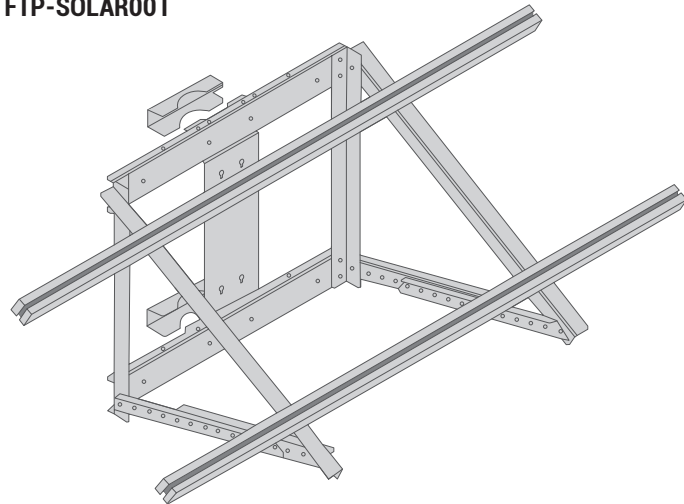


ADJUSTABLE GALVANISED SOLAR PANEL MOUNTING BRACKET

FTP-SOLAR001



FTP-SOLAR001 ASSEMBLY INSTRUCTIONS

This Installation Manual describes how to assemble and install the FTP-SOLAR001 Adjustable Solar Panel Mounting Bracket. The structure can either be installed on a pole or on a wall.

1 SPECIFICATIONS

- Supports installation up to two (2) solar panels.
- Mounting of up to two boxes under the solar panels, e.g. two FTP-3XX products or one FTP-3XX and an additional box.
- Can be mounted on poles with a diameter between 50 mm and 110 mm.
- Can be mounted on a wall.
- Supports tilting of the solar panels between 5 and 45 degrees.

2 TOOLS NEEDED

- | | |
|--------------------|-------------------------------|
| a. Spanners | b. Hex key (Allen key) |
| Two (2) 10 mm. | One (1) 6 mm. |
| Two (2) 13 mm. | |
| One (1) 17 mm. | |

3 INSTALLATION SEQUENCE

- Step 1:** Inventory of package.
Step 2: Assembly of Rear and Corner brackets.
Step 3: Installation of either one (1) or two (2) Assembly Brackets for the FTP-3XX.
Step 4: Assembly of Tilt and Carrier Brackets.
Step 5: Assembly of Solar Panel Profiles.
Step 6: Installation:
 A. On a Pole.
 B. On a Wall.
Step 7: Installation of Solar Panels.
Step 8: Installation of FTP-3XX.

Step 1: Inventory of package

Unpack the Small Solar Panel Mounting Structure and ensure the are included in the packaging. See **Figure 1** for reference:

- | | |
|---|---|
| A: Carrier Bracket , 2 pcs. | N: Hex Head bolts ,
M8 x 180 mm, 4 pcs. |
| B: Corner Bracket , 2 pcs. | O: Hex Head bolts ,
M10 x 25 mm, 4 pcs. |
| C: Rear Bracket , 2 pcs. | P: Washer , M10, 4 pcs. |
| D: Tilt Bracket , 4 pcs. | Q: M10 Self-locking nuts ,
4 pcs. |
| E: Assembly Bracket , 2 pcs. | R: Middle Clamps , H24, 2pcs. |
| F: Pole Bracket , 4 pcs. | S: End Clamps ,
PV-03-22, 4 pcs. |
| G: Solar Panel profile , 2 pcs. | |
| H: Hex Head bolts ,
M6 x 16 mm, 16 pcs. | |
| I: Washers , M6, 32 pcs. | |
| J: M6 Self-locking nuts ,
16 pcs. | |
| K: Hex Head bolts ,
M8 x 20 mm, 18 pcs. | |
| L: Washer , M8, 44 pcs. | |
| M: M8 Self-locking nuts ,
22 pcs. | |
- The packaging contains:**
- Four bags with 6 mm bolts, 8 mm bolts, 8 mm long bolts, 10 mm bolts, nuts and washers respectively.
 - Three bags of panel fasteners.

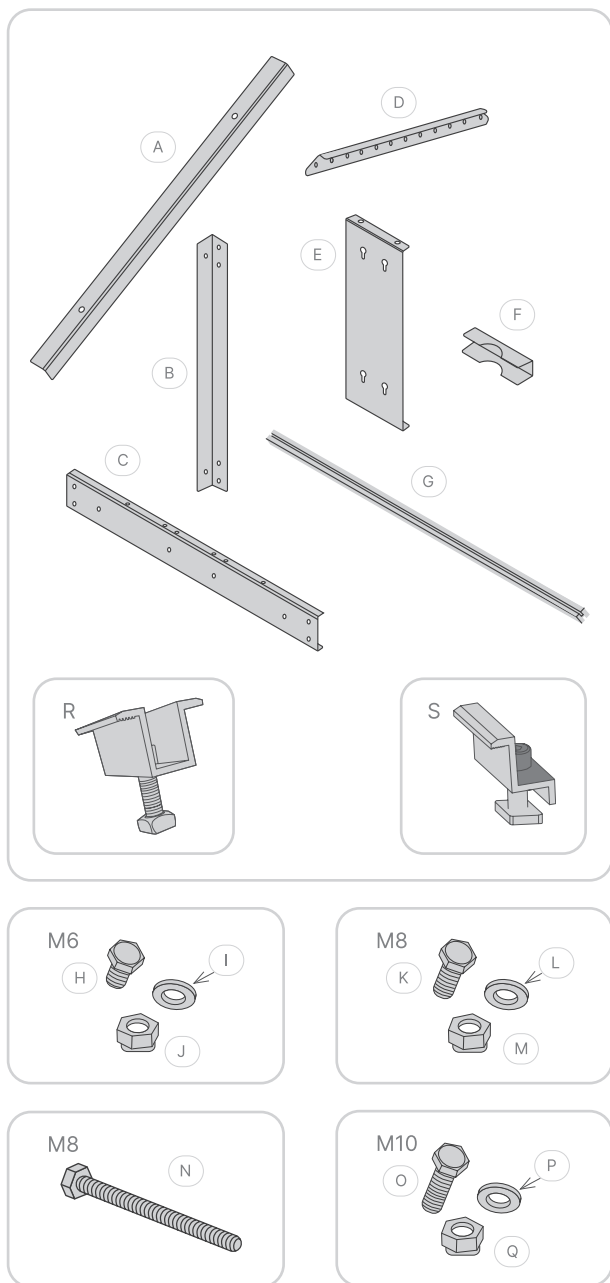


Figure 1. Mechanical parts.

Step 2: Assembly of Rear and Corner Brackets

Assemble the **Corner (B)** and **Rear (C)** assembly as shown in **Figure 2** using (K), (L), and (M) as illustrated in **Step 1 Inventory of package**.

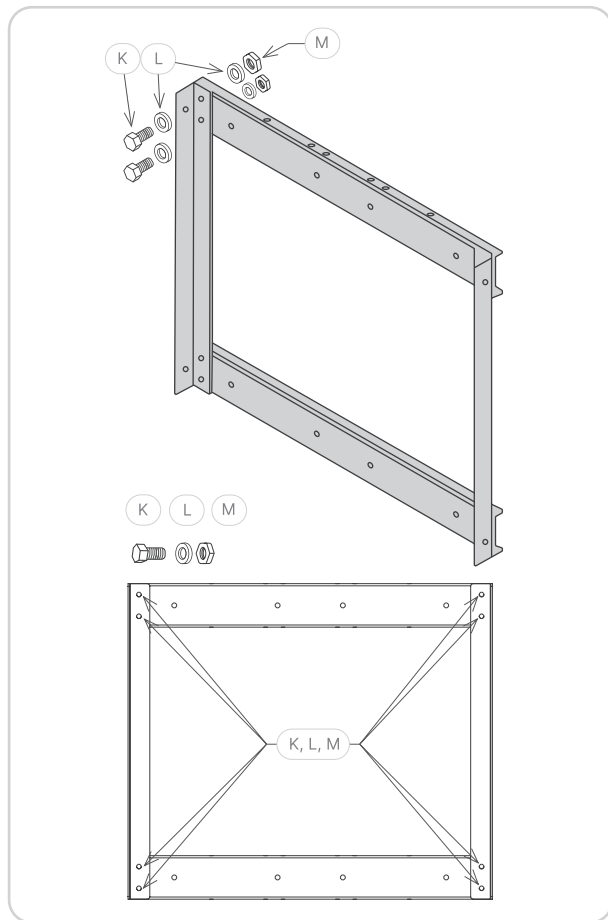


Figure 2. Corner and rear bracket assembly.

Step 3: Installation of one (1) or two (2) Assembly Brackets

The FTP-SOLAR001 solar mounting structure supports installation of either one (1) FTP-3XX or an FTP-3XX and an additional box of customer equipment.

a. Single FTP-3XX support

Take care to orient the **Assembly Bracket (E)** the right way to ease the mounting of the boxes:

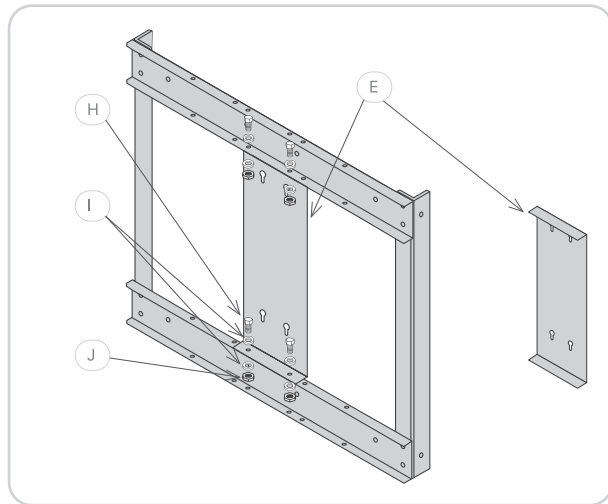


Figure 3. Installation of assay bracket for single FTP-3XX.

b. FTP-3XX and customer box support

Assemble the **Assembly Bracket (E)** as shown in **Figure 4** using (H), (I), and (J):

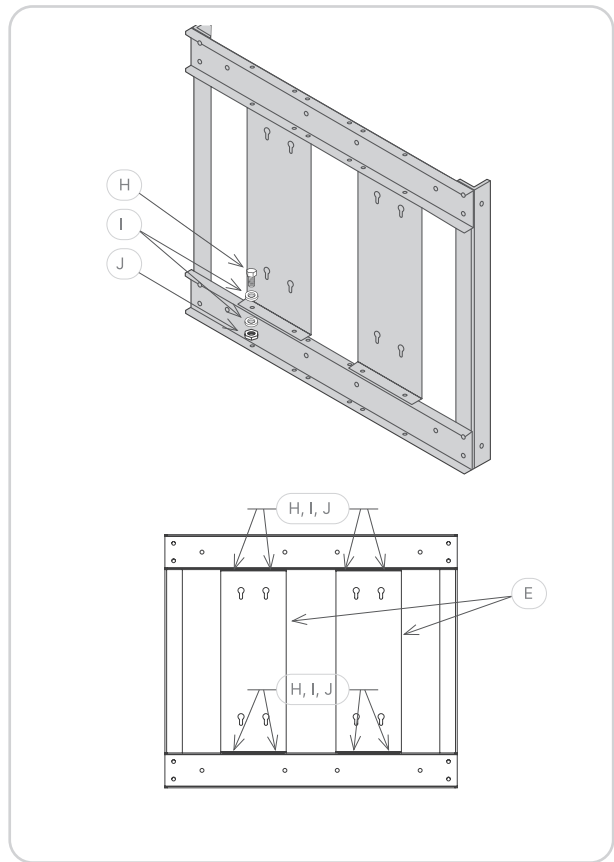


Figure 4. Installation of Assy Bracket for FTP-3XX and customer box.

Step 4: Assembly of Tilt Carrier Brackets

Assemble the **Carrier Bracket (A)** and **Tilt Brackets (D)** as shown in **Figure 5** using (K), (L), and (M):

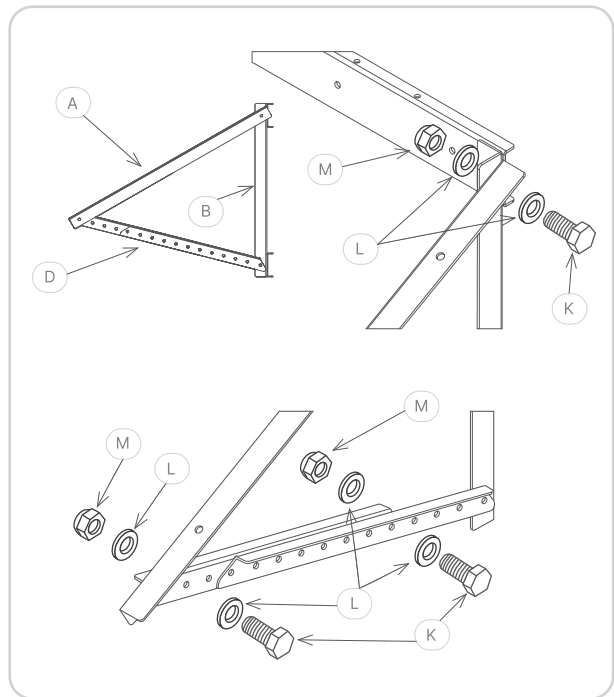


Figure 5. Installation of Carrier and Tilt Bracket.

The appropriate tilt of the **Solar Panels Profile (G)** is set by having a number of free holes between the bolts assembling the **two Tilt Brackets (D)**.

Table 1 below provides the number of “free” holes between the two (2) bolts to obtain the appropriate tilt.

Tilt	Free holes between bolts
5 degrees	One (1)
10 degrees	Two (2)
15 degrees	Three (3)
20 degrees	Four (4)
25 degrees	Five (5)
30 degrees	Six (6)
35 degrees	Seven (7)
40 degrees	Eight (8)
45 degrees	Nine (9)

Table 1. Setting the Tilt of the Solar Panels.

Step 5: Assembly of Solar Panel Profiles

Install the Solar Panel Profile (G) using (O), (P), and (Q), refer to Figure 6.

Slide (O) into the solar panel and place each Solar Panel Profile (G) so it's over the holes in the Carrier Bracket (A). Ensure the Solar Profiles (G) are properly centred on the frame, then fasten (O) with (P), and (Q) under the Carrier Brackets (A).

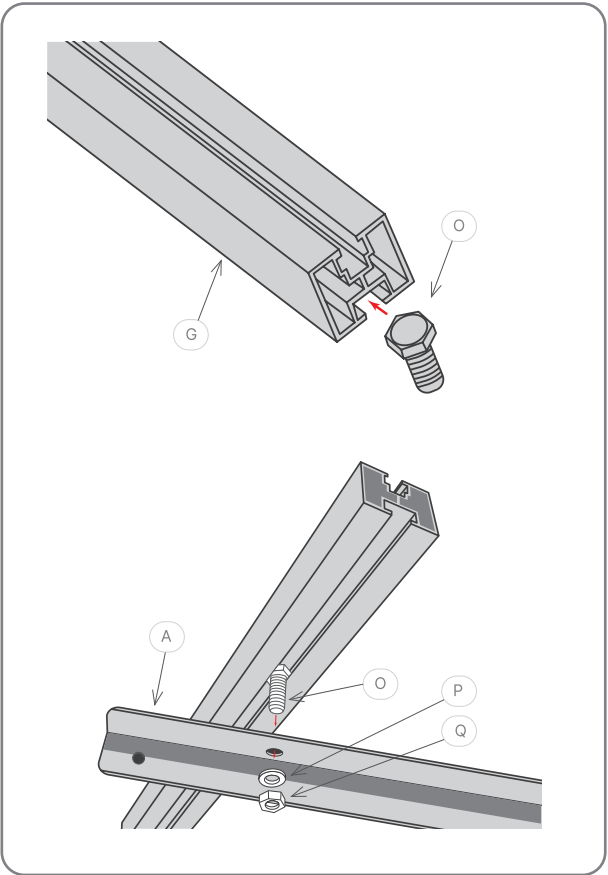


Figure 6. Installation of Carrier and Tilt Bracket.

Step 6: Installation

a. For installation on a Pole, refer to Figure 7. Slide the M8 x 180 mm Hex Head Bolt (N) through the holes on the Carrier Bracket (A) and the Pole Brackets (F). Place the structure against a pole and place a second Pole Bracket (F) on the other side of the pole with (L) and (M).

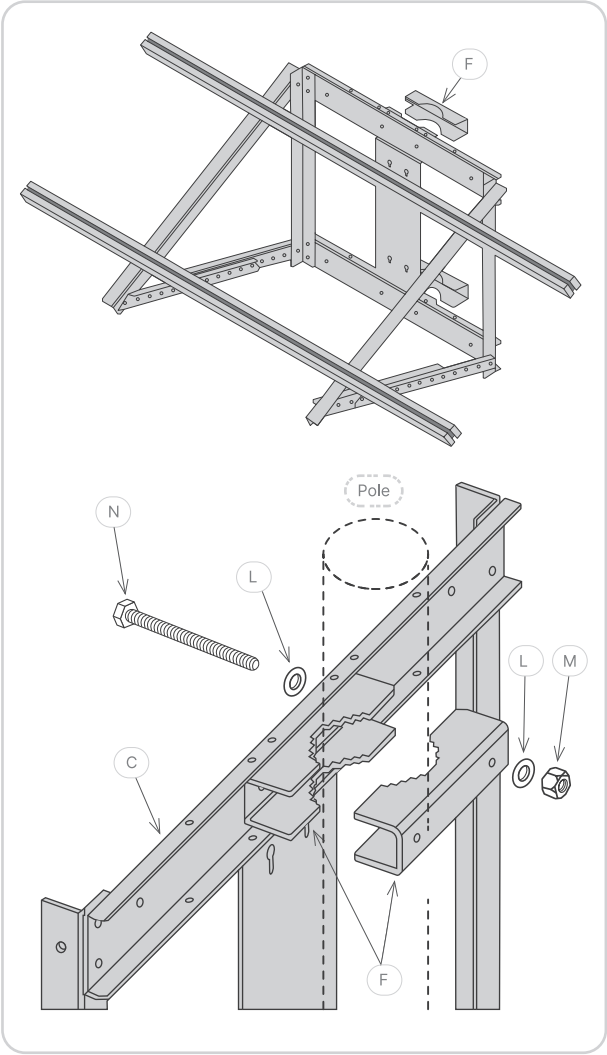


Figure 7. Installation on a pole.

b. For installation on a Wall, refer to Figure 8. Use appropriate *Bolts or *Screws with a maximum diameter of 8 mm. * these are not included in the package.

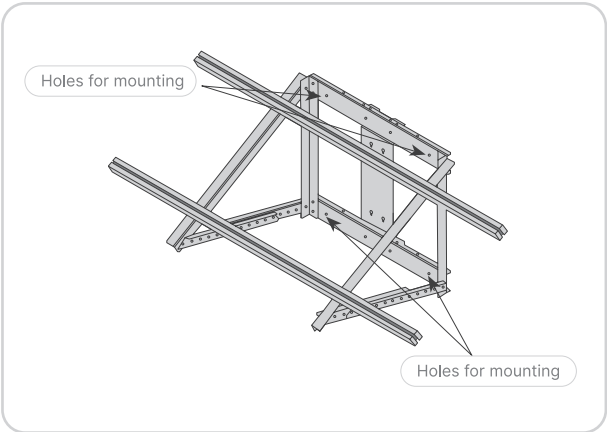


Figure 8. Installation on a wall.

Step 7: Installation of solar panels

For installation of solar panels, use (R) and (S) as referred in the Inventory of package, Figure 1.

a. Installation of Carrier and Tilt Bracket, refer to Figure 9:

1. Attach the Middle Clamp (R) to the middle of the Solar Profiles (G) and tighten lightly.
2. Place the first solar panel on the Solar Panel Profile (G) so that the Middle Clamps (R) holds one side of the solar panel and slide two (2) of the End Clamp (S) into the solar profile and fasten the end clamps.
3. Place the second solar panel on the Solar Panel Profile (G) and push it towards the Middle Clamp (R), so that the Middle Clamp holds the solar panel.
4. Slide the two End Clamp (S) into the Solar Profile (G) and fasten the End Clamp (S).
5. Tighten the Middle Clamp (R).

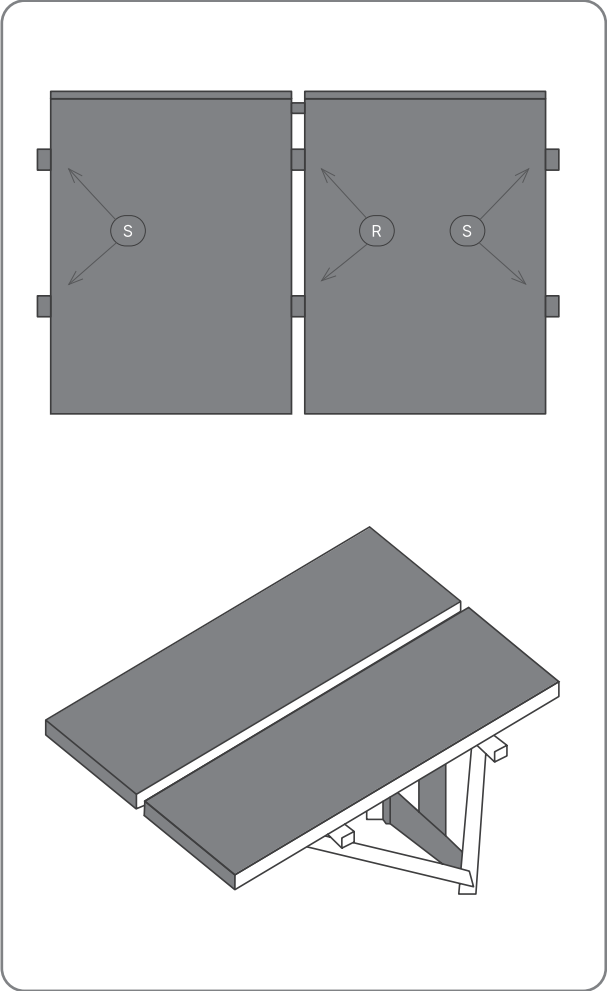


Figure 9. Installation of Carrier and Tilt Bracket.

Step 8: Installation of FTP-3XX

For installation of a product in the FTP-3XX series, refer to Figure 10 and Figure 11.

1. Assemble (H), (I) and (J) according to Figure 10. Tighten (J) loosely.
2. Install the FTP-3XX in the keyholes on the Assembly Bracket (E) according to Figure 11.
3. Tighten (J).
4. Unit is ready for installation of solar cables.

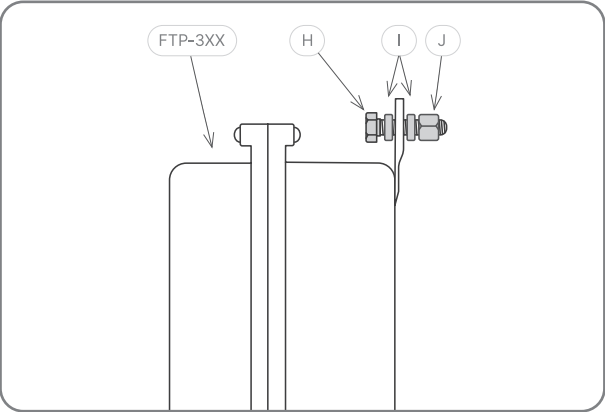


Figure 10.

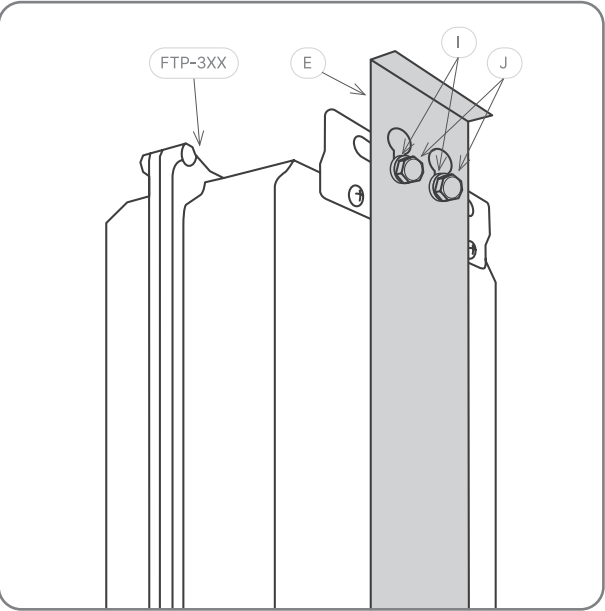


Figure 11.



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