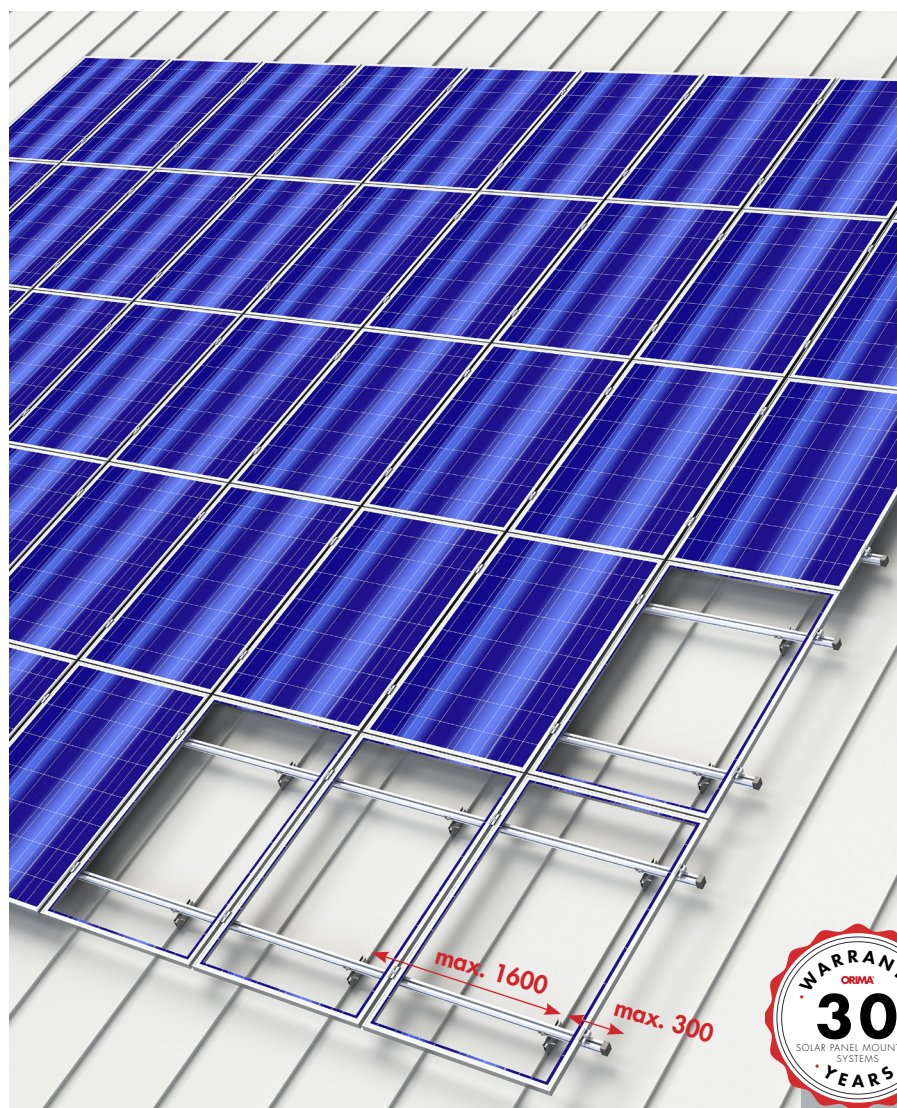


# DELTA FOR PITCHED ROOFS

## INSTALLATION GUIDE

# ORIMA®

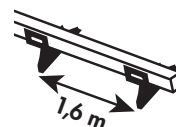
Nordic solar partner



One-person assembly



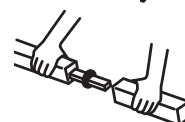
The longest distance between fasteners on the market.



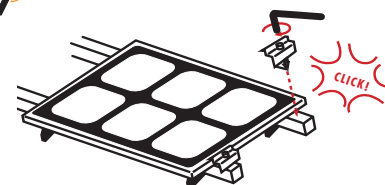
Safety and quick profile fastening



Easy and quick profile extension.



Easy Rail Quick Clamps



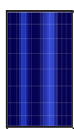
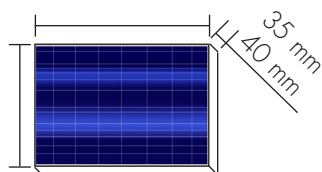
## POSITIONING

We recommend to install the panels as close as possible to the roof ridge.

Neither the solar panels nor the panel racks are designed to act as snow guards. It's recommended to install the snow guards above the panels to prevent the snow retention against the panels if the distance between the uppermost panel row and the roof ridge is more than one meter.

Notice the greater wind load near the roof edges. It's recommended to install the panels as center as possible the roof.

**Suitable panel thickness 35 mm or 40 mm.** Panel size may vary and the panel orientation can be both vertical and horizontal.



**The maximum distance between the roof fasteners is 1600 mm.**

The Easy Rail system is tested against the basic snow loads. We recommend to reduce the spacing of the roof fasteners from 1600 mm on areas with very heavy snow loads. .

## TOOLS

Screwdriver



Hex Key 6



Socket wrench



AV 10 7

AV 13 8

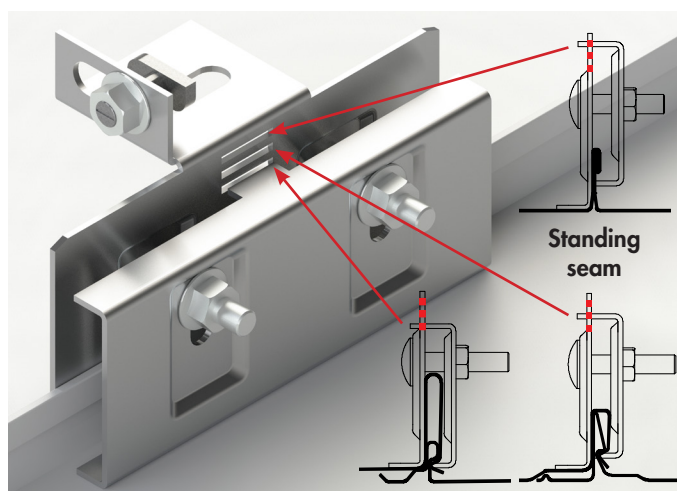
## 1. ROOF FASTENERS

The maximum spacing of the roof fasteners is 1600 mm. Choose the roof fastener type to match the roofing material.

### SEAM METAL ROOF (standing seam, lock seam)

#### Easy Rail Bracket Set Seam Roof 36880 (fastener 36840)

Tighten the bolts of the fastener until the apparent elastic limit, i.e. until the sides of the fastener have come closer to each other but have not become dented or twisted. Seam height max. 40 mm.

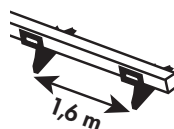
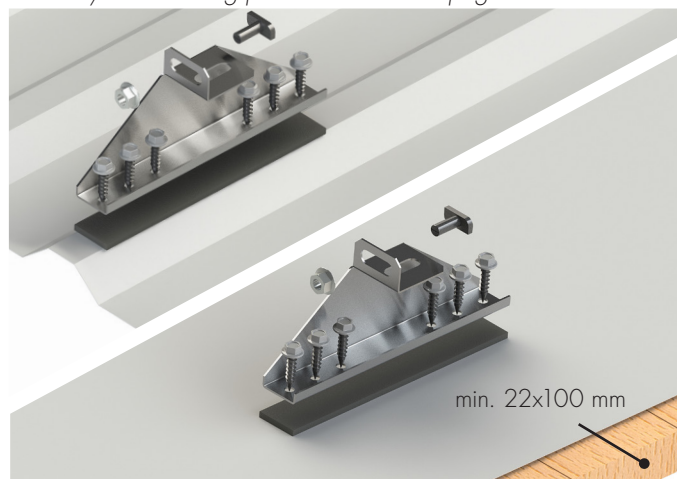


### BITUMEN AND PROFILED SHEET ROOF

#### Easy Rail Bracket Set Bitumen/Profile Sheet Roof 36870 (fastener 38020)

Profile sheet: The roof fastener may be fastened directly onto the metal sheet, the location of the roof's battens is not significant. While tightening the screws, be careful not to overtighten the screws.

Bitumen roof: The condition of the roof deck boarding must be verified. *Alternative fastening to the bitumen roof: Solar UP plate and Easy Rail mounting profile fastener. See page 4.*

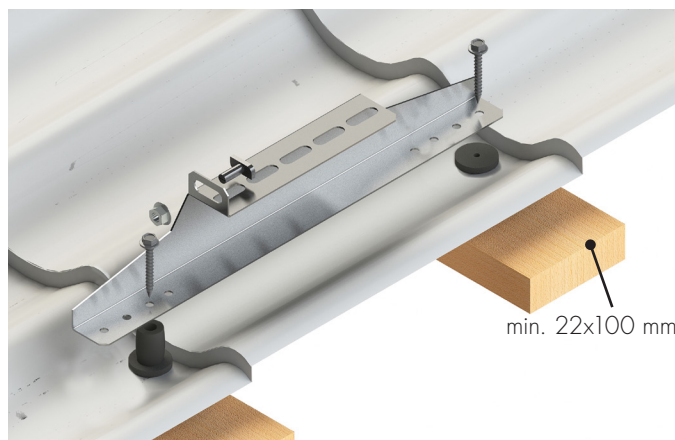


AV 10  AV 13 

### TILE PATTERNED SHEET METAL ROOF

#### Easy Rail Bracket Set Tile Sheet 36860 (fastener 38010)

The condition of the battens must be verified.



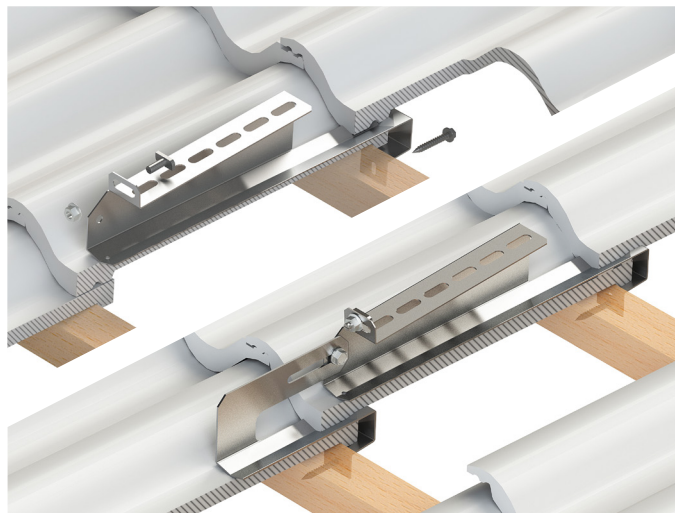
### TILE ROOF

#### Easy Rail Bracket Set for Tile Roof 36890 (fastener 38030)

Fasten to the tile batten. Some tile types may require notching of the upper tile to provide proper fitting.

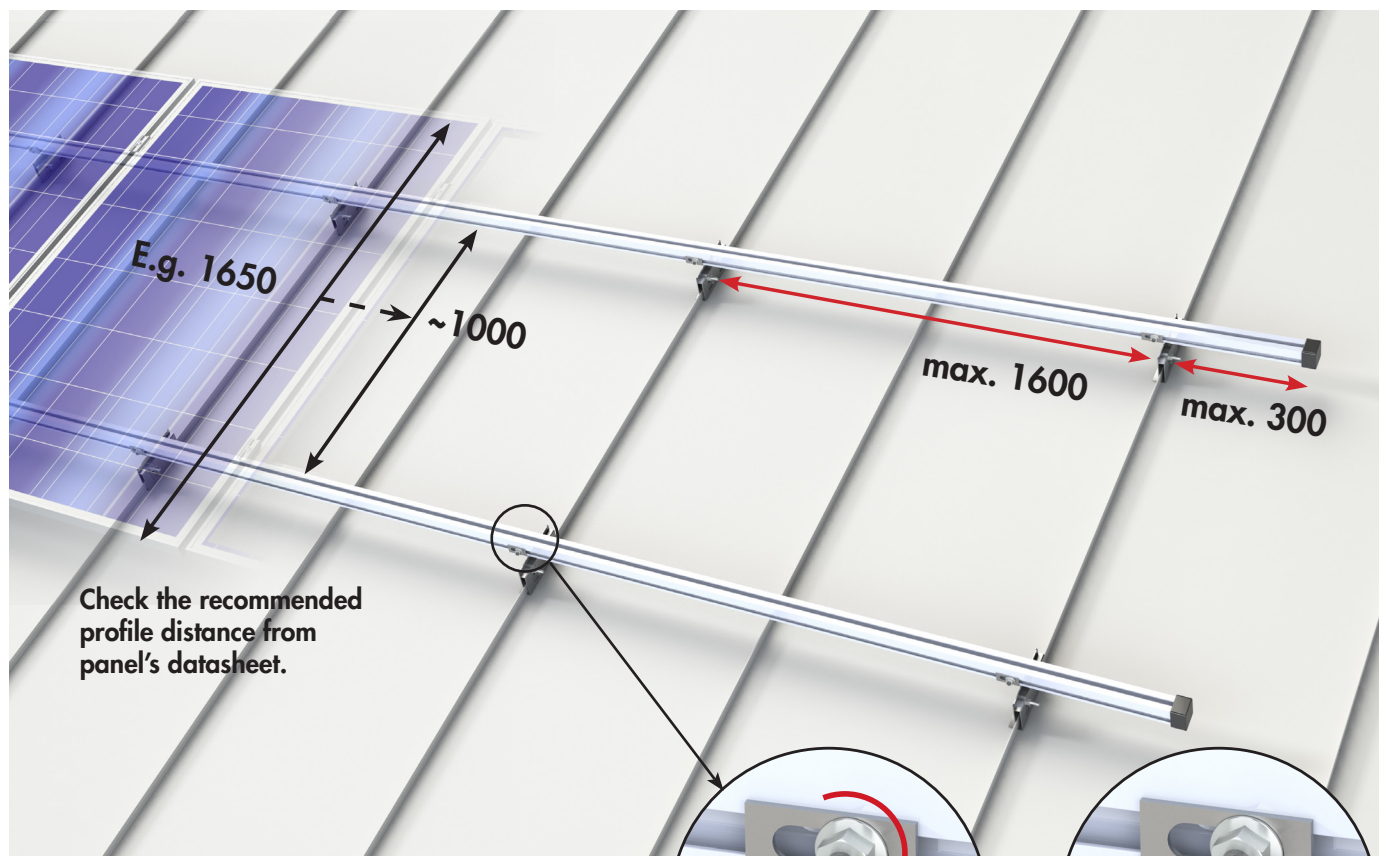
#### Easy Rail Front Bracket 36250, Screw 7x50 17271, Flange Bolt M8x20 17285, Flange Nut M8 17201

The usage of the front bracket is recommended on windy terrains e.g. at seaside or high buildings.





## 2. MOUNTING PROFILE

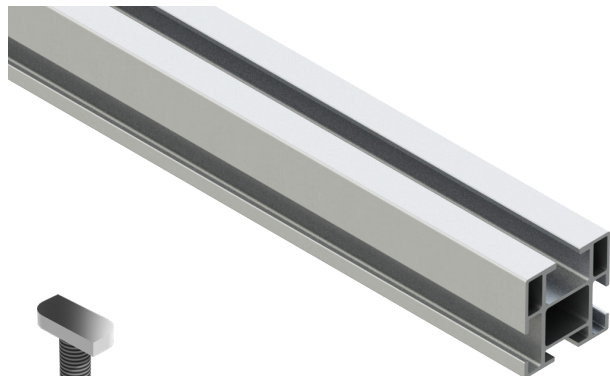


**Easy Rail Mounting Profile 3,1 m 36600**

**Easy Rail Mounting Profile 6,2 m 36480**


Each mounting profile must be fastened with at least two roof fasteners.

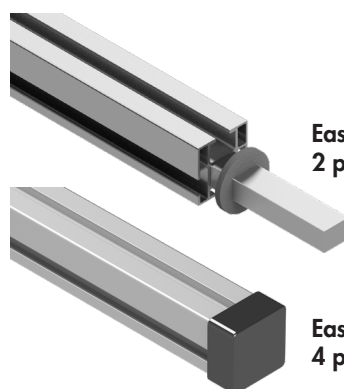
Notice the thermal expansion: The recommended maximum length of the one profile line is 15 meters.



**Easy Rail T-Bolt 100 pc. 36900**

**Easy Rail Flange Nut 100 pc. 36910**

AV 13 



**Easy Rail Profile Extension set,  
2 pc. 36750**

**Easy Rail Profile End Cap set,  
4 pc. 36720**

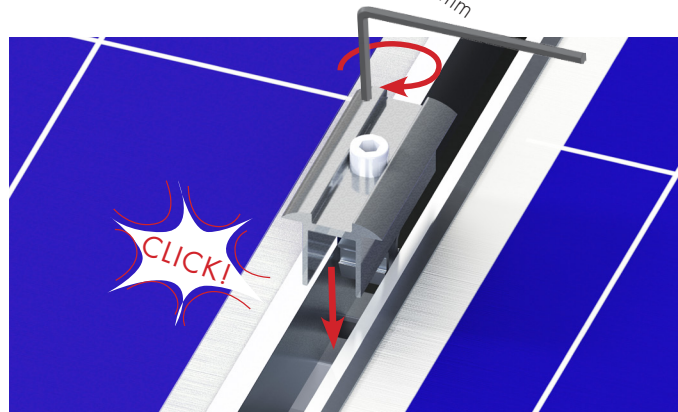
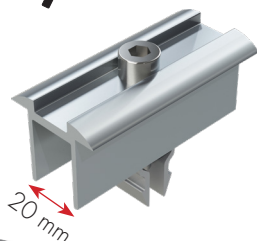
### 3. PANEL FASTENING WITH Easy Rail CLAMPS



#### Easy Rail Middle Clamp Set

35 mm 10 pc. 36540  
black 3654033

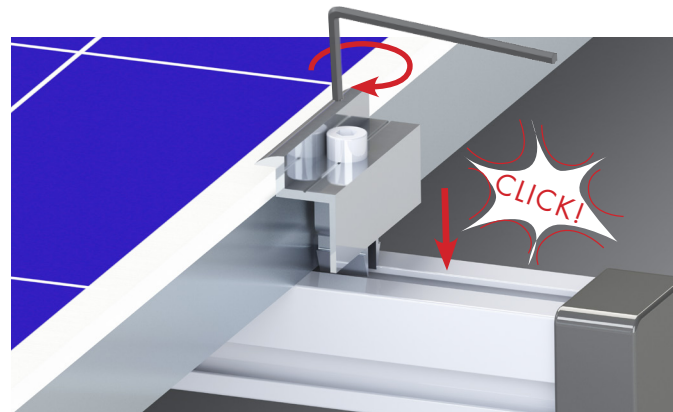
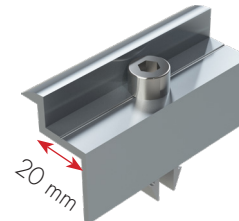
40 mm 10 pc. 36780  
black 3678033



#### Easy Rail End Clamp Set

35 mm 8 pc. 36530  
black 3653033

40 mm 8 pc. 36770  
black 3677033



### 4. EASY RAIL PROFILE FASTENER WITH UP ON THE BITUMEN ROOF

Non penetrating installation.

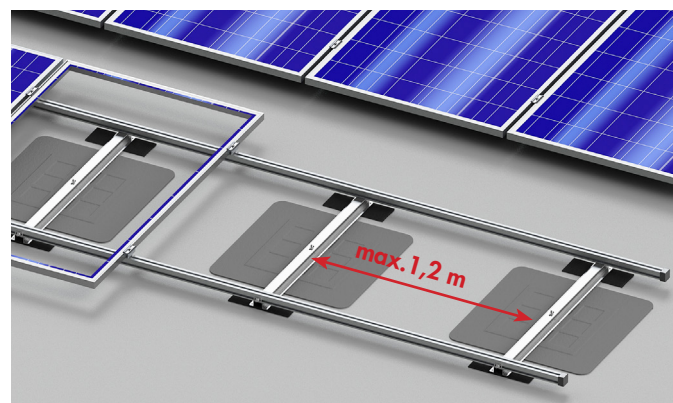
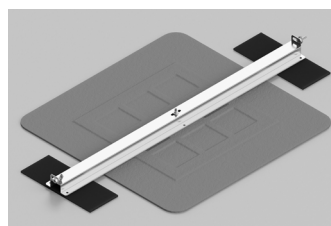
Easy Rail Mounting Profile Fastener Set  
for UP Plate 38230

UP Plate 36300

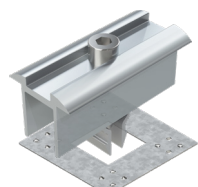
UP SBS Mat 36390

UP Bolt Set, 10 pc. 36310

Installation guide:  
Solar UP - Universal Platform

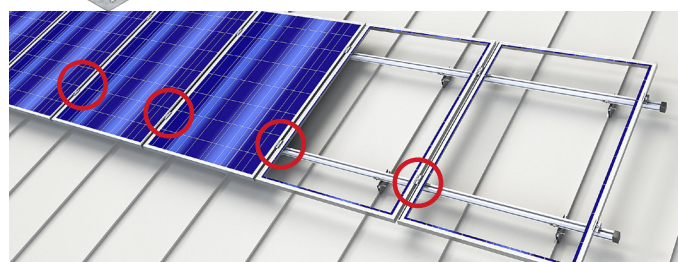


### 5. ACCESSORIES



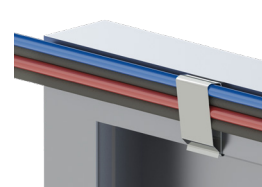
#### Grounding washer 50 pc. 36760

Use to ensure the continuity of grounding.  
Install the grounding washer under one  
middle clamp.



#### Cable Holder 50 pc 36550

Fasten to the panel frame.  
Max. 4 cables.



#### Positioning Pin 40 pc. 36470

Makes the fastening  
of the panels easier.  
Fasten the pins to the  
panel frames on the  
rear side. Panel can  
be hanged on the upper profile while  
fastening the panel clamps.

