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## FATH Solar



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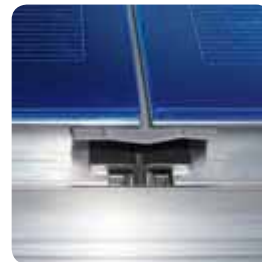
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## Components, Mounting Systems, In-roof PV Solutions

**FATH Solar** is the newest branch of the **FATH Group** and is situated in Spalt / Mittelfranken. We successfully develop and manufacture standard leveling, fitting and connection components as well as accessories for aluminum profile systems. Beyond that, we provide customers with tailor-made assembly components manufactured in metal and plastics. This is how we found our way to solar technology.

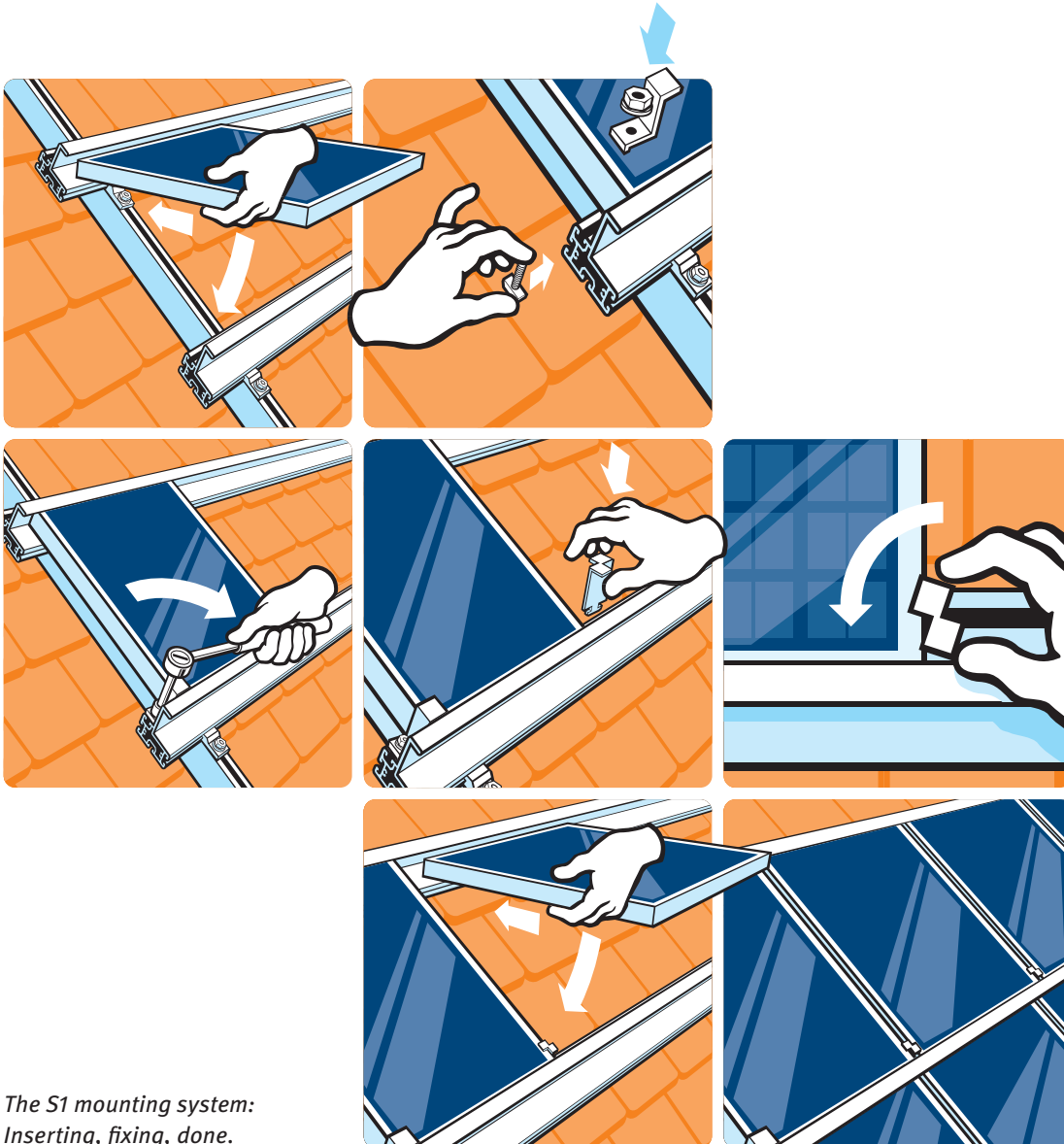


Our engineers are experts with all requirements of assembly systems for PV plants. Here, we could build on the knowledge we gained from the module production and our competencies as a components manufacturer. The result are innovative and visually appealing solutions for in-roof and on-roof fixations of PV modules. Particularly our in-roof solution (S2 plus) meets highest technical and aesthetic demands.



## S1: Half as Complex and Twice as Safe

The **on-roof mounting system S1** can be described with this simple formula.  
While others are still putting in the screws, with S1 you have already safely mounted your PV modules – complete, clean and with minimum effort.  
A sophisticated system of few custom-made parts makes it possible.  
S1 is compatible with Schott modules, for instance. You may take a closer look...



*The S1 mounting system:  
Inserting, fixing, done.*

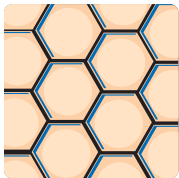
## S1: Pivotal Advantage for all Standard Framed Modules

Compared to conventional installation systems, our S1 mounting system has many advantages. See them listed below:



### Fast

- + considerably less screw joints
- + the patented turning system simplifies the assembly and decreases the assembly time



### Efficient

- + clearance between the modules: approximately 2 mm
- + the amount of area is used most efficiently, production increases



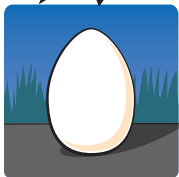
### Safe

- + no spot-strain on the modules at all
- + assembly mistakes are avoided



### Reliable

- + »Made in Germany«
- + certification pending



### Simple

- + approximately 50% less mounting elements
- + easier handling and lower expenses



### Easy

- + only a single tool is required for the assembly
- + even faster and more efficient labor

## S1: The Profiles

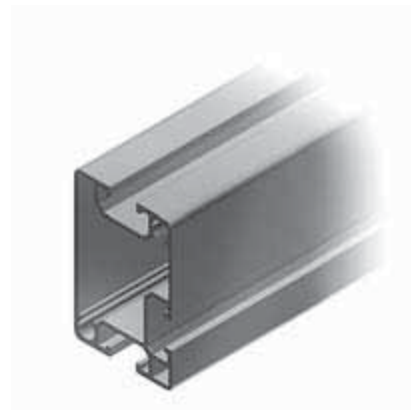
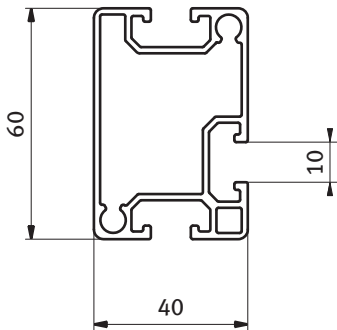
Profiles for framed PV modules, frame height 50 mm

**Description** Cross-network installation as insertion system, for instance on pitched and flat roofs or outdoor constructions; patented system

**Material** Aluminum AW 6063

**Surface** Plain

**Pack Quantity** 10 x 6000 mm



Fixation

Weight [kg / m]

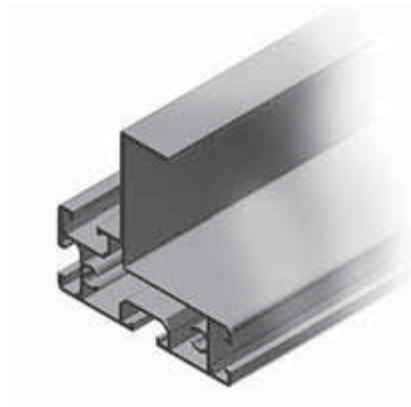
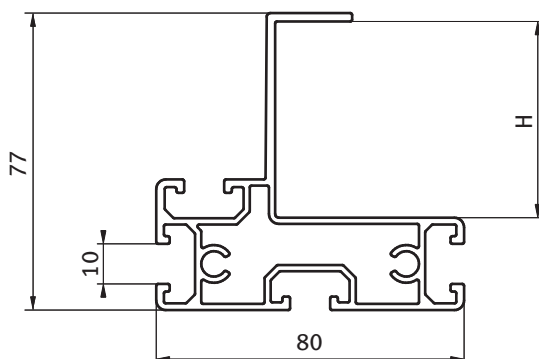
Part N°

GP Basic Profile

depending on substructure

1.31

110013



Height H [mm]

Fixation

Weight [kg / m]

Part N°

TP Carrier Profile S150

50

with clamping bracket\*

1.93

110016

\*see page 8

## S1: Application of the Profiles

The basic profile is attached with fasteners (e.g. roof hooks) suitable for each installation variation. The carrier profile is attached 90° shifted to the basic profile.

Per junction the following attachments are required:

**2 Clamping brackets**

**2 Hammer screws M8**

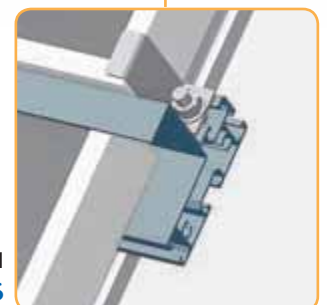
**2 Flange nuts M8**

(see Accessories for S1 Mounting System on page 8)

S1



GP Basic profile  
**110013**



TP Carrier profile S1  
**110016**

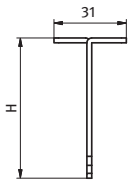
## S1: The Accessories

**Description** Components for mounting of the basic and carrier profile and of the PV modules with 50 mm frame height

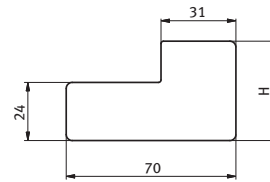
S1 Mounting System	Material	Height H [mm]	Weight [g]	Part N°
S1 T-Fix 50	Stainless steel SS 304	54	42.0	<a href="#">110094</a>
S1 L-Fix 50	Stainless steel SS 304	54	50.5	<a href="#">110095</a>
S1 Side-stop left 50	Stainless steel SS 304	88	100.0	<a href="#">110097</a>
S1 Side-stop right 50	Stainless steel SS 304	88	100.0	<a href="#">110098</a>
S1 Cover cap left TP 50	Nylon	41	10.0	<a href="#">110108 *</a>
S1 Cover cap right TP 50	Nylon	41	10.0	<a href="#">110109 *</a>
Cover cap GP	Nylon		11.0	<a href="#">110030*</a>
Clamping bracket	Aluminum AW 6063		7.0	<a href="#">110096</a>
Hammer screw M8	Stainless steel SS 304		13.0	<a href="#">103039</a>
Flange nut M8	Stainless steel SS 304		7.0	<a href="#">110145</a>
Self-forming screw S7 x 25	Nickel plated steel		12.2	<a href="#">110259</a>
Flanged hex screw M8 x 25	Stainless steel		13.6	<a href="#">110148</a>

\*Minimum order quantity 5,000 pieces

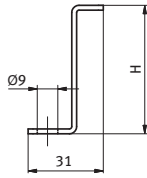
[110094](#)



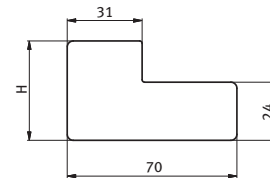
[110108](#)



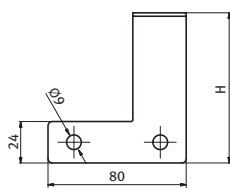
[110095](#)



[110109](#)



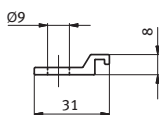
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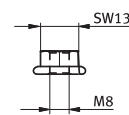
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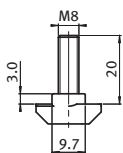
[110096](#)



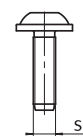
[110145](#)



[103039](#)



[110259](#)



## S1: Application of the Accessory Parts

The border modules can be installed in two different ways: for a flush finish of the carrier profiles, side lays are to be used; L-fix pieces for overlaying profile ends.

The following is required in order to mount the first solar module of a row:

- |                          |    |   |
|--------------------------|----|---|
| <b>1 L-Fix</b>           | or | <b>1 Side-stop left / right</b>                       |
| <b>1 Hammer screw M8</b> |    | <b>2 Self-forming screws S7 x 25 or screw M8 x 25</b> |
| <b>1 Flange nut M8</b>   |    |   |

Beginning with the second PV module, you will need in each case:

**1 T-Fix**

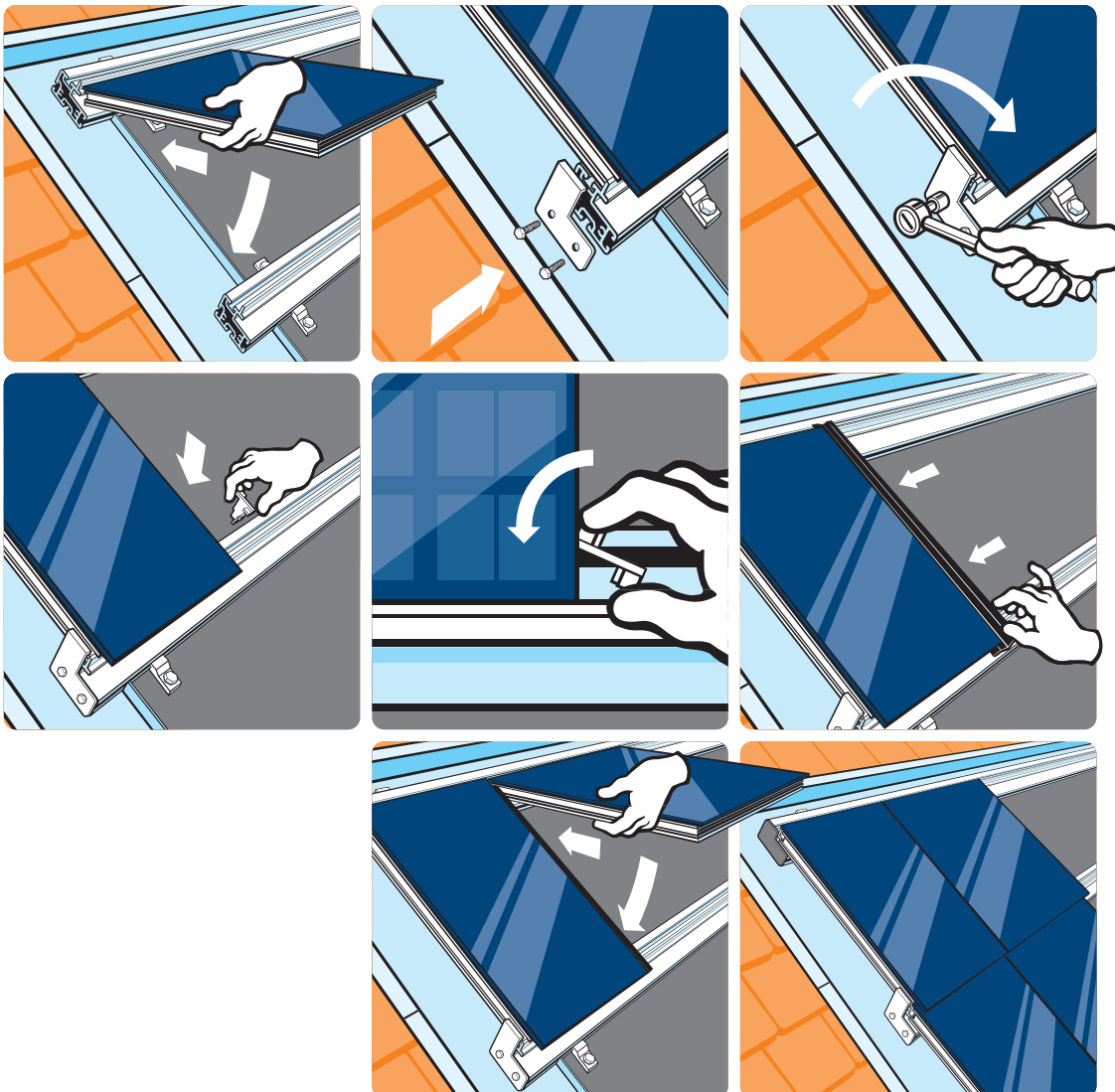
The last module in the row is attached with:

- |                          |    |   |
|--------------------------|----|---|
| <b>1 T-Fix</b>           | or | <b>1 T-Fix</b>  |
| <b>1 L-Fix</b>           |    | <b>1 Side-stop left / right</b>                       |
| <b>1 Hammer screw M8</b> |    | <b>2 Self-forming screws S7 x 25 or screw M8 x 25</b> |
| <b>1 Flange nut M8</b>   |    |   |



## S2: Simple, Nice, Efficient

We are ending compromises and, in cooperation with a well-known partner, have developed a highly integrated system of **frameless modules** and **fasteners** that is perfect for **in-roof installation**.  
Not only it's simple and fast, it looks ingenious, too!



## S2: The Integrated System for Smooth Running



### Integrated

- + perfectly appropriate as in-roof and on-roof installation
- + newly developed, frameless modules with certified bonding technology



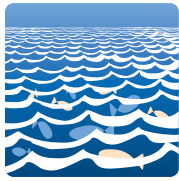
### Fast

- + considerably less screw joints
- + the patented turning system simplifies the assembly and decreases the assembly time



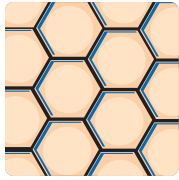
### Nice

- + seamless integration of the modules into the roof area
- + this results in completely new possibilities for constructors and architects



### Clean

- + optimum run-off of water, snow and dirt
- + in the long run, the effectiveness increases drastically, the maintenance effort decreases



### Efficient

- + with this system, the clearance between the panels is close to zero
- + for even more surface area, even better efficiency and even more production per square meter



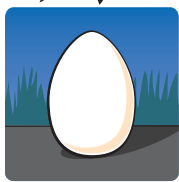
### Safe

- + no spot-strain on the modules at all
- + assembly mistakes are avoided



### Reliable

- + »Made in Germany«
- + certification pending



### Simple

- + approximately 50% less mounting elements
- + easier handling and lower expenses



### Easy

- + only a single tool is required for the assembly
- + even faster and more efficient labor

## S2: The Profiles

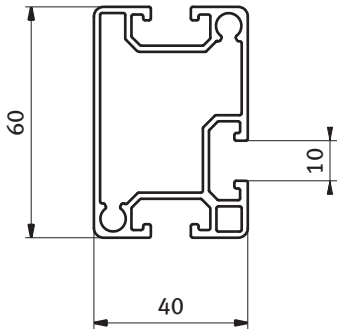
For frameless modules; on-roof and in-roof installation

**Description** Fastening system for framed or completely frameless modules (S2 plus); **appropriate for in-roof installation** with only a few additional components; patented system

**Material** Aluminum AW 6063

**Surface** Plain

**Pack Quantity** 10 x 6000 mm



Fixation

Weight [kg / m]

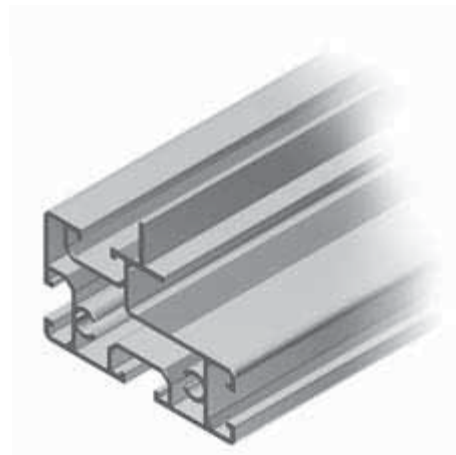
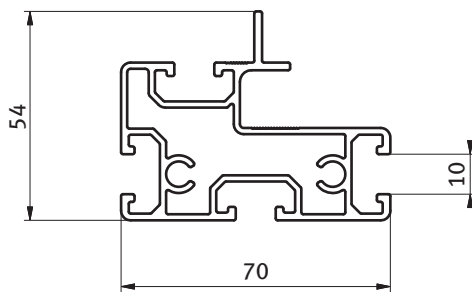
Part N°

GP Basic Profile

depending on substructure

1.31

110013



Fixation

Weight [kg / m]

Part N°

TP Carrier Profile S2

with clamping bracket\*

1.67

110015

\*see page 14

## S2: Application of the Profiles

The basic profile is installed on the embedded profiles with attachments (i.e. roof hooks). In many cases, only the carrier profile is required. Please consult us for advice. The carrier profile is positioned 90° on the basic profile or mounted on the load-carrying construction parts directly.

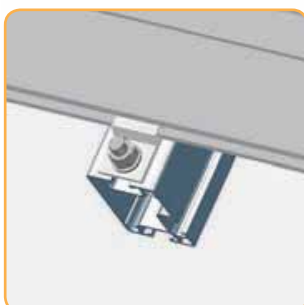
At each fixing point, the following is required:

- 2 Clamping brackets**
- 2 Hammer screws**
- 2 Flange nuts M8**

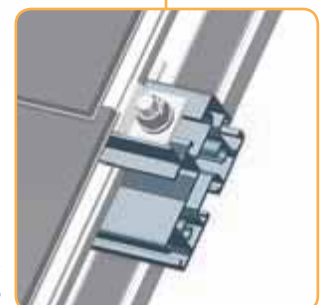
In the event of direct mounting:

- 2 Clamping brackets**
- Suitable screws**

*S2 plus:  
Concealed fixation and  
frameless modules  
for perfect appearance  
and efficiency*



GP Basic profile  
**110013**



TP Carrier profile S2  
**110015**

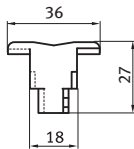
## S2: The Accessories

**Description** Construction parts to attach the basic and carrier profiles, as well as the specially designed PV modules

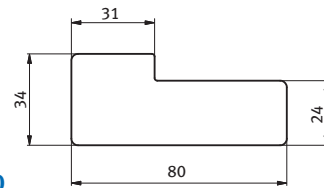
S2 Mounting System	Material	Weight [g]	Part N°
S2 T-Fix	Stainless steel SS 304	24.0	<a href="#">110027</a>
S2 Side-stop left	Stainless steel SS 304	42.0	<a href="#">110099</a>
S2 Side-stop right	Stainless steel SS 304	42.0	<a href="#">110100</a>
Clamping bracket	Aluminum AW 6063	7.0	<a href="#">110096</a>
Hammer screw M8	Stainless steel SS 304	13.0	<a href="#">103039</a>
Flange nut M8	Stainless steel SS 304	7.0	<a href="#">110145</a>
Self-forming screw S7 x 25	Nickel plated steel	12.2	<a href="#">110259</a>
Flanged hex screw M8 x 25	Stainless steel	13.6	<a href="#">110148</a>
S2 Gaskets	EPDM	80.0 / m	<a href="#">112684</a>
S2 plus Gaskets	EPDM	60.0 / m	<a href="#">110034</a>
S2 Drain profile	EPDM	20.0 / m	<a href="#">112685</a>
S2 plus Drain profile	EPDM	15.0 / m	<a href="#">110035</a>
Cover cap GP	Nylon	11.0	<a href="#">110030*</a>
TP S2 / S2 plus Cover cap left	Nylon	10.0	<a href="#">110110*</a>
TP S2 / S2 plus Cover cap right	Nylon	10.0	<a href="#">110111*</a>

\*Minimum order quantity 5,000 pieces

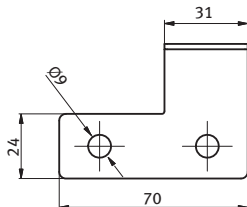
[110027](#)



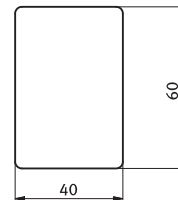
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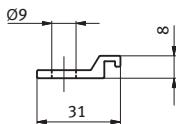
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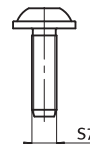
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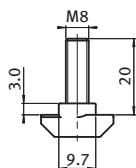
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[110259](#)



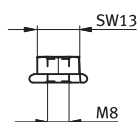
[103039](#)



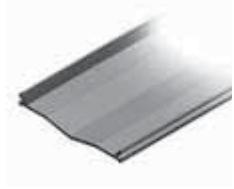
[110034](#)



[110145](#)



[110035](#)



## S2: Application of the Accessory Parts

The border modules can be installed in two different ways: for a flush finish of the carrier profiles, side-stops are to be used; clamping brackets for overlaying profile ends.

For on-roof installation, the following is required in order to mount the first solar module of a row:

<b>1 Clamping bracket</b>	or	<b>1 Side-stop left / right S2</b>
<b>1 Hammer screw</b>		<b>2 Self-forming screws S7 x 25</b>
<b>1 Flange nut M8</b>		<b>or Screw M8 x 25</b>

Beginning with the second module, you will need:

**1 T-Fix S2**

The last module is mounted with:

<b>1 T-Fix S2</b>	or	<b>1 T-Fix S2 50</b>
<b>1 Clamping bracket</b>		<b>1 Side-stop left / right S2</b>
<b>1 Hammer screw</b>		<b>2 Self-forming screws S7 x 2</b>
<b>1 Flange nut M8</b>		<b>or Screw M8 x 25</b>

For in-roof installation, gaskets are required in module-length between the parallel modules of a row, and the drain profile is required in module-width, horizontally, between the modules installed above each other.



S2

## Framed PV Modules FS 230 AP S2 to FS 205 AP S2

<b>Description</b>	High performance module for in-roof and on-roof installation; lamination framed with a narrow aluminum profile, frame masked
<b>Dimensions</b>	(L x W x H) 1680 mm x 990 mm x 50 mm
<b>Weight</b>	17 kg
<b>Cell type</b>	Polycrystalline
<b>Cell embedding</b>	EVA (Ethylen Vinyl Acetate)
<b>Actual power output</b>	230 Wp ±5%
<b>Performance guarantee</b>	80% for 20 years
<b>Frame material</b>	Aluminum

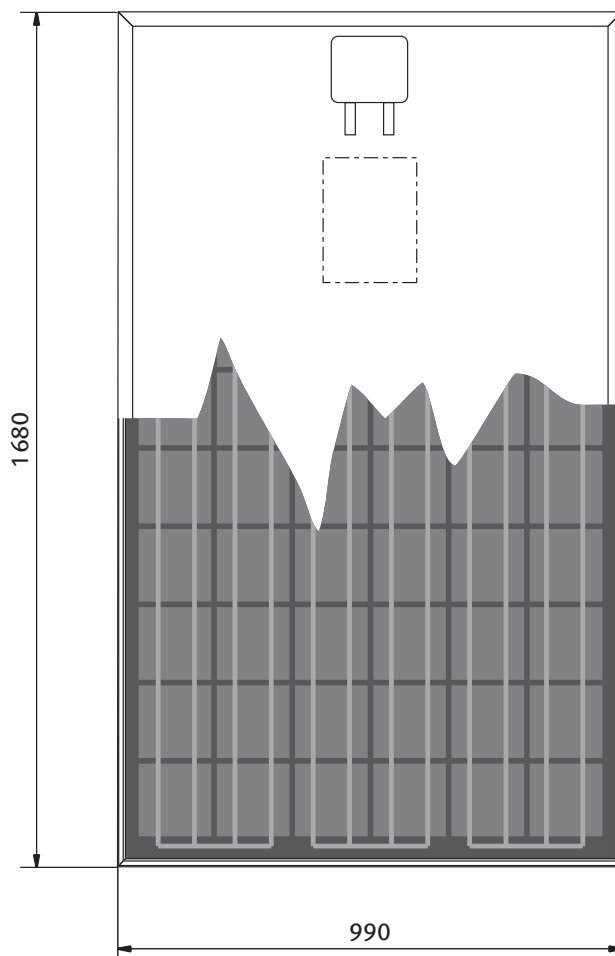
For the framed PV modules FS 230 S2, **FATH Solar** selects the respectively best laminations of well-known cooperation partners based on strict quality criteria. The laminations are regularly tested by in-house experts and by independent institutions, before they are processed further in our factory. So you can be assured to have made an investment that is sustainable and return-optimized.

### Advantages

- + Constant actual power output for reliable high performance over many years
- + The large-sized modules and the FATH mounting system provide for ideal installation efficiency
- + We solely use premium quality semi-finished products and raw materials
- + Additional mechanical protection due to the aluminum frame profile



Description	Maximum power (P <sub>max</sub> )	Voltage at P <sub>max</sub> (V <sub>amp</sub> )	Current at P <sub>max</sub> (I <sub>mp</sub> )	Short-circuit current (I <sub>sc</sub> )	Open-circuit voltage (V <sub>oc</sub> )	Part N°
FS 230AP S2	230 W	30.33 V	7.58 A	8.08 A	37.36 V	<b>112919</b>
FS 225AP S2	225 W	29.88 V	7.53 A	8.04 A	37.10 V	<b>112950</b>
FS 220AP S2	220 W	29.41 V	7.48 A	8.00 A	36.84 V	<b>112951</b>
FS 215AP S2	215 W	28.93 V	7.43 A	7.95 A	36.48 V	<b>112952</b>
FS 210AP S2	210 W	28.37 V	7.40 A	7.90 A	36.25 V	<b>112953</b>
FS 205AP S2	205 W	27.89 V	7.35 A	7.85 A	36.12 V	<b>112954</b>



**The Quality**

- + Certification per IEC 61215 Ed2/IEC 31730
- + Manufacture at a factory certified per ISO 9000
- + Isolation test at 2,200 VDC



...certifications pending

PV

## Bonded PV Modules FS 230 AP S2 plus to FS 205 AP S2 plus

<b>Description</b>	High performance module for in-roof and on-roof installation; lamination bonded, frame masked
<b>Dimensions</b>	(L x W x H) 1665 mm x 1019 mm x 48 mm
<b>Weight</b>	17 kg
<b>Cell type</b>	Polycrystalline
<b>Cell embedding</b>	EVA (Ethylen Vinyl Acetate)
<b>Actual power output</b>	230 Wp ±5%
<b>Performance guarantee</b>	80% for 20 years
<b>Frame material</b>	Aluminum

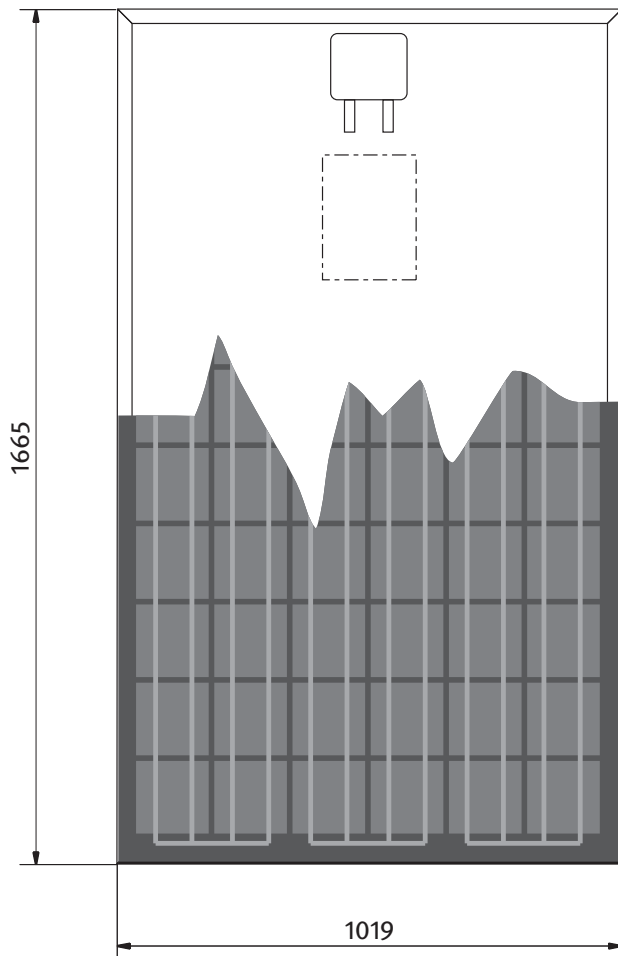
For the bonded PV modules FS 230 S2plus, **FATH Solar** selects the respectively best laminations of well-known cooperation partners based on strict quality criteria. The laminations are regularly tested by in-house experts and by independent institutions, before they are processed further in our factory. So you can be assured to have made an investment that is sustainable and return-optimized.

### Advantages

- + Constant actual power output for reliable high performance over many years
- + The large-sized modules and the FATH mounting system provide for ideal installation efficiency
- + Lamination and frame all-embracing agglutinated
- + No dirt ridges, smooth surfaces
- + Premium two-component adhesive, developed and tested with a well-known brand manufacturer
- + Durable clean and stable connection between lamination and frame



Description	Maximum power (P <sub>max</sub> )	Voltage at P <sub>max</sub> (V <sub>amp</sub> )	Current at P <sub>max</sub> (I <sub>mp</sub> )	Short-circuit current (I <sub>sc</sub> )	Open-circuit voltage (V <sub>oc</sub> )	Part N°
FS 230AP S2 plus	230 W	30.33 V	7.58 A	8.08 A	37.36 V	<b>112920</b>
FS 225AP S2 plus	225 W	29.88 V	7.53 A	8.04 A	37.10 V	<b>112944</b>
FS 220 AP S2 plus	220 W	29.41 V	7.48 A	8.00 A	36.84 V	<b>112945</b>
FS 215 AP S2 plus	215 W	28.93 V	7.43 A	7.95 A	36.48 V	<b>112946</b>
FS 210 AP S2 plus	210 W	28.37 V	7.40 A	7.90 A	36.25 V	<b>112947</b>
FS 205AP S2 plus	205 W	27.89 V	7.35 A	7.85 A	36.12 V	<b>112948</b>



**The Quality**

- + Certification per IEC 61215 Ed2/IEC 31730
- + Manufacture at a factory certified per ISO 9000
- + Isolation test at 2,200 VDC

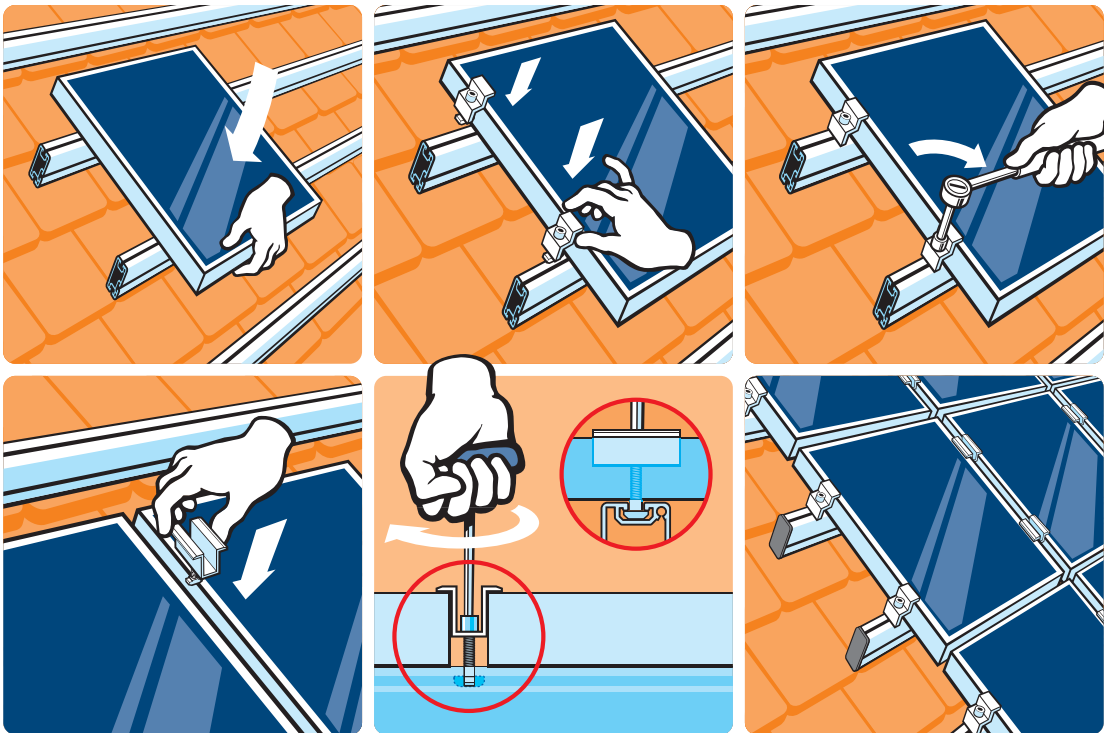


...certifications pending

PV

## S3: FATH-quality for all Standard Applications

Even if you prefer to rely on well-known technology, you don't have to do it without **FATH** quality. Our S3 system consists of assembly components that you can apply just like you are used to: A termination fitting at different heights and a variable middle fitting. Of course, you may also obtain slot nuts and screws from us – after all, we are the experts for leveling, fitting and connecting. S3 is suitable for most standard framed PV modules.



## S3: The Profile

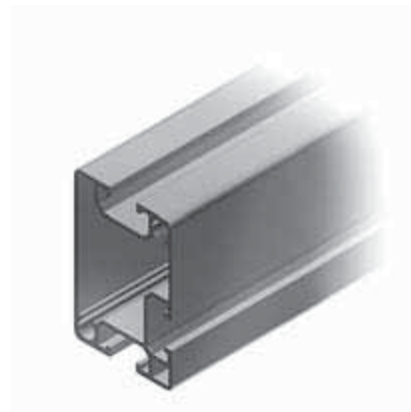
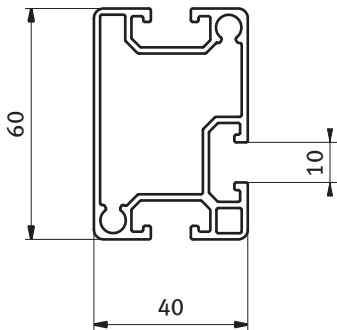
for framed PV modules

**Description** One-layer or cross-network installation,  
for instance on pitched and flat roofs or outdoor constructions

**Material** Aluminum AW 6063

**Surface** Plain

**Pack Quantity** 10 x 6000 mm



Fixation

Weight [kg / m]

Part N°

GP Basic Profile

depending on substructure

1.31

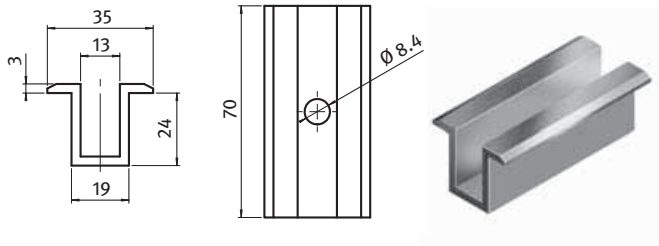
110013

S3

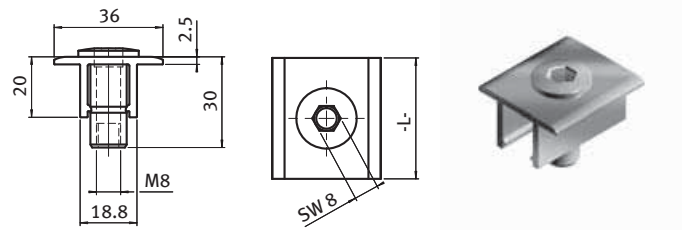
### S3: The Accessories

**Description** Components for the mounting of the basic and carrier profile and of standard PV modules

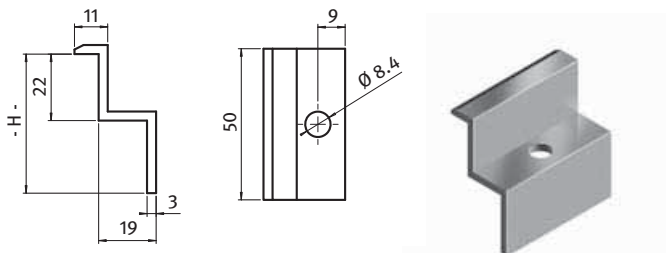
S3 Mounting System	Material	Weight [g]	Part N°
Standard termination fitting 50/35	Aluminum AW 6060 plain	24.4	<a href="#">112304</a>
Standard termination fitting 50/41	Aluminum AW 6060 plain	26.8	<a href="#">112356</a>
Standard termination fitting 50/46	Aluminum AW 6060 plain	28.8	<a href="#">112308</a>
Standard termination fitting 50/46	Aluminum AW 6060 black anodized	28.8	<a href="#">112335</a>
Standard termination fitting 50/50	Aluminum AW 6060 plain	30.4	<a href="#">111644</a>
Hexagon socket head cap screw M8 x 35 (for 46)	Stainless steel SS 304	20.0	<a href="#">112676</a>
Hexagon socket head cap screw M8 x 40 (for 50)	Stainless steel SS 304	23.0	<a href="#">112674</a>
Standard middle fitting 70	Aluminum AW 6060 plain	45.8	<a href="#">111643</a>
Standard middle fitting 70	Aluminum AW 6060 black anodized	45.8	<a href="#">112336</a>
Hexagon socket head cap screw M8 x 30 (for 46)	Stainless steel SS 304	16.0	<a href="#">112675</a>
Hexagon socket head cap screw M8 x 35 (for 50)	Stainless steel SS 304	20.0	<a href="#">112676</a>
T-slot nut	Stainless steel SS 304	10.0	<a href="#">102582</a>



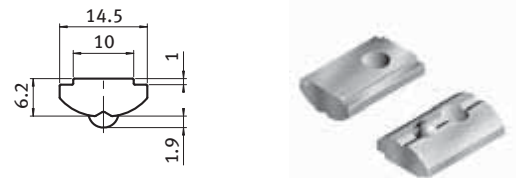
Standard middle fitting (see page 33)



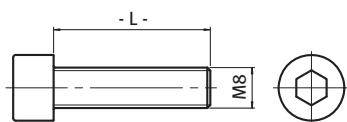
Universal middle fitting (see page 32)



Standard termination fitting (see page 34)



[102582](#)



[112674](#) · [112675](#) · [112676](#)

## S3: Application

The basic profile is mounted with clamps according to the individual installation option (i.e. roof hooks). In the process, two parallel profile strings per module row (as shown below) or module column are mounted on to the roof. For the assembly we provide clamps in correspondence with the frame height.

For the mounting of the first module of a row or column, the following is required:

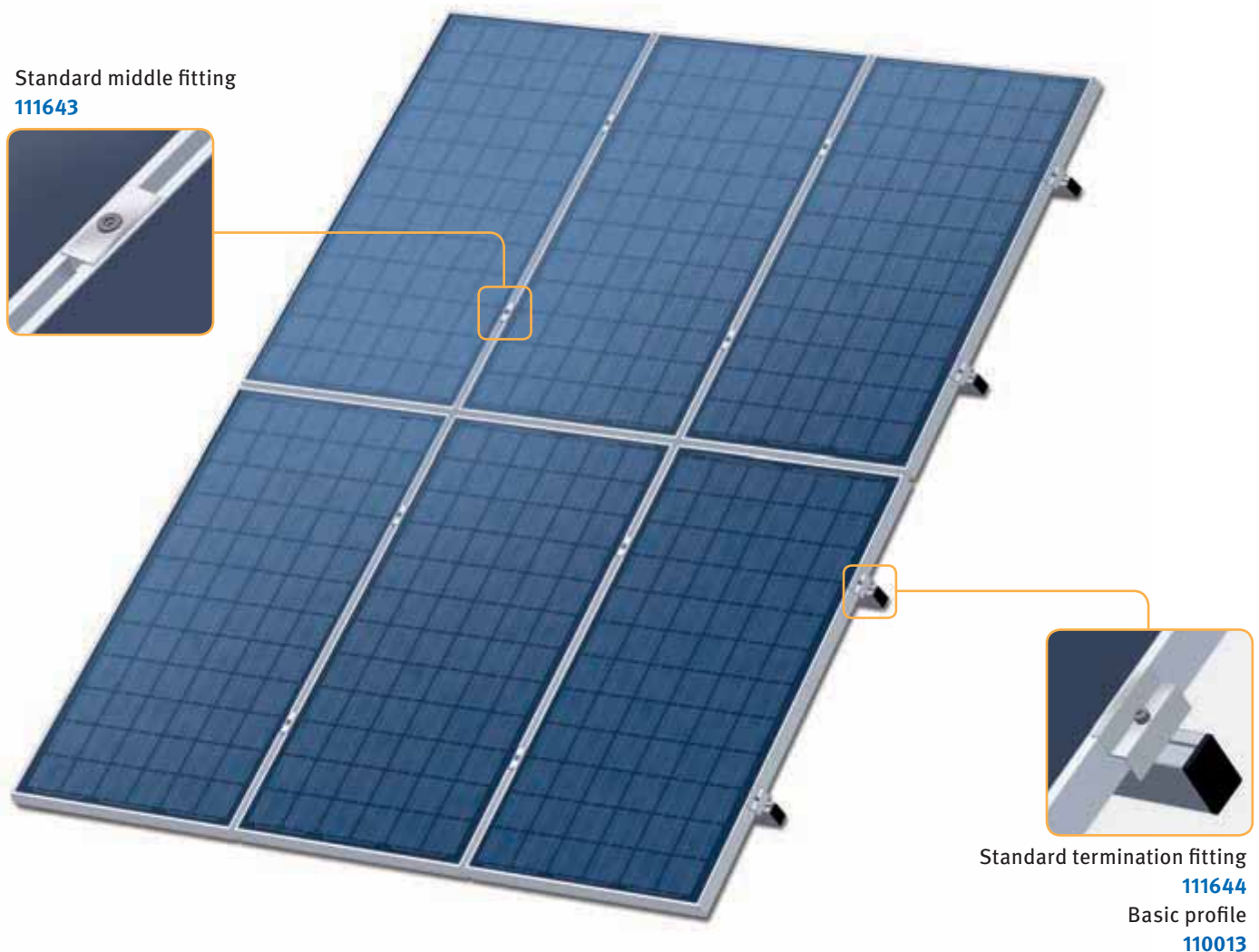
- 2 Standard termination fittings 50
- 2 Hexagon socket head cap screws M8
- 2 T-slot nuts M8

From the second solar module on, you will need in each case:

- 2 Standard middle fittings 70
  - 2 Hexagon socket head cap screws M8
  - 2 T-slot nuts M8
- alternatively: 2 Universal middle fittings  
2 Hammer screws M8

The last module of a row or column is mounted with:

- 2 Standard termination fittings 50
- 2 Hexagon socket head cap screws M8
- 2 T-slot nuts M8

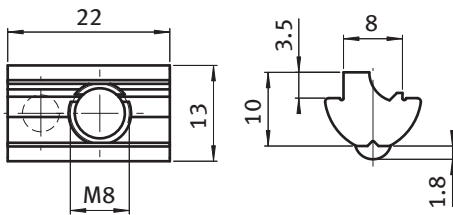


## Roll-in T-slot Nut 13,0 x 10,0 mm, Slot 8

**Description** Self-aligning roll-in T-slot nut with spring ball; to fit into profile slots of various sizes

**Material** Aluminum / Stainless steel SS 303

**Pack Quantity** 100 pieces



	Thread	Weight [g]	Part N°
T-slot nut 13 x 10 Aluminum	M8	3.9	<a href="#">102536</a>
T-slot nut 13 x 10 Stainless steel*	M8	10.8	<a href="#">102537*</a>

### T-slot Nut Variations

Our T-slot nuts are available in different lengths with several threads in various sizes (UNC thread, fine thread, etc.). Thread locking is also available. Please ask: +49 (0) 9175 7909-140

\* minimum order quantity in stainless steel: 50,000 pieces

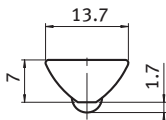
## Roll-in T-slot Nut, Slot 8 / 10

**Description** Roll-in T-slot nut with spring ball; to fit into profile slots of various sizes

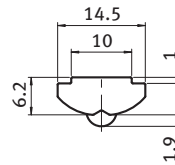
**Material** T-slot nut: Stainless steel SS 303  
Profile: Stainless steel SS 303, without thread

**Pack Quantity** 100 pieces

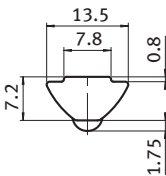
Slot N	Thread	Length [mm]	Weight [g]	Part N°
8	M8	22	9.0	<a href="#">102318</a>
10	M8	22	10.1	<a href="#">102582</a>
8	M8	22	9.0	<a href="#">102391</a>
8	M8	22	10.0	<a href="#">109187</a>



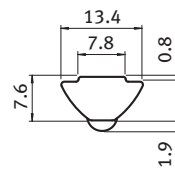
[102318](#)



[102582](#)



[102391](#)



[109187](#)

### T-slot Nut Variations

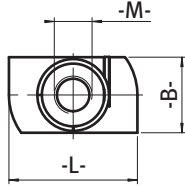
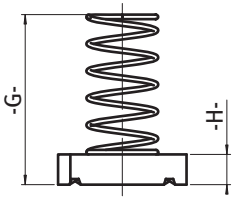
Our T-slot nuts are available in different lengths with several threads in various sizes (UNC thread, fine thread, etc.). Thread locking is also available. Please ask: +49 (0) 9175 7909-140

## Spring Nut, Slot 22

**Description** To attach components to profiles

**Material** Stainless steel SS 304

**Pack Quantity** 100 pieces



Slot N	Thread	B [mm]	L [mm]	H [mm]	G [mm]	Weight [g]	Part N°
22	M10	20.0	34.0	8.0	45.0	36.2	102906
Your required dimensions:							

### Spring Nut Variations

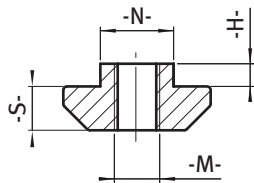
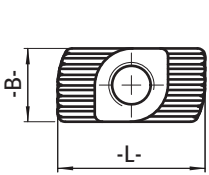
Please give us the desired dimensions. You will receive your individual offer starting at a minimum amount of 5,000 pieces, also available with thread locking. Please contact us: +49 (0) 9175 7909-140

## Hammer Nut, Slot 10

**Description** To attach components to profiles;  
penetrates the anodized coat of the profile – ensuring a safe, electrically conductive connection

**Material** Stainless steel 1.4401

**Pack Quantity** 100 pieces



Slot N	Thread	B	L	S	H	Weight [g]	Part N°
10	M6	9.7	19.5	5.6	3.0	7.3	<a href="#">102978</a>
10	M8	9.7	19.5	5.6	3.0	6.1	<a href="#">102987</a>
Your required dimensions:							

### Hammer Nut Variations

Please give us the desired dimensions. You will receive your individual offer starting at a minimum amount of 10,000 pieces, also available with thread locking. Please contact us: +49 (0) 9175 7909-140

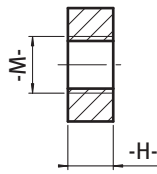
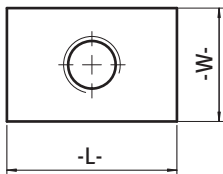
## Threaded Plate

**Description** To attach components with a screw

**Material** Stainless steel SS 304

**Dimensions** L x W x H

**Pack Quantity** 100 pieces



Threaded Plate	Dimensions L x W x H [mm]	Thread	Part N°
	19 x 19 x 4	M8	108991
Your required dimensions:			

### Threaded Plates Variations

Our threaded plates are available – starting at a minimum amount of 10,000 pieces - in different dimensions and with several threads in various sizes (UNC thread, fine thread, etc.), also available with thread locking.

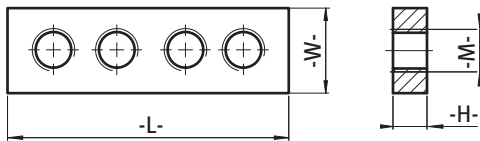
Please contact us: +49 (0) 9175 7909-140

## Profile Connector

**Description** For front-end connection of 2 profiles

**Material** Stainless steel SS 304 / Aluminum

**Pack Quantity** 10 pieces



Profile Connector	Material	Dimensions L x W x H [mm]	Thread	Weight [g]	Part N°
	Stainless steel	200 x 20 x 4	4 x M8	119.9	<a href="#">103251</a>
	Aluminum	200 x 20 x 10	4 x M8	101.5	<a href="#">103252</a>
	Aluminum	200 x 35 x 8	4 x M8	101.5	<a href="#">109345</a>

### Profile Connector Variations

Our profile connectors are available – starting at a minimum amount of 300 pieces – in different dimensions and with several thread designations in various sizes (UNC thread, fine thread, etc.) also available with thread locking.

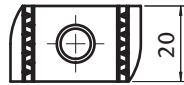
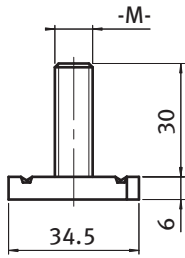
Please contact us: +49 (0) 9175 7909-140

## Rhombus Screw, Slot 22

**Description** To attach components to profiles, easy to insert, for profiles with 22 mm slot

**Material** Stainless steel SS 304

**Pack Quantity** 100 pieces



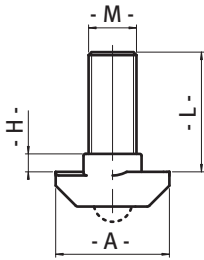
Rhombus Screw	Thread	Weight [g]	Part N°
	M8	37.2	<a href="#">103326</a>
	M10	42.7	<a href="#">103328</a>

## Hammer Head Screw, Slot 8 / 10 / 11

**Description** To attach components to profiles;  
penetrates the anodized coat of the profile - ensuring a safe, electrically conductive connection

**Material** Stainless steel SS 304

**Pack Quantity** 100 pieces



Nut	Dimensions M x L	A [mm]	B [mm]	H [mm]	Weight [g]	Part N°
8	M8 x 30	18.0	8.0	5.0	16.0	<a href="#">109637</a>
10	M8 x 20	19.0	9.7	3.0	13.4	<a href="#">103039</a>
10	M8 x 25	19.0	9.7	3.0	15.4	<a href="#">103044</a>
10	M8 x 30	19.0	9.7	3.0	16.0	<a href="#">103051</a>
10	M8 x 40	19.0	9.7	3.0	19.8	<a href="#">103055</a>
10	M8 x 60	19.0	9.7	3.0	24.8	<a href="#">103057</a>
11	M10 x 25	22.5	10.6	0.0	26.2	<a href="#">110164 *</a>
11	M10 x 30	22.5	10.6	0.0	26.2	<a href="#">110167 *</a>
10 with spring ball	M10 x 25	21.0	9.9	1.5	27.0	<a href="#">112028*</a>

### Hammer Head Screw Variations

\* minimum order quantity: 20,000 pieces

Our hammer head screws are available in different lengths and different sizes.

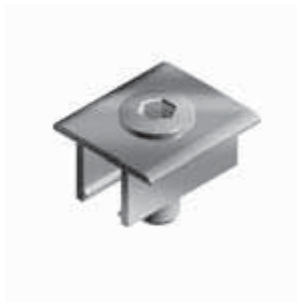
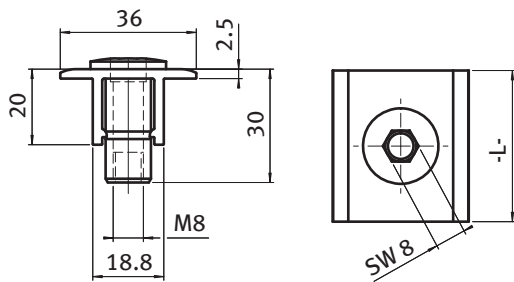
For orders of 10,000 pieces and more we will produce any size. For inquiries, please call: +49 (0) 9175 7909-140

## Universal Middle Fitting

**Description** To attach solar modules of 30 to 50 mm frame height on all kinds of carrier profiles; a M8 hammer screw is required to attach the middle clamps (see page 31)

**Material** Profile: Aluminum AW 6060  
Bushing: Stainless steel SS 304

**Pack Quantity** 10 pieces, pre-assembled



Version	Length [mm]	Weight [g]	Part N°
plain	40.0	37.3	<a href="#">103353</a>
black anodized	40.0	37.3	<a href="#">103354 *</a>
silver anodized	40.0	37.3	<a href="#">108842</a>
plain	70.0	51.2	<a href="#">103355</a>
black anodized	70.0	51.2	<a href="#">103356 *</a>
silver anodized	70.0	51.2	<a href="#">108843</a>

### Universal Middle Fitting Variations

\* on request

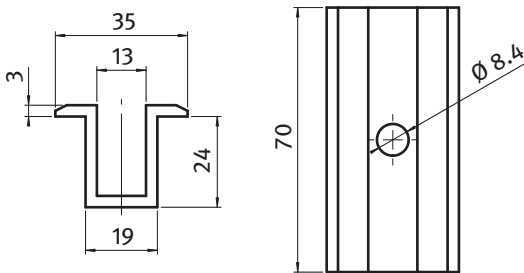
Our universal middle fittings are also available – starting at a minimum amount of 1,000 pieces - in different lengths. Please contact us: +49 (0) 9175 7909-140

## Standard Middle Fitting

**Description** For the mounting of PV modules of different frame heights and on different carrier profiles; you will require suitable clamps (starting page 24) for the installation

**Material** Profile: Aluminum AW 6060

**Pack Quantity** 100 pieces



Version	Length [mm]	Weight [g]	Part N°
plain	70.0	45.8	<a href="#">111643</a>
black anodized	70.0	45.8	<a href="#">112336 *</a>

### Standard Middle Fitting Variations

\* on request

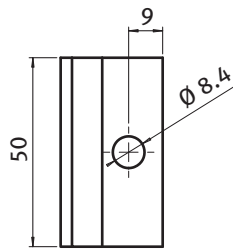
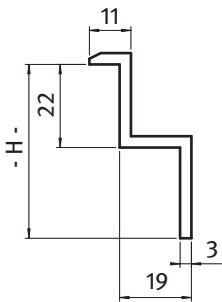
Our standard middle fittings are also available – starting at a minimum amount of 1,000 pieces – in different lengths. Please contact us: +49 (0) 9175 7909-140

## Standard Termination Fitting

**Description** For the mounting of PV modules of different frame heights and on different carrier profiles; you will require suitable clamps (starting page 24) for the installation

**Material** Profile: Aluminum AW 6060

**Pack Quantity** 100 pieces



Version	Length [mm]	Height [mm]	Weight [g]	Part N°
plain	50.0	35.0	24.4	<b>112304</b>
plain	50.0	41.0	26.8	<b>112356</b>
plain	50.0	46.0	28.8	<b>112308</b>
black anodized	50.0	46.0	28.8	<b>112335 *</b>
plain	50.0	50.0	30.4	<b>111644</b>

### Standard Termination Fitting Variations

\* on request

Our standard termination fittings are also available – starting at a minimum amount of 1,000 pieces – in different lengths. Please contact us: +49 (0) 9175 7909-140

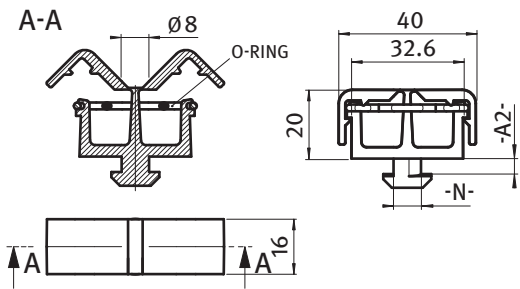
## Clip Cable Binder

**Description** To attach cables without cable ties, can be opened and closed as needed; can be mounted into the slot with a quarter turn

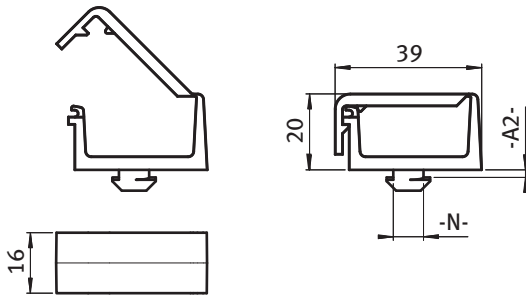
**Material** Fiberglass reinforced nylon

**Color** Black

**Pack Quantity** 10 pieces



Version	A2 [mm]	Slot N	Weight [g]	Part N°
2 chambers	2.0	8	6.2	<a href="#">100503</a>
2 chambers	4.0	8	7.0	<a href="#">108752</a>
2 chambers	4.5	8	6.2	<a href="#">100499</a>
2 chambers	1.0 - 1.8	8	7.4	<a href="#">110723</a>



Version	A2 [mm]	Slot N	Weight [g]	Part N°
1 chamber	1.5	8	5.8	<a href="#">100506</a>
1 chamber	4.5	8	6.5	<a href="#">100510</a>

### Clip Cable Binder Variations

Our cable binders are also available for other slots or without a hammer for screw connections.

Please contact us: +49 (0) 9175 7909-140

Dimension A2 must be specified on customized requirements

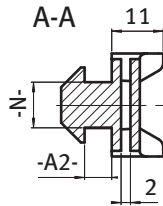
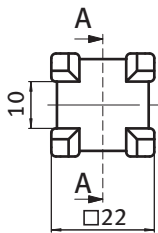
## Cross Cable Binding Block, Slot 8 / 10

**Description** To secure cables to aluminum profiles in two directions; can be mounted into the slot with a quarter turn

**Material** Fiberglass reinforced nylon

**Color** Black

**Pack Quantity** 100 pieces



Version	A2 [mm]	Slot N	Weight [g]	Part N°
Nut 8	4.3	8	4.0	<a href="#">100471</a>
Nut 10	3.3	10	4.1	<a href="#">100475</a>
Your required dimensions:				

### Cross Cable Binding Block Variations

Our cross cable binders are also available for other slots.

Please contact us: +49 (0) 9175 7909-140

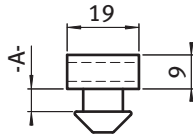
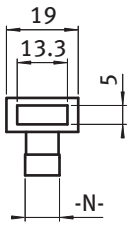
## Cable Binding Block, Slot 8 / 10

**Description** To secure cables to aluminum profiles;  
can be mounted into the slot with a quarter turn

**Material** Fiberglass reinforced nylon

**Color** Black

**Pack Quantity** 100 pieces



Version	A2 [mm]	Slot N	Weight [g]	Part N°
Nut 8 8	1.8	8	3.4	<a href="#">100405</a>
Nut 10 10	3.6	10	4.0	<a href="#">100402</a>
Your required dimensions:				

### Cable Binding Block Variations

Our cable binders are also available for other slots.

Please contact us: +49 (0) 9175 7909-140

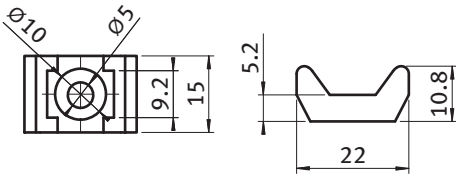
## Universal Cable Binding Block, Slot 5 - 12

**Description** To secure cables to aluminum profiles; to be mounted with a hammer nut

**Material** Fiberglass reinforced nylon

**Color** Black

**Pack Quantity** 100 pieces



Universal Cable Binding Block

Weight [g]

Part N°

1.6

100406

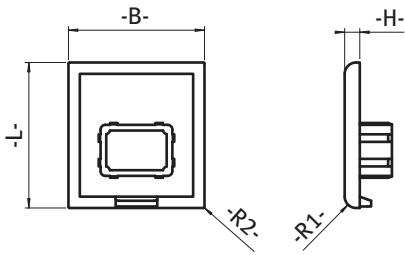
## Cover Caps

**Description** To cover profile ends

**Material** Fiberglass reinforced nylon

**Color** Black

**Pack Quantity** 100 pieces



Dimensions L x B [mm]

H

R1

R2

Your required dimensions:

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### Cover Cap Variations

Our cover caps are available in all sizes and with different attachments according to your profile.

Please contact us: +49 (0) 9175 7909-140

