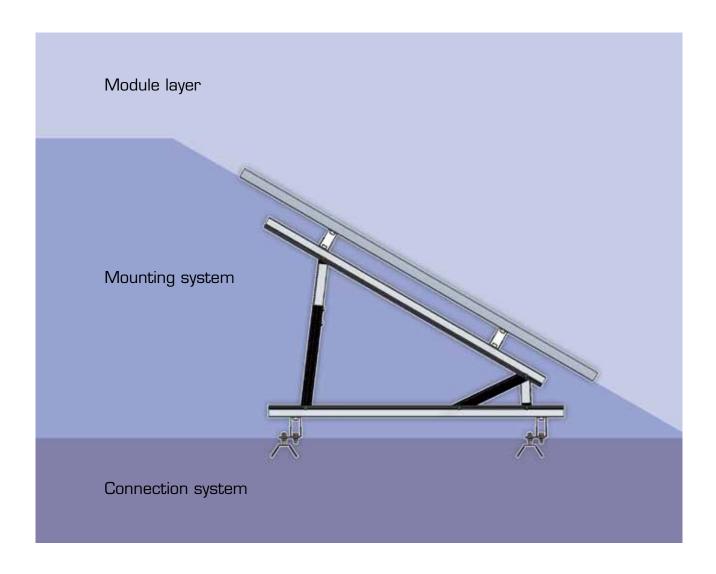




MOUNTING-SYSTEMS FOR PV-MODULES

Product range



PROFINAL

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CONNECTION SYSTEM

Tiled Roof (Aluminum Roof-Hooks)

201.105.32-E Roofhook, persistent, consisting of baseplate and

hook to swivel in

For 32 mm battens Height of baseplate 46 mm

201.105.40-E Roofhook, persistent, consisting of baseplate and hook to swivel in

For 40 mm battens Height of baseplate 54 mm

201.107.32-E Roofhook, with elevation adjustment, consisting of baseplate and ready-for-use hook

For 32 mm battens Height of baseplate 46 mm

201.107.40-E Roofhook, with elevation adjustment, consisting of baseplate and ready-for-use hook

For 40 mm battens Height of baseplate 54 mm

201.106.32-E Roofhook, lateral connection with elevation adjustment, consisting of baseplate & ready-for-use hook with T-fitting

For 32 mm battens Height of baseplate 46 mm

201.106.40-E

Roofhook, lateral connection with elevation adjustment, consisting of baseplate & ready-for-use-hook with T-fitting

For 40 mm battens Height of baseplate 54 mm













Tiled Roof (Stainless Steel Roofhooks)

201.105. 1508040-4301



Roofhook Vario 43

Baseplate $150 \times 80 \times 5$ mm, lower angle 40 mm, bent hook 8 mm, Material: 1.4301, angle $55 \times 55 \times 35 \times 5$ mm please ask for separat quotation



201.105. 150x60W Roofhook standard small

Layout B: Baseplate 150x80x5 mm, Hook 30x5 mm, Height 130 mm



201.105. 35x6-4301 Roofhook Standard

Baseplate 180x80x5 mm, Hook 35x6 mm, Height 139 mm



201.105. 40x6-4301 Roofhook Standard

Baseplate 180x80x4 mm, Hook 40x6 mm, Height 130 mm



201.105. 140*56K-4301 Roofhook adjustable

Baseplate 144x56x5 mm, Hook 5 mm ready-for-use,

Material: 1.4301





Roofhook Accessories (support plates)

201.702.2-B	Support plate 2 mm aluminum	
	Height compensation at uneveness	3
201.702.3-B	Support plate 2 mm aluminum	
	Height compensation at uneveness	3
201.702.5-B	Support plate 5 mm aluminum	
	Height compensation at uneveness	3

Connection Systems for tin roof and corrugated Eternit

301.9211-2-10x	Dowel screw for wooden substructure Dowel screw A2	
	Dowel screw with hexagonal head SW7 M10*200mm Length of thread: metric: 110mm wood: 70mm	Thumphon .
301.9211-2-12x	Dowel screw for wooden substructure Dowel screw A2	
	Dowel screw with hexagonal head SW8 M12*300mm Length of thread: metric: 140mm Wood: 100mm	Thin thin
		_
301.9216-2-10x	Dowel screw, hexagonal head ready-for-use (Illustration similar)	1
	Ready-for-use with 3 self-locking nuts A2 + EPDM-gasket M10	
301.9216-2-12x	Dowel screw, hexagonal head ready-for-use (Illustration similar)	1
	Ready-for-use with 3 self-locking nuts A2 + EPDM-gasket + 1 big washer above the M12 gasket	
301.9216-2-10x	EPDM-gasket approx. 60° Shore A	
	for dowel screw M10/M12	
301.9221-2-10x	Approved dowel screw for wooden substructure,	
	Dowel screw hexagonal head ready-for-use	The Min
	With special coating, ready-for-use with nuts, washers and fungal-seal, construction inspection approved	
301.9222-2-10x	Approved dowel screw for steel substructure Dowel screw hexagonal head ready-for-use	
	With special coating, ready-for-use with nuts, washers and fungal-seal, construction inspection approved	



Adaptor plates for dowel screws

201.301. 82x30x5-4301 Adaptor plate stainless steel A2 for dowel screws M10

L: 82mm x D: 30mm x H: 5mm Round hole: 11mm Slot hole: 11*29,5mm, material: 1.4301; For dowel screw M10 Screw attachment in lower railing-channel



201.302. 82x40x6-B Adaptor plate aluminum for dowel screws M10

L: 82mm x D: 40mm x H: 6mm Round hole: 11mm Slot hole: 11*29,5mm, material: aluminum; For dowel screw M10 Screw attachment in lower railing-channel



201.304. 82x40x6-B Adaptor plate aluminum for dowel screws M12

L: 82mm x D: 40mm x H: 6mm Round hole: 13mm Slot hole: 11*29,5mm, material: aluminum; For dowel screw M12 Screw attachment in lower railing-channel



201.303. 82x30x5-4301 Adaptor plate stainless steel A2 for dowel screws M12

L: 82mm x D: 30mm x H: 5mm Round hole: 13mm Slot hole: 11*29,5mm, material: 1.4301; For dowel screw M12 Screw attachment in lower railing-channel



Accessory Parts for Tin-, Eternit- and Kalzip-roofs

101.031. 6100-B

Trapezoidal-railing **703 g/m**

Length: at buyer's option

Profile can be directly attached to trapezoidal-roof

Channel for sliding block M8



101.131.6100-B

Trapezoidal-sheet railing

1047 g/m

Length: at buyer's option

Profile can be directly attached to trapezoidal-sheet-roof

Channel for sliding block M8



100.006. 40x40x40x3-B

Z-Profile aluminum

Length: 6,1 m; Dimensions: 40*40*40*3 mm





201.043. KALZIP10-4301

Kalzip-Clip angled M10

Kalzip-Clip A2 with slot hole for railing connection M10, ready-for-use with srew/nut/washer



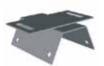
201.042. ...

Trapezoidal-tin-shoe 4-hole

For direct attaching at trapezoidal-sheet. Optionally with mounting plate, grub srew or angle. We recommend our construction inspection approved drilling screw 6.3x2 for attaching to roof







MOUNTING SYSTEM

Standard-Mounting railings (Profiles)

101.001.6100-B

Mounting rail 40 x 40 mm 921 g/m

Length: 6.100 mm; span length: 1,6 m Lower connection: DIN 933 M10 Upper connection: sliding block M8 (Length at buyer's option)



2

2

2

101.002.6100-B

Mounting rail 80 x 40 mm 1.252 g/m

Length: 6.100 mm, span length: 3,2 m Lower connection: DIN 933 M10 Upper connection: sliding block M8 (Length at buyer's option)



101.003.6100-B

Mounting rail 40 x 40 mm 910 g/m

(Length at buyer's option)

Length: 6.100 mm; span length: 1,6 m Lower connection: DIN 933 M10 Upper connection: square nut M8 or hexagonal-nut M8

101.015.6100-B

Mounting rail 40 x 40 mm 923 g/m

Length: 6.100 mm; span length: 1,6 m Lateral connection: sliding block M8 Upper connection: sliding block M8



101.016.6100-B

Mounting rail 80 x 40 mm 1449 g/m

Length: 6.100 mm; span length: 3,2 m Lateral connection: sliding block M8 Upper connection: sliding block M8



PROFINAL Distribution of Aluminum Profiles

101.017.6100-B

Mounting rail 80 x 40 mm 1.253 g/m

Length: 6.100 mm; span length: 3,2 m Lower connection: DIN 933 M10 Upper connection: sliding block M8 (Length at buyer's option)



101.031.6100-B

Trapezoidal-railing

703 g/m

Length: at buyer's option

Profile can be directly attached to trapezoidal-sheet.

Upper channel for sliding block M8



101.032.6100-B

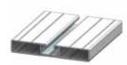
Trapezoidal-railing

936 g/m

Length: at buyer's option

Profile can be directly attached to trapezoidal-sheet.

Upper channel for sliding block M8



101.131.6100-B

Trapezoidal-railing

1047 g/m

Length: at buyer's option

Profile can be directly attached to trapezoidal-sheet.

Upper channel for sliding block M8



101.050.6100-B

FS-Profile 80 x 102 mm 3.010 g/m

Heavy load profile; Length: 6.100 mm

lateral connection with assembling-plate (201.026.40-B)



101.101.6100-B

"Mounting rail ""Alu light""; sliding block above" **757** g/m

3

Length: 6.100 mm

Upper connection: sliding block M8

Lower connection: hexagonal-head screw: DIN 933 M10



101.103.6100-B

"Mounting rail ""Alu light""; square nut above" **754 g/m**

3

Length: 6.100 mm

Upper connection: square nut

Lower connection: hexagonal-head screw: DIN 933 M10



101.040.6100-B

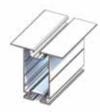
Mounting rail 80 x 40 mm 1520 g/m



Length: 6.100 mm

Upper connection: sliding block M8

Lower connection: with mounting plate (201.026.40-B)



101.059.6100-B

Mounting rail 99 x 99 mm 1800 g/m



Length: 6.100 mm

Upper connection: sliding block M8

Lower connection: with mounting plate (201.026.40-B)



Sliding Block

301.001.1-E

Sliding block to swivel in

for M8 packaging 100 pieces Ball made from stainless steel



- 2 anodised versions also available from stock
- 3 For other dimensions availability please enquire



2

Simple cross bracing

101.015.6100-B

Mounting rail 40 x 40 mm 923 g/m

Length: 6.100 mm, span length: 1,6 m Lateral connection: sliding block M8 Upper connection: sliding block M8



101.016.6100-B

Mounting rail 80 x 40 mm 1449 g/m

Length: 6.100 mm, span length: 3,2 m Lateral connection: sliding block M8 Upper connection: sliding block M8



201.014.40-B

Cross connector (connection angle)

Cross bracing angle for 101.015.6100-B and 101.016.6100-B on 101.001.6100-B, 101.002.6100-B or 101.003.6100-B with three sliding blocks and screws DIN 912-2-8*16



101.017.6100-B

Mounting rail 80 x 40 mm 1.253 g/m

Length: 6.100 mm, span length: 3,2 m Lower connection: DIN 933 M10 Upper connection: sliding block M8 (Length at buyer's option)



201.026.40-B

Mounting plate

for attaching mounting rail to triangle Length: 40 mm; Height: 36 mm; Diameter: 11 mm Compability: for example 101.017.6100-B, 101.050.6100-B, 201.099.1020-B, 201.099.2040-B



Rail connectors

201.012.200-B U-shell, Length: 200mm Profile connector (alu) for mounting rails 101.001.6100-B, 101.003.6100-B and 101.015.6100-B for external connection 201.018.200-B Profile connector, slot 200mm For mounting rails 101.001.6100-B, 101.003.6100-B; 101.016.6100-B,101.017.6100-B = 2 connectors/ connection 101.015.6100-B = 1 connector/connection 201.118.200-B "Batch connector "Light", slot 200 mm" For mounting rails 101.101.6100-B and 101.103.6100-B 2 connectors/ connection 201.019.400-B FS-mounting rail connector 3 For the FS-mounting rail; Compatibility with: FS-mounting rail, 2 connectors/ connection



Aluminum accessories

100.001. 40x40x3-B	Angle profile ALUMINUM 40*40*3 Length: 6,00 Meter; 40*40*3	
100.002.	ALUMINUM flat We are delivering aluminum flat-profiles in many different dimensions	
100.003.	ALUMINUM round We are delivering aluminum round-profiles in many different dimensions	
100.004.	ALUMINUM square-pipe We are delivering aluminum square-pipes in many different dimensions	
100.005.	ALUMINUM U-profile We are delivering aluminum U-profiles in many different dimensions	
100.006. 40x40x40x3-B	ALUMINUM Z-profile Length: 6,1 Meter; 40*40*40*3 mm	4

Support triangles

201.099. 40x40x...x...

Triangle support 3 Construction with angle-profile 40*40*3 mm or 40*40*5 mm



201.097. 40x40x...x... Triangle support SOLANO

Construction with angle-profile 40*40*3 mm or 40*40*5 mm



201.099-1020-B und 201.099-2040-B Flat roof triangle support aluminum

Foldable; adjustable from 10° to 20°

or from 20° to 40°



201.098. 40x40x5-B Veneer mounting support

Constuction with angle-profile 40x40x5 mm





MODULE LAYER

Clamps for framed PV-Modules

201.004.70x...-B

End-Clamp aluminum

Length: 70 mm

Width: 30mm, 35mm, 40mm, 42mm, 45mm, 46mm, 50mm

Module support: 8mm

Please indicate module-frame height

201.013.70-B

Middle-Clamp aluminum

Length: 70 mm

Module support: 8mm; module distance: 20mm





Clamps for Thin-Film PV-Modules

201.113.100-B

End-Clamp for Thin-Film (glass) Modules;



Handy clip-connection UV-durable EPDM-rubber gasket

Modular height adjustment

Additionally needed: Allen Screw DIN 912 A2 8x35, sliding block M8



201.104.100-B

Middle-Clamp for Thin-Film (glass) Modules; aluminum



Handy clip-connection UV-durable EPDM-rubber gasket Modular height adjustment

Additionally needed: Allen Screw DIN 912 A2 8x35, sliding block M8



201.213.70-B

Middle-/End-Clamp for Thin-Film (glass) Modules; aluminum



Rubber-Type 6,8mm, Patented Type with EPDM-Rubberbed Handy end stop to protect module damages

Optional thief-protection available

Additionally needed: Allen Screw DIN 912 A2 8x35, sliding block M8



Module-Clamps incl. Clip-Connection (Click-Fix)

201.9742-E ...

End-Clamp; aluminum incl. Clip

Ready-for-use incl. Screw, Nut and Clip-Connection

Higher tensile strength than conventional connectors because of special aluminum alloy. This handy clip is intermateable with all Profinal-Profiles (upper connection).

Please indicate module frame height



201.9745-M- ...

Middle-Clamp; aluminum

Ready-for-use with Screw,, Nut and Clip-Connection

Higher tensile strength than conventional connectors because of special aluminum alloy. This handy clip is intermateable with all Profinal-Profiles (upper connection).

Please indicate module frame height





Save time and money thru shorter assembly time!



Screws and Accessories for Module Clamps

301.912-2-8*30	M8*30 mm
301.912-2-8*35	M8*35 mm
301.912-2-8*40	M8*40 mm
301.912-2-8*45	M8*45 mm
301.912-2-8*50	M8*50 mm
301.912-2-8*55	M8*55 mm
301.912-2-8*60	M8*60 mm
301.9250-2-8.4	Locking Washer A2 8,4mm





Utilization of Allen-Screws for different Module-Heights

Module- Height	Screw for railings with sliding block	Security-Rail (only with sliding block profile)	Screw for railings with square nut 5
32 mm	Allen-Screw, M8*35 mm		Allen-Screw, M8*35 mm or *40 mm
34 mm	Allen-Screw, M8*35 mm		Allen-Screw, M8*35 mm or *40 mm
35 mm	Allen-Screw, M8*40 mm	х	Allen-Screw, M8*40 mm or *45 mm
36 mm	Allen-Screw, M8*40 mm	х	Allen-Screw, M8*40 mm or *45 mm
38 mm	Allen-Screw, M8*40 mm		Allen-Screw, M8*40 mm or *45 mm
40 mm	Allen-Screw, M8*45 mm	х	Allen-Screw, M8*45 mm or *50 mm
41 mm	Allen-Screw, M8*45 mm	x	Allen-Screw, M8*45 mm or *50 mm
42 mm	Allen-Screw, M8*45 mm		Allen-Screw, M8*45 mm or *50 mm
45 mm	Allen-Screw, M8*50 mm	x	Allen-Screw, M8*50 mm or *55 mm
46 mm	Allen-Screw, M8*50 mm	х	Allen-Screw, M8*50 mm or *55 mm
50 mm	Allen-Screw, M8*50 mm	Х	Allen-Screw, M8*55 mm or *60 mm

The screw length is depending on the mounting rail, the square nut, the sliding block, the clip, the clamp and the module frame. For individual advise please call us.

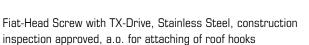
⁵ For this option are both screws possible to use



SCREWS ACCESSORIES

Fiat-Head Screw

301.9810-0-8x80	M8*30 mm
301.9810-0-8x100	M8*35 mm
301.9810-0-8x120	M8*40 mm





Hexagonal-Head Woodscrews

301.571-2-8x80	M8*80 mm
301.571-2-10x80	M10*80 mm
301.571-2-8x100	M8*100 mm
301.571-2-10x100	M10*100 mm
301.571-2-8x120	M8*120 mm
301.571-2-10x120	M10*120 mm
301.571-2-8x140	M8*140 mm
301.571-2-10x140	M10*140 mm
301.571-2-8x160	M8*160 mm
301.571-2-10x160	M10*160 mm
301.571-2-8x180	M8*180 mm
301.571-2-10x180	M10*180 mm
301.571-2-8x200	M8*200 mm
301.912-2-10*200	M10*200 mm

Hexagonal-Woodscrews, a.o. for attaching of roof hooks $% \left\{ \left(1\right) \right\} =\left\{ \left(1\right) \right\}$



Cheese-Head Screw with hexagon socket

301.912-2-... x ... M8*... mm 301.912-4-... x ... M8*... mm



Cheese-Head Screw with hexagon socket with full thread in A2 and A4 following DIN 912; a.o. Dimensions M10 * 25 for the lower railing channel No.: 101.001.6100-B

Hexagonal Screws

301.933-2-... x ... M8 * ... mm 301.933-4-... x ... M8 * ... mm



Hexagonal Screws with full thread in A2 and A4 following DIN 933; a.o. Dimensions M10*25 for the lower railing channel No.: 101.001.6100-B

T-Head bolts

301.9415-2-8x20	M8*20 mm
301.9415-2-10x20	M10*20 mm
301.9415-2-8x25	M8*25 mm
301.9415-2-10x25	M10*25 mm
301.9415-2-8x30	M8*30 mm
301.9415-2-10x30	M10*30 mm
301.9415-2-8x35	M8*35 mm
301.9415-2-10x35	M10*35 mm



T-Head bolts A2 and A4 for mounting rail Type 28/15 (further railings by request)



Washers

		inner	outer
301.9021-2	Für M8:	8,4 mm	24,0 mm
301.9021-2	Für M10:	10,5 mm	30,0 mm
301.9021-2	Für M12:	13,0 mm	37,0 mm



Washer with large outer diameter in A2 and A4 following DIN 9021

Washers

		inner	outer
301.125-2	Für M8:	8,4 mm	16,0 mm
301.125-2	Für M10:	10,5 mm	20,0 mm
301.125-2	Für M12:	13,0 mm	24,0 mm



Washer in A2 and A4 following DIN 125

Safety Washers

		inner	outer
301.9250-2-8,4	Für M8:	8,4 mm	13,0 mm
301.9250-2-10,5	Für M10:	10,5 mm	26,0 mm
301.9250-2-13,0	Für M12:	13,0 mm	18,0 mm



"Safety Washer ""S"" a.o. for different Module-Clamps"

Screw Locking Washers

		inner	outer
301.25201-4-8,7	Für M8:	8,7 mm	16,5 mm
301.25201-4-10,7	Für M10:	10,7 mm	16,0 mm
301.25201-4-13,0	Für M12:	13,0 mm	19,5 mm



Screw locking washer in A4 following DIN 25201

Safety Screws

M8 * 20 mm 301.125-2- ... 301.125-2- ... M8 * 30 mm 301.125-2- ... M8 * 40 mm





Safety screw mushroom head in A2 similar to ISO 7380 from stock

Mushroom Head Screws

301.603-2*	M10*20 mm
301.603-4*	M10*20 mm
301.603-2*	M10*25 mm
301.603-4*	M10*25 mm
301.603-2*	M10*30 mm
301.603-4*	M10*30 mm



Mushroom Head Screw with sqare in A2 and A4 following DIN 603

Square Nut

301.557-2-8	M8 (A2)
301.557-4-8	M8 (A4)
301.557-2-10	M10 (A2)
301.557-4-10	M10 (A4)
301.557-2-12	M12 (A2)
301.557-4-12	M12 (A4)

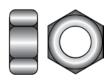


Square Nut in A2 and A4 following DIN 557



Hexagonal Nut

301.934-2-8	M8 (A2)
301.934-4-8	M8 (A4)
301.934-2-10	M10 (A2)
301.934-4-10	M10 (A4)
301.934-2-12	M12 (A2)
301.934-4-12	M12 (A4)



Hexagonal Nut in A2 and A4 following DIN 934

Hexagonal Nut

301.9345-2-8	M8 (A2)
301.9345-4-8	M8 (A4)
301.9345-2-10	M10 (A2)
301.9345-4-10	M10 (A4)
301.9345-2-12	M12 (A2)
301.9345-4-12	M12 (A4)

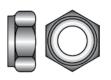




Hexagonal Nut similar to DIN 6923 with flange and and gear teeth in A2 and A4

Self-Locking Nut

301.985-2-8	M8 (A2)
301.985-4-8	M8 (A4)
301.985-2-10	M10 (A2)
301.985-4-10	M10 (A4)
301.985-2-12	M12 (A2)
301.985-4-12	M12 (A4)



Self-locking nut low type in A2 and A4 following DIN 985

Screw Sockets

301.9290-2-8	M8 (A2)
301.9290-4-8	M8 (A4)
301.9290-2-10	M10 (A2)
301.9290-4-10	M10 (A4)
301.9290-2-12	M12 (A2)
301.9290-4-12	M12 (A4)



Screw socket with full inner thread, round type in A2 and A4

Screw Sockets

301.9300-2-8	M8 (A2)
301.9300-4-8	M8 (A4)
301.9300-2-10	M10 (A2)
301.9300-4-10	M10 (A4)
301.9300-2-12	M12 (A2)
301.9300-4-12	M12 (A4)



Screw socket mit full inner thread, hexagonal type in A2 and A4 $\,$

Spring Washers

301.127-2-8	M8 (A2)
301.127-4-8	M8 (A4)
301.127-2-10	M10 (A2)
301.127-4-10	M10 (A4)
301.127-2-12	M12 (A2)
301.127-4-12	M12 (A4)



Spring washer A2 and A4 following DIN 127



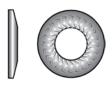
Pull-Off Nut

301.9305-2-6	M6
301.9305-2-8	M8
301.9305-2-10	M10
301.9305-2-12	M12



Thrust Washers

301.9265-2-8	M8
301.9265-2-10	M10
301.9265-2-12	M12



Thrust washer M-type (medium) for high torque connection with standard support

301.9360-2	Shear Connector

For attaching dowel screws to concrete; Shear Connector = VA; Mortar Cartridge = VA-P



301.9495 ZN- ...

Safety-Stars

Material: Zinc pressure casting; for TX 10-40, Safety stars for TX-drive



301.9490-2-6,25

Ball

Balls stainless 304 6; 25mm type 40; To secure allen-screws SW6, Ball to bang in



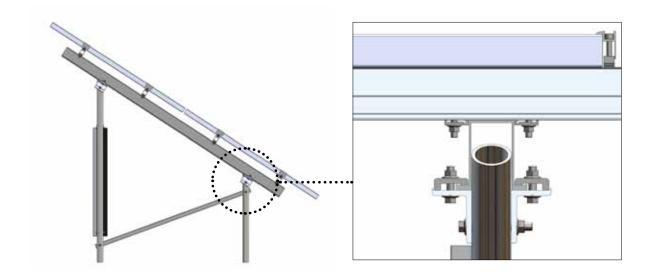
FREE-FIELD SUBSTRUCTURES

Mounting System "Krinner"

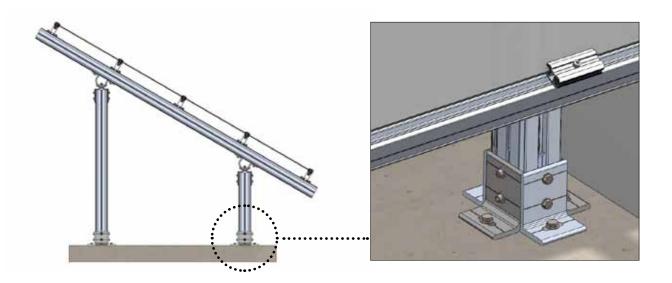


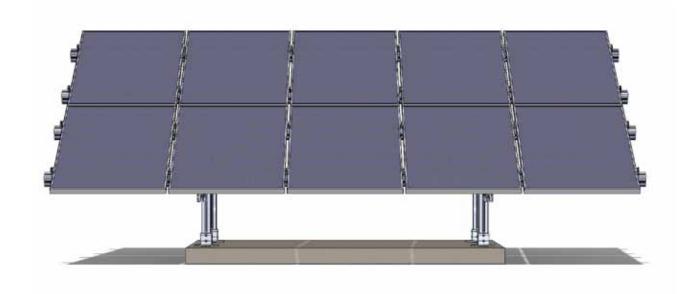


Mounting System "Hollow-Profile"



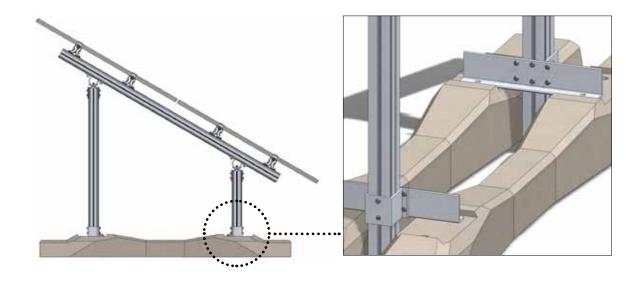
Mounting System "Concrete"

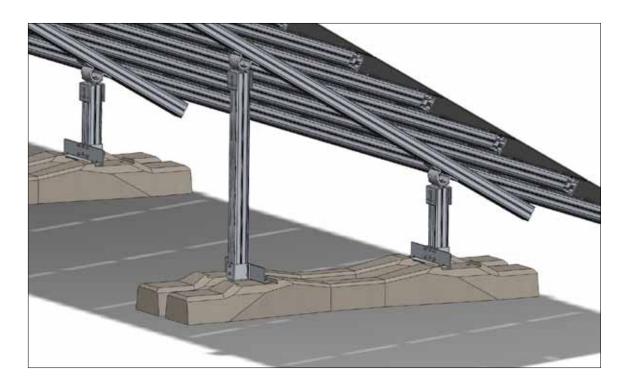




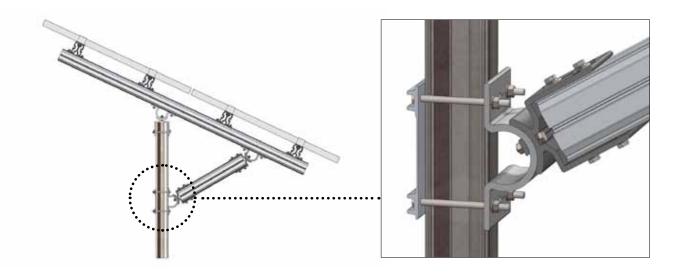


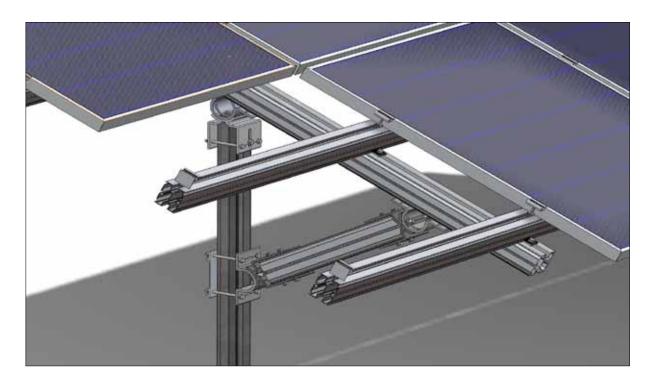
Mounting System "Sleeper"





Mounting System "Sigma-Pile"





Profinal Handelsgesellschaft mbH

Bunsenstraße 5 26389 Wilhelmshaven

T: 04421 7557970 F: 04421 7557979

E: info@profinal-aluminium.deI: www.profinal-aluminium.de

Stock:

An der Junkerei 48 M 26389 Wilhelmshaven T: 04421 5071755

As Partner of Company WASI we guarantee the following Qualities:









All information non-binding and subject to change. Misstakes, falsity and changes to reserve. Please notice the documentation of products.

