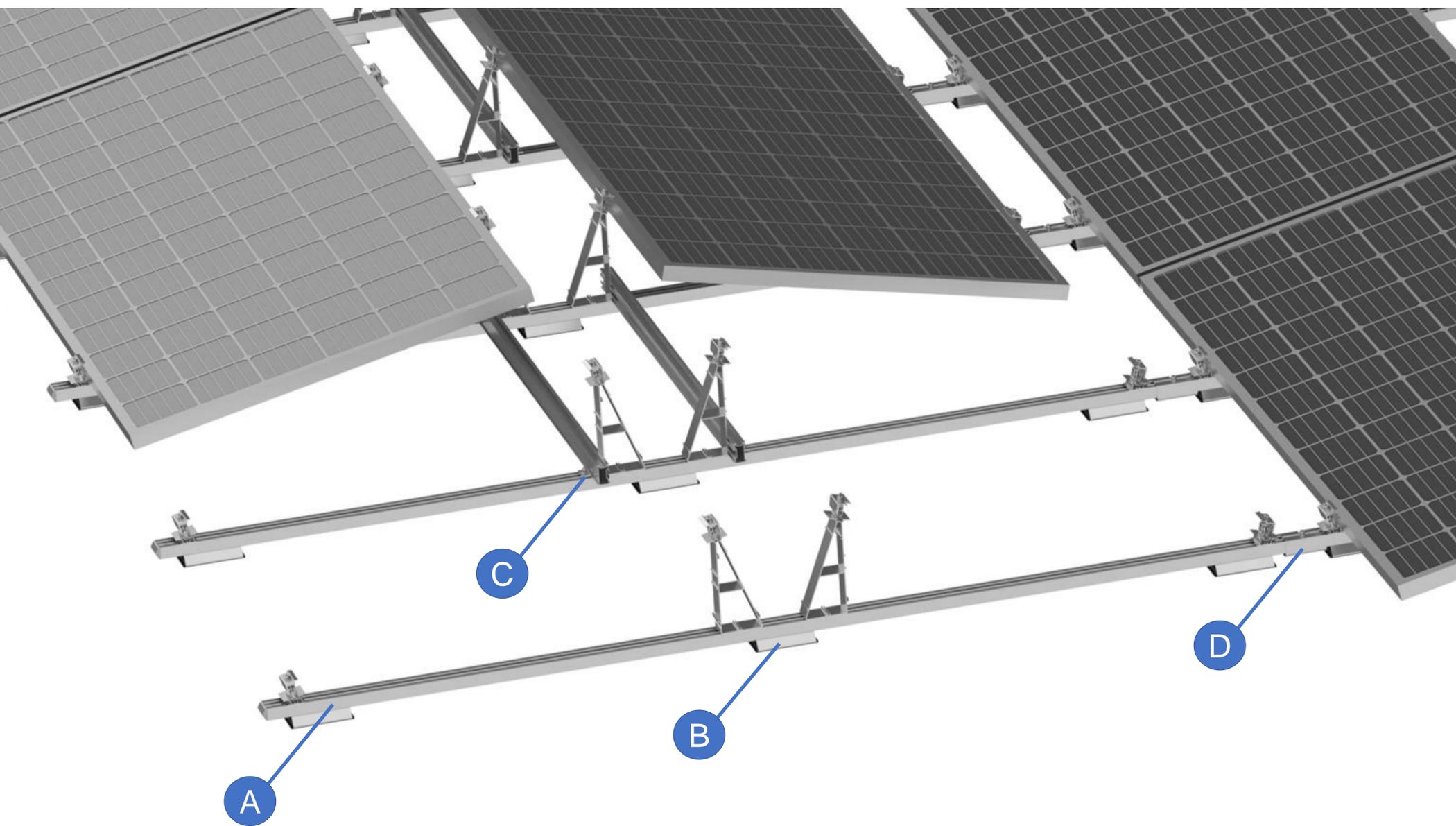
CAP TFX

- ▶ The cap compatible with Isobeam TFX rail

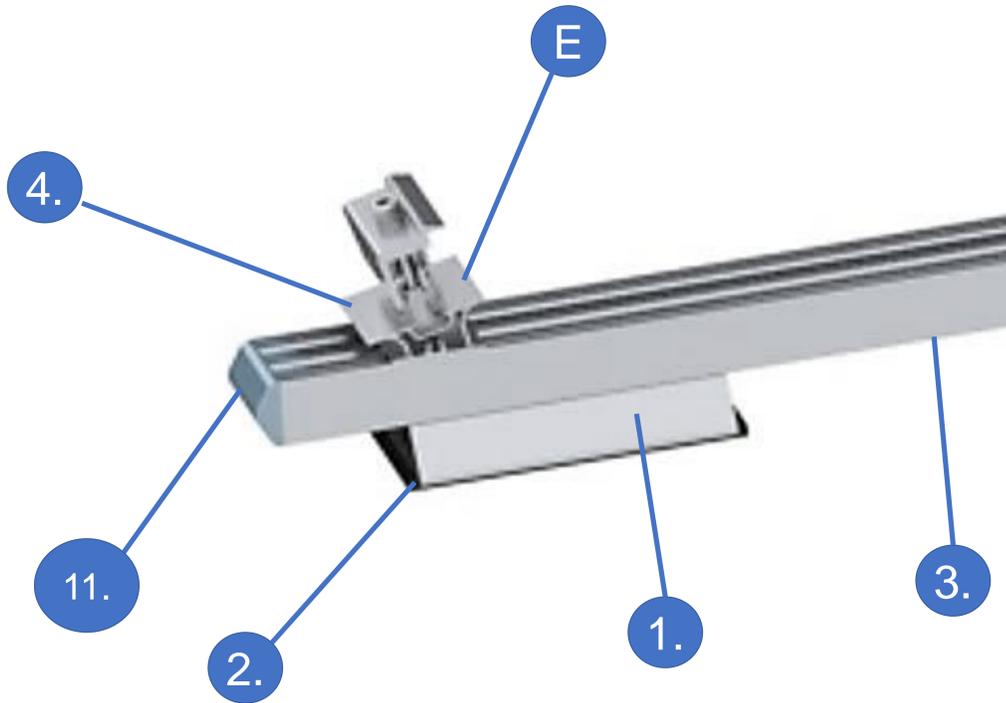


SCOPE OF INSTALLATION

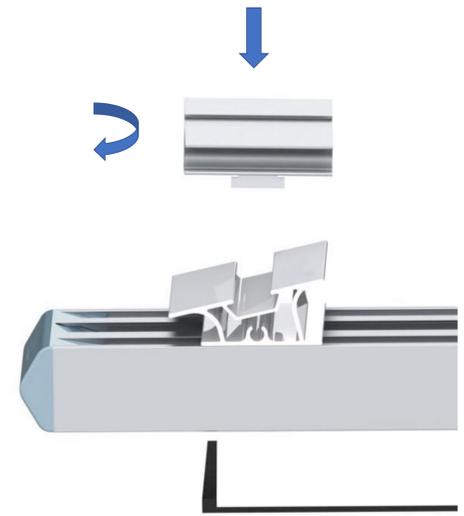
Module Support Parts	Connection Components	Connection Tools	Ballast / Cap
1. FBS Tool 2. Surface protection SBR 3. Isobeam TFX 4. Isoflat FS.2 5. Isoflat BS.2	6. EasyClamp End U60 7. Isobeam TFX connector 9. Xclamp	8. Allen head bolt & Square nut 10. T- Head bolt& Flange nut	11. Cap TFX 12. Ballast stone



Detail A



Front support assembly

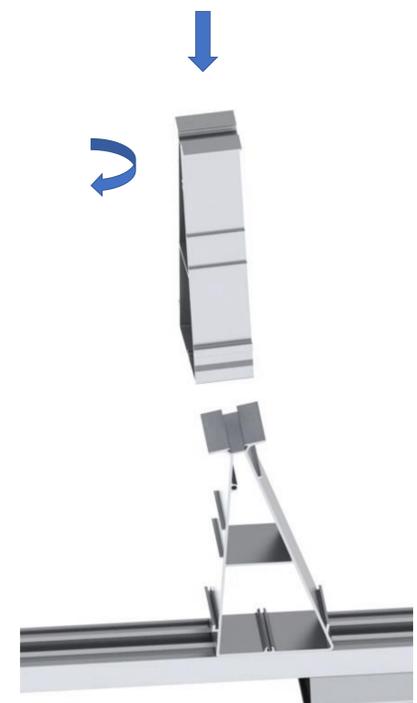


Detail E

Detail B

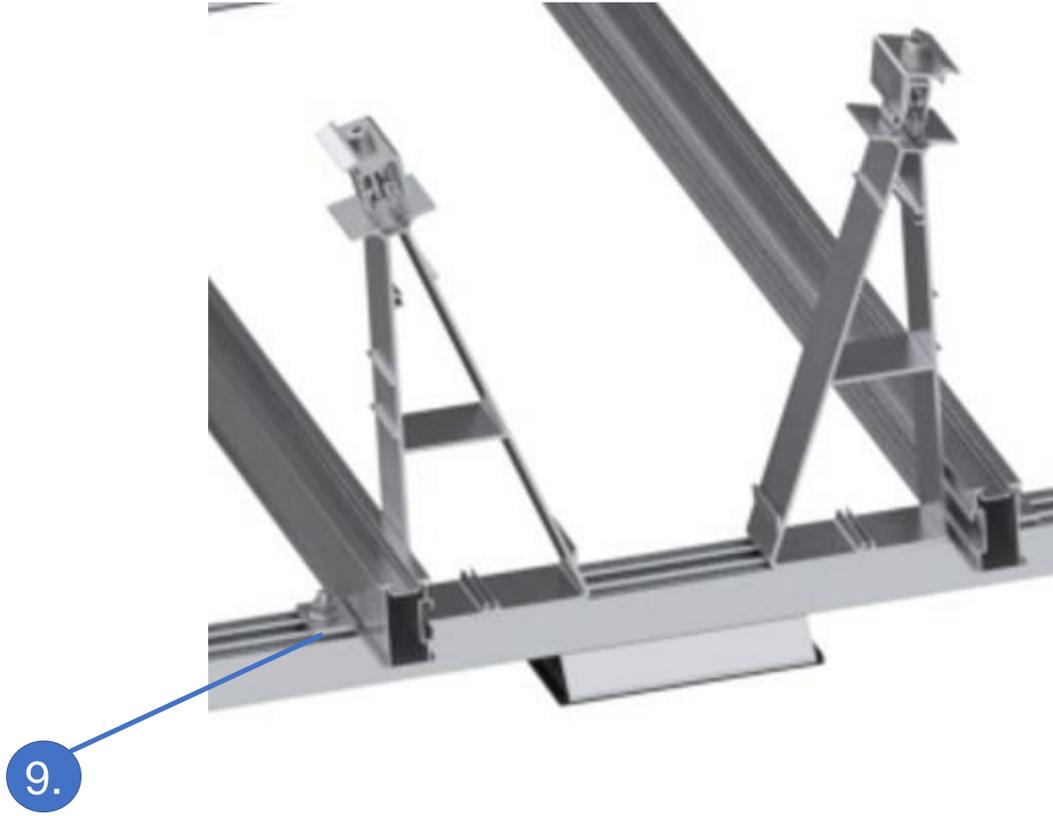


Back support assembly

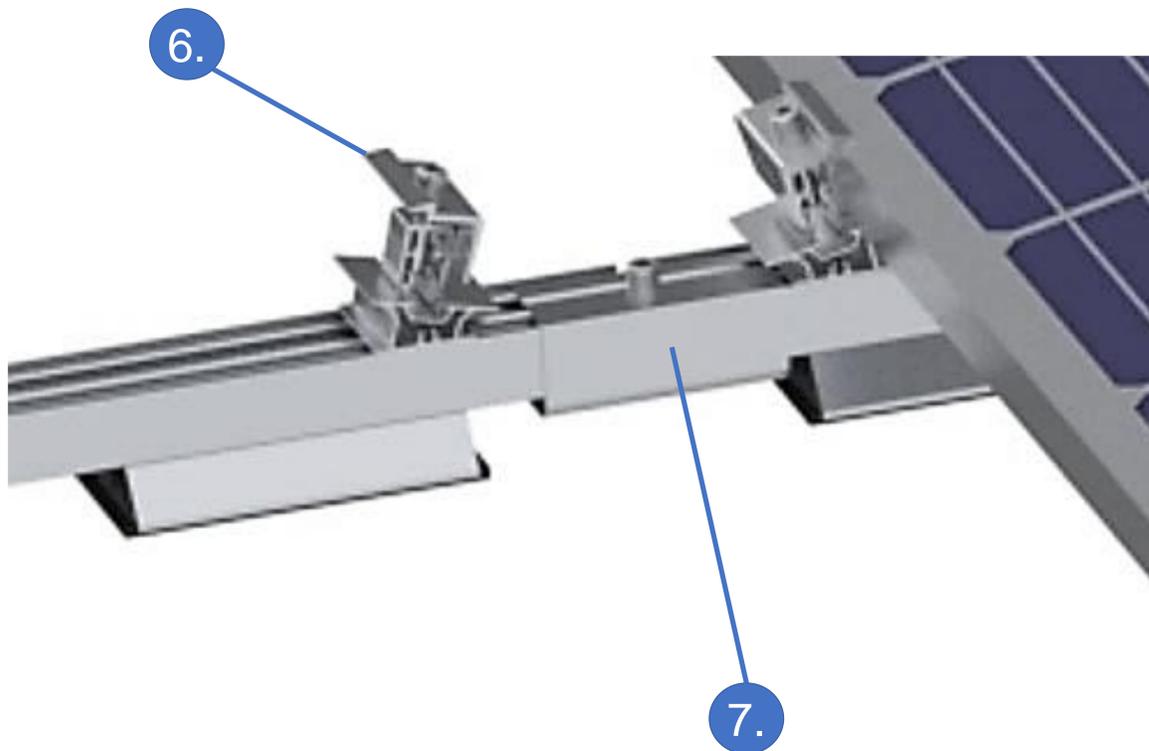


Detail F

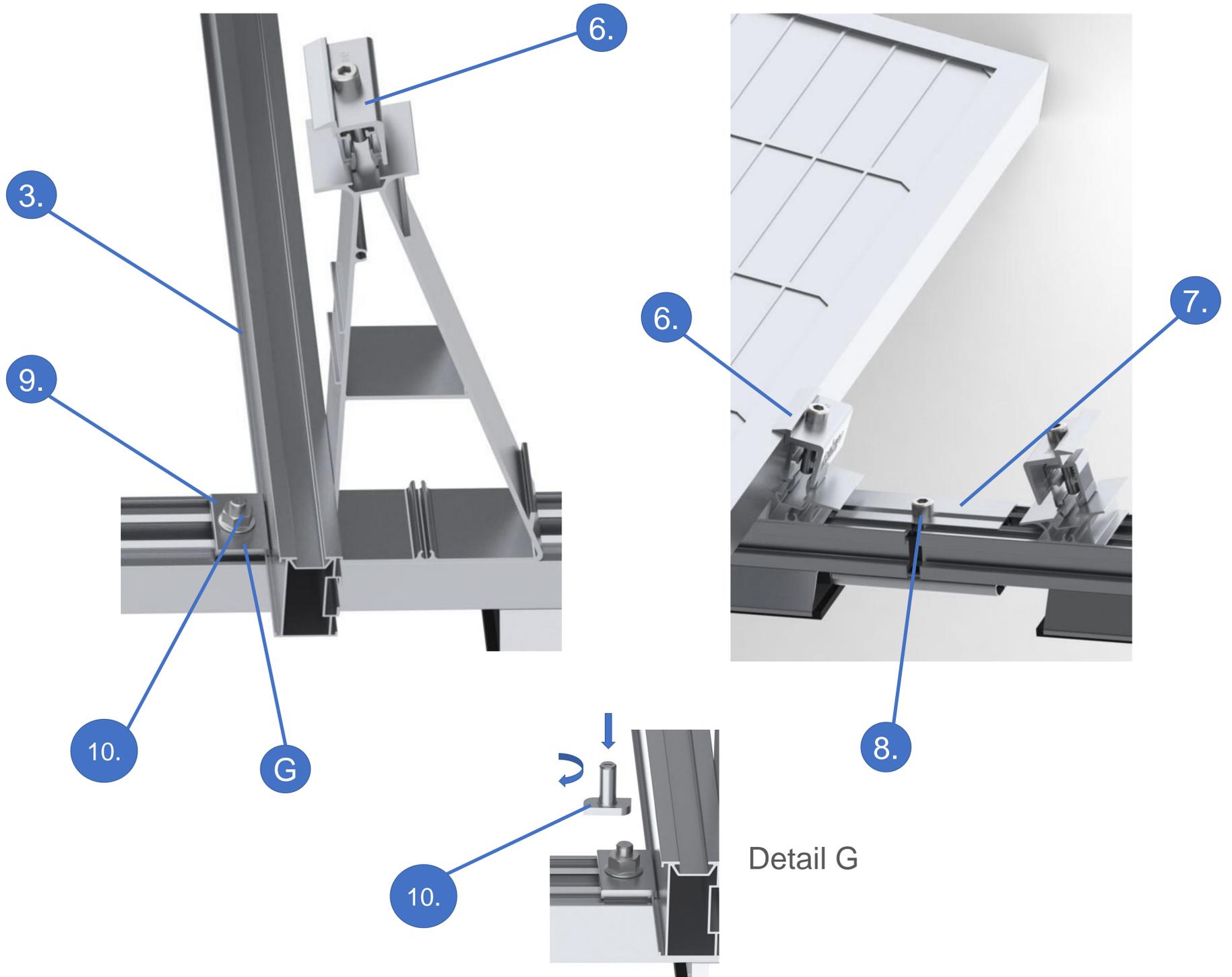
Detail C



Detail D



Assembly of Connection Components



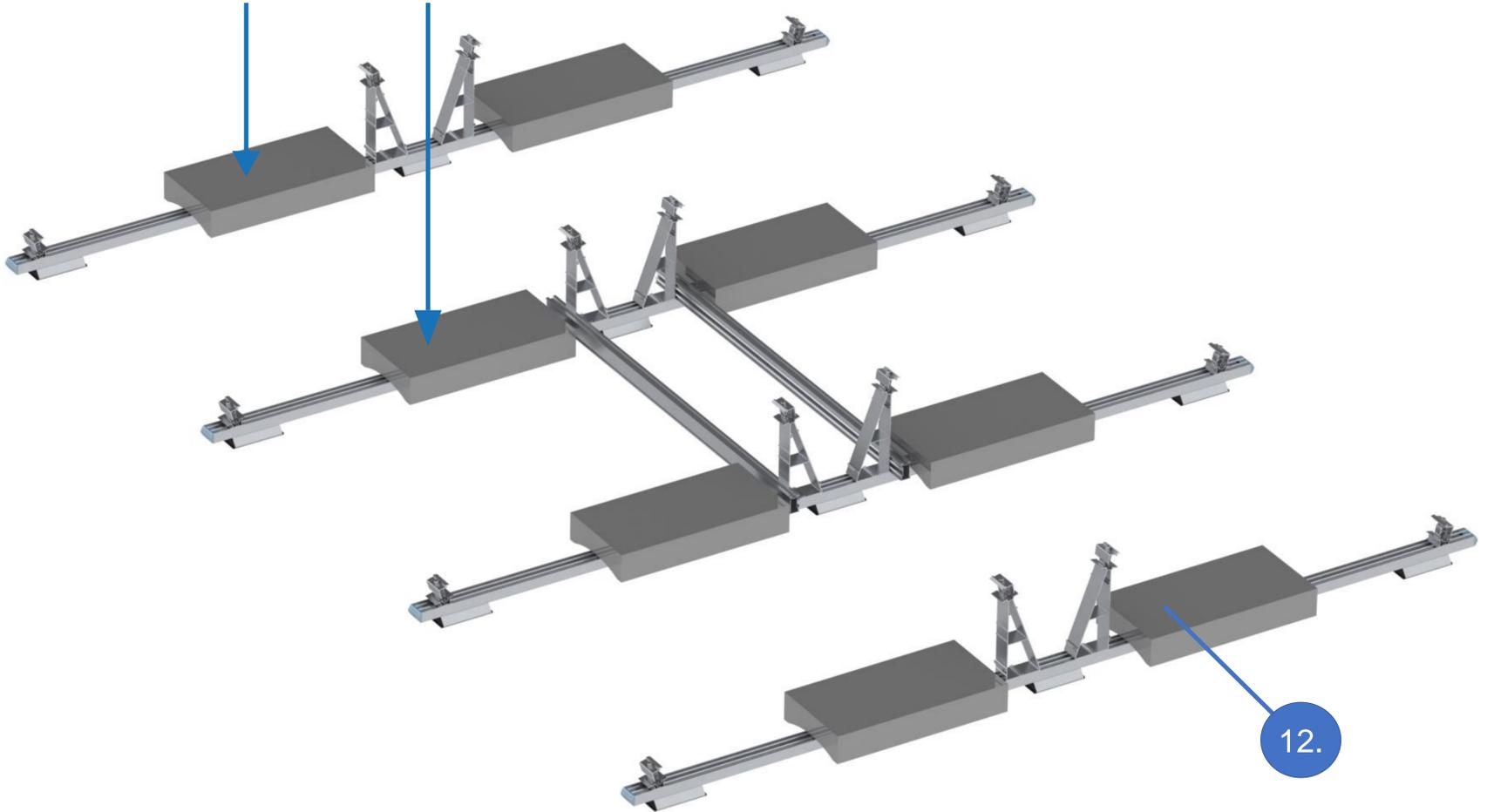
- 1) Allen head bolt & square nut (8.) mounts to TFX connector apparatus (7.). TFX rails (3.) are placed into the TFX connector (7.) from the right and left of the connector and the assembly is completed by tightening the allen head bolt (M8x40) and square nut(M8).
- 2) The Xclamp apparatus (9.) is placed on the appropriate edge of the TFX ballast support rail (3.) as seen in the image, and the ballast support rail assembly is completed by tightening it with a T head bolt & flanged nut(M8)(10.). In cases where the ballast support rail does not lean on the rear support, it is fixed from the double side of the rail with the Xclamp apparatus(9.).
- 3) EasyClamp panel holders (6.) are mounted on the front (FS2)(4.) and rear supports (BS2)(5.). After the panels are placed on FS2(4.) and BS2(5.), panel assembly is completed by tightening the imbus bolt at the EasyClamps (6.) with a torque of 14-17 N.m.



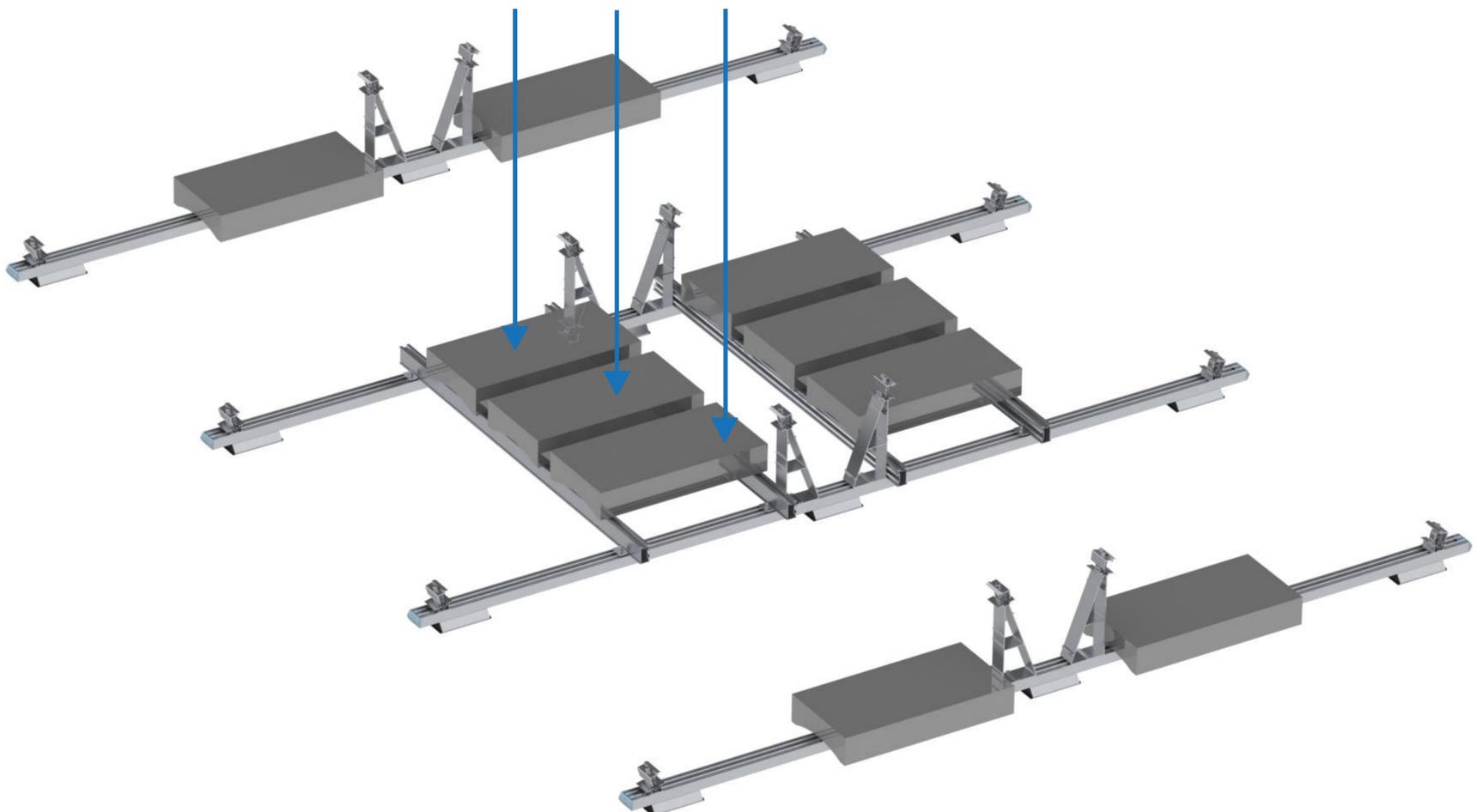
Fixing Options

1. Fixing with ballast

Ballast option (A)



Ballast option (B)





Fixing Options

1. Fixing with ballast

- 1) As a result of the calculations, the ballast fixing system may vary depending on the amount of weight required per panel.
- 2) Option A is used up to 50 kg per panel.
- 3) In option A, the ballasts are placed on the rails.
- 4) Option B is used when the required weight per panel is more than 50 kg.
- 5) Installation of option B is done by placing it on TFX rails(3.) fixed with X Clamp(9.).

Notes

A large rectangular area filled with a light gray grid pattern, intended for handwritten notes or technical drawings.

Thank you for choosing ISOTEC brand for your solar mounting system.

- 1) You can always contact us for suggestions, feedback and any questions about installation.
- 2) Web: www.isotec.com.tr
- 3) Mail: info@isotec.com.tr
- 4) Phone: +90 216 693 23 49