

# SOLAR FASTENER

## SOLAR FASTENER

For secure fastening of solar and photovoltaic systems

The REISSER stainless steel A2 solar fastener is very easy to install and is the prerequisite for exact adjustment of solar systems. With its technical approval Z-14.4-555 it guarantees tightness, proved load rating and maximum safety in installation.

The solar fastener is anchored in the substructure and transports all the incidental traction and compression forces in it. This prevents that the weight of the solar system as well as wind and snow loads being transferred to the thin sheeting. Therefore it avoids damage to the roof surface. The tightness of the connection is optimised by a top chord connection with saddle washer and sealing washer or umbrella sealing. Original facade fastening with solar fasteners guarantees that the roof sealing is maintained.

The REISSER solar fastener is available for timber (type A) or steel (type BZ) substructure with a self-tapping thread. The basis is the FABA type A sealing screw for timber substructure or type BZ for steel substructures. It is connected with a setscrew by a high quality welding process. A positive-locking connection is achieved together with hexagon nut, locking nut, washers, sealing washer and umbrella sealing or saddle washer.

The proved REISSER solar fastener should be used for all roofs with trapezoidal profiles, sandwich elements and corrugated fibre board coverings.

REISSER-Schraubentechnik GmbH is the specialist for maximum safety for the installation of your solar systems.

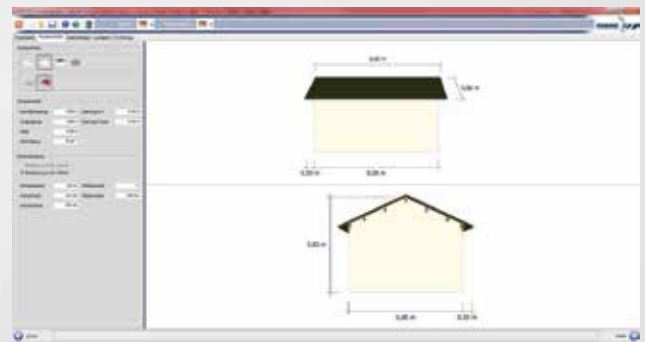


### REISSER

#### solar calculation software

The REISSER solar calculation software computes the number of solar fasteners necessary for your building project. You will

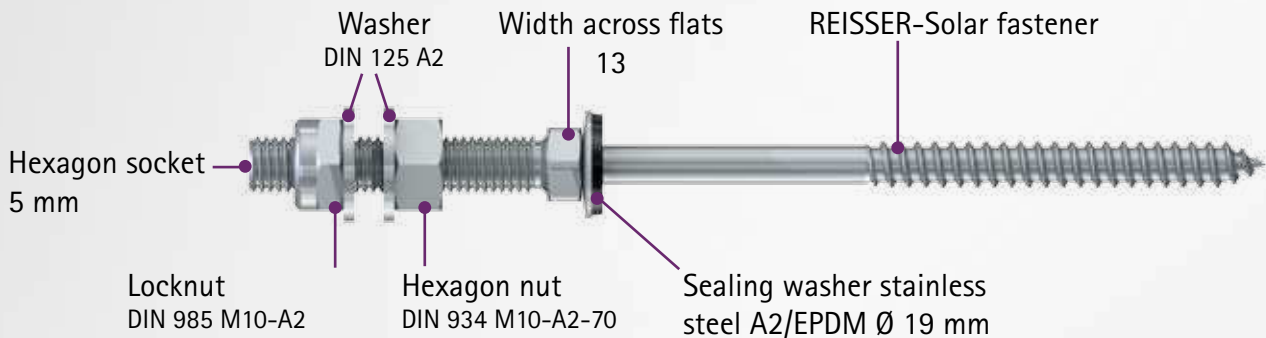
find the software on [www.reisser-screws.com](http://www.reisser-screws.com).



# SOLAR FASTENER

## Solar fastener for timber substructure

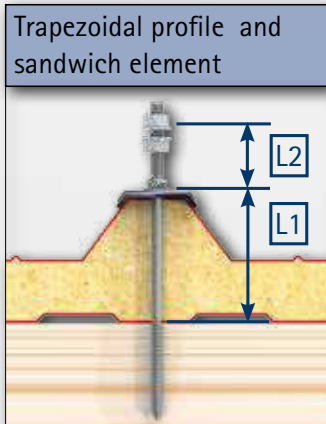
### TYPE A



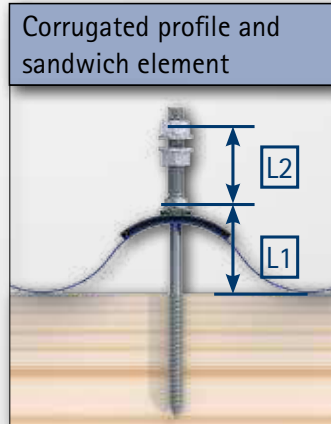
### Accessories depending on application



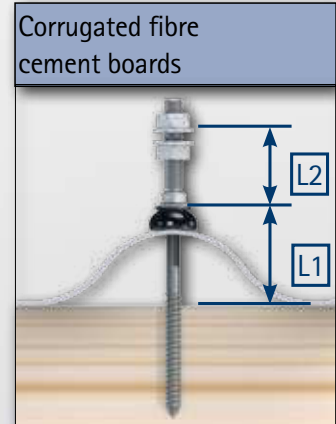
Saddle washer for trapezoidal profile (see chapter 4 „Saddle washers“, p.62)



Saddle washer for corrugated profile (see chapter 4 „Saddle washers“, p.63)



Umbrella sealing (see chapter 6 „Accessories“, p.88)



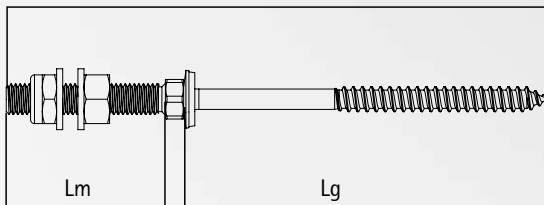
**L1** Clamping area    **L2** Adjustment height

Self-drilling screws  
Facade screws  
DSH-Set // FixFlex // FPS  
Saddle washers  
Solar  
Accessories  
Tools  
Anchors & heavy duty fixing systems  
Technical Approval  
GTC



## Solar fastener type A Stainless steel A2 RSB-A-8,4/M10 x Lm/Lg

Total length L



- With captive sealing washer stainless steel A2/EPDM Ø 19 mm
- With special slide coating
- With technical approval
- For fastening photovoltaic and solar installations
- For timber substructures
- Length of partial thread=70 mm

Designation	Ø mm	Lg/Lm mm	Total length L mm	Clamping area L1 mm	Item no.	Pack
RSB-A	8,4/M10 x	80/50	136	0 - 40	3876 V 098 100 080 5	20
	8,4/M10 x	100/50	156	20 - 60	3876 V 098 100 100 5	20
	8,4/M10 x	130/50	186	55 - 90	3876 V 098 100 130 5	20
	8,4/M10 x	150/50	206	75 - 110	3876 V 098 100 150 5	20
	8,4/M10 x	180/50	236	105 - 140	3876 V 098 100 180 5	20
	8,4/M10 x	200/50	256	125 - 160	3876 V 098 100 200 5	20
	8,4/M10 x	80/70	156	0 - 40	3876 V 098 100 084 5	20
	8,4/M10 x	100/70	176	20 - 60	3876 V 098 100 104 5	20
	8,4/M10 x	130/70	206	55 - 90	3876 V 098 100 134 5	20
	8,4/M10 x	150/70	226	75 - 110	3876 V 098 100 154 5	20
	8,4/M10 x	180/70	256	105 - 140	3876 V 098 100 184 5	20
	8,4/M10 x	200/70	276	125 - 160	3876 V 098 100 204 5	20

### Technical information:

- For timber substructure we recommend 6,0 mm (0,7 x D\*) for pre-drilling (D\* = nominal screw diameter)
- Recommended screw length: trapezoidal panel height/height of sandwich element + screw-in depth
- Minimum screw-in depth 34 mm (min. 4 x D\* - max. 12 x D\*)
- Doubling of shear load with additional aluminium angle bracket for fastening onto sandwich elements (see p. 76)



#### Please note:

You will find the matching saddle washer or umbrella sealing for your profile in chapter 4 „Saddle washers“ (pp. 62+63) and chapter 6 „Accessories“ (p. 88)

Different dimensions on request.



# SOLAR FASTENER

Self-drilling screws

Facade screws

DSH-Set // FixFlex // FPS

Saddle washers

Solar

Accessories

Tools

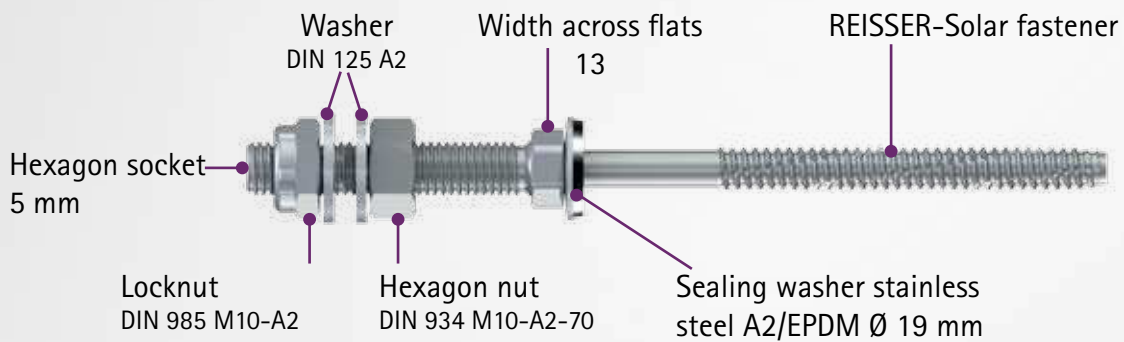
Anchors & heavy duty fixing systems

Technical Approval

GTC

## Solar fastener for steel substructure

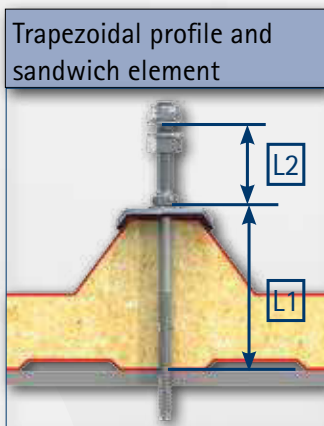
### TYPE BZ



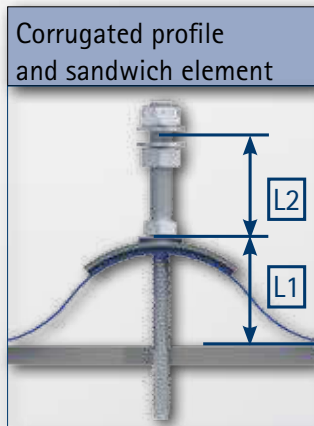
### + Accessories depending on application



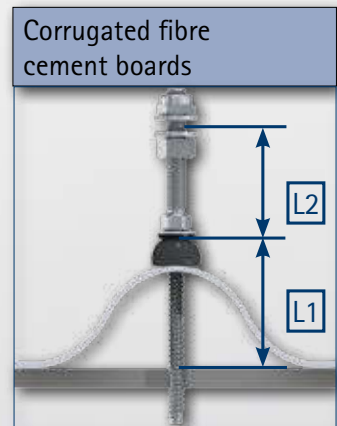
Saddle washer for trapezoidal profile (see chapter 4 „Saddle washers“, p.62)



Saddle washer for corrugated profile (see chapter 4 „Saddle washers“, p.63)



Umbrella sealing (see chapter 6 „Accessories“, p.88)

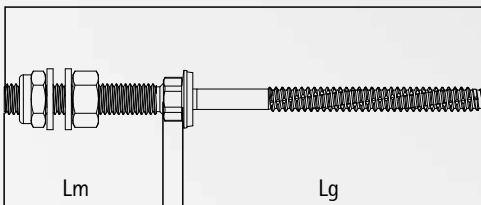


L1 Clamping area    L2 Adjustment height



## Solar fastener type BZ Stainless steel A2 RSB-Z-8,0/M10 x Lm/Lg

total length L



- With captive sealing washer stainless steel A2/EPDM Ø 19 mm
- With special slide coating
- With technical approval
- For fastening photovoltaic and solar installations
- For steel substructures
- Length of partial thread=65 mm

Designation	Ø mm	Lg/Lm mm	Total length L mm	Clamping area L1 mm	Item no.	Pack
RSB-Z	8,0/M10 x	80/50	136	15 - 60	3874 V 098 100 080 5	20
	8,0/M10 x	100/50	156	35 - 80	3874 V 098 100 100 5	20
	8,0/M10 x	125/50	181	60 - 105	3874 V 098 100 125 5	20
	8,0/M10 x	150/50	206	85 - 130	3874 V 098 100 150 5	20
	8,0/M10 x	160/50	216	95 - 140	3874 V 098 100 160 5	20
	8,0/M10 x	200/50	256	135 - 180	3874 V 098 100 200 5	20
	8,0/M10 x	80/70	156	15 - 60	3874 V 098 100 084 5	20
	8,0/M10 x	100/70	176	35 - 80	3874 V 098 100 104 5	20
	8,0/M10 x	125/70	201	60 - 105	3874 V 098 100 129 5	20
	8,0/M10 x	150/70	226	85 - 130	3874 V 098 100 154 5	20
	8,0/M10 x	160/70	236	95 - 140	3874 V 098 100 164 5	20
	8,0/M10 x	200/70	276	135 - 180	3874 V 098 100 204 5	20

### Technical information:

#### Pre-drilling table for substructure

Component II thickness mm (steel substructure)	1,5-5,0	6,0	8,0	≥10,0
Pre-drilling- Ø mm	6,8	7,0	7,2	7,4

- Recommended screw length (Lg): trapezoidal profile height/sandwich thickness + 20 mm
- Doubling of shear load with additional aluminium angle bracket for fastening onto sandwich elements (see p. 76)



#### Please note:

You will find the matching saddle washer or umbrella sealing for your profile in chapter 4 „Saddle washers“ (pp. 62+63) and chapter 6 „Accessories“ (p. 88)

Different dimensions on request.

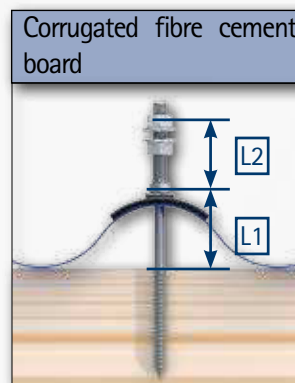
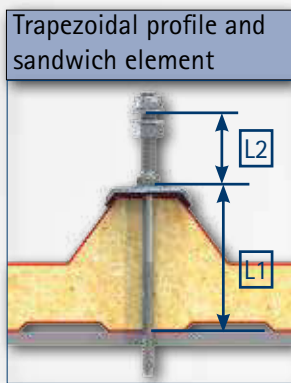
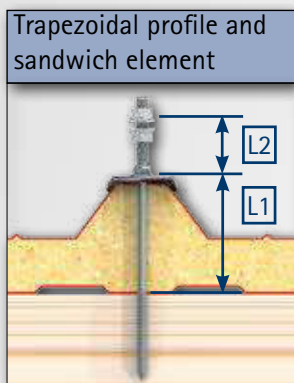
As a matter of principle, please pay attention to the data as specified in the technical approval Z-14.4-555



Self-drilling screws  
 Facade screws  
 DSH-Set // FixFlex // FPS  
 Saddle washers  
 Solar  
 Accessories  
 Tools  
 Anchors & heavy duty fixing systems  
 Technical Approval  
 GTC

# Fastening with RSB-A-8,4/M10 x L and RSB-Z-8,0/M10 x L

Table to determine the number of solar fasteners per sqm



Roof pitch in °	Wind zone 2 building height > 10 m < 18 m resp. wind zone 3 < 10 m // q ref = 0,80 kN/sqm												
	Snow load kN/sqm												
	0,65	0,85	1	1,1	1,25	1,5	1,75	2	2,25	2,5	2,75	3	
10	0,89	0,89	0,89	0,89	0,89	0,89	0,95	1,06	1,17	1,28	1,40	1,51	
20	0,89	0,89	0,89	0,89	0,94	1,05	1,15	1,26	1,36	1,47	1,61	1,76	
30	0,89	0,89	0,89	0,89	0,99	1,16	1,34	1,52	1,71	1,90	2,10	2,31	
40	0,90	0,90	0,90	0,90	0,90	0,98	1,11	1,25	1,39	1,53	1,67	1,82	
50	0,91	0,91	0,91	0,91	0,91	0,91	0,91	0,91	0,91	0,95	1,03	1,10	
60	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	0,92	

Roof pitch in °	Wind zone 2 building height > 18 m < 25 m resp. wind zone 3 > 10 m < 25 // q ref = 1,10 kN/sqm												
	Snow load kN/sqm												
	0,65	0,85	1	1,1	1,25	1,5	1,75	2	2,25	2,5	2,75	3	
10	1,17	1,17	1,17	1,17	1,17	1,17	1,17	1,17	1,20	1,31	1,42	1,54	
20	1,17	1,17	1,17	1,17	1,17	1,17	1,25	1,36	1,46	1,57	1,68	1,81	
30	1,18	1,18	1,18	1,18	1,18	1,20	1,38	1,57	1,43	1,96	2,16	2,36	
40	1,18	1,18	1,18	1,18	1,18	1,18	1,18	1,29	1,43	1,58	1,72	1,87	
50	1,19	1,19	1,19	1,19	1,19	1,19	1,19	1,19	1,19	1,19	1,19	1,19	
60	1,21	1,21	1,21	1,21	1,21	1,21	1,21	1,21	1,21	1,21	1,21	1,21	

**Please note:**

There are only slight deviations between timber and steel substructure, therefore the table above is valid for both substructures.

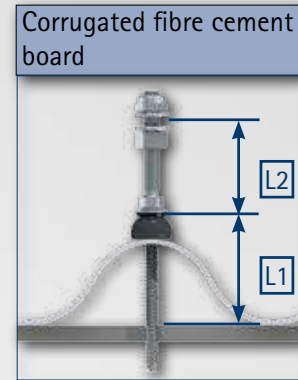
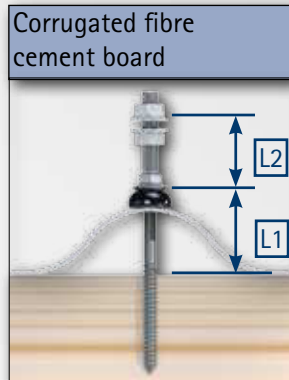
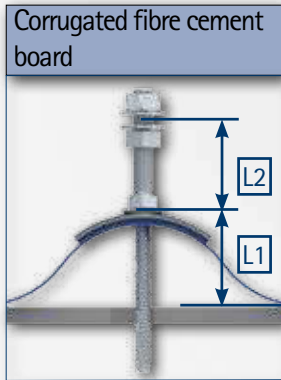
The following values have been taken:

- Screw-in depth in timber substructure = 70 mm
- Screw-in depth in steel substructure = ca 20 mm
- Roofing profile steel thickness = 0,63 mm
- Weight for modul and rails per sqm = 15 kg
- Profile height L1 = 60 mm
- Mounting dimension over L2 = 30 mm

Compression and tensile forces were transferred through the solar fastener into the substructure. Permissible load is determined by technical approval Z-14.4-555.

# Fastening with RSB-A-8,4/M10 x L and RSB-Z-8,0/M10 x L

Table to determine the number of solar fasteners per sqm



Roof pitch in °	Wind zone 1 building height < 10 m // q ref = 0,50 kN/sqm											
	Snow load kN/sqm											
	0,65	0,85	1	1,1	1,25	1,5	1,75	2	2,25	2,5	2,75	3
10	0,49	0,51	0,58	0,62	0,69	0,80	0,91	1,02	1,13	1,24	1,36	1,47
20	0,55	0,63	0,69	0,74	0,80	0,91	1,01	1,12	1,25	1,39	1,54	1,69
30	0,55	0,78	0,68	0,84	0,94	1,11	1,28	1,46	1,67	1,83	2,03	2,23
40	0,51	0,59	0,67	0,72	0,80	0,93	1,06	1,19	1,33	1,47	1,61	1,75
50	0,52	0,52	0,52	0,52	0,54	0,61	0,68	0,76	0,83	0,9	0,97	1,05
60	0,53	0,53	0,53	0,53	0,53	0,53	0,53	0,53	0,53	0,53	0,53	0,53

Roof pitch in °	Wind zone 1 building height > 10 m < 18 m resp. wind zone 2 < 10 m // q ref = 0,65 kN/sqm											
	Snow load kN/sqm											
	0,65	0,85	1	1,1	1,25	1,5	1,75	2	2,25	2,5	2,75	3
10	0,66	0,66	0,66	0,66	0,71	0,82	0,93	1,04	1,15	1,26	1,37	1,48
20	0,66	0,69	0,75	0,80	0,86	0,97	1,07	1,18	1,28	1,42	1,57	1,72
30	0,67	0,70	0,79	0,86	0,96	1,13	1,31	1,49	1,67	1,86	2,06	2,26
40	0,68	0,68	0,69	0,74	0,82	0,95	1,08	1,22	1,36	1,49	1,64	1,78
50	0,69	0,69	0,69	0,69	0,69	0,69	0,70	0,78	0,85	0,92	1,00	1,07
60	0,70	0,70	0,70	0,70	0,70	0,70	0,70	0,70	0,70	0,70	0,70	0,70

**Please note:**

There are only slight deviations between timber and steel substructure, therefore the table above is valid for both substructures.

The following values have been taken:

- Screw-in depth in timber substructure = 70 mm
- Screw-in depth in steel substructure = ca 20 mm
- Roofing profile steel thickness = 0,63 mm
- Weight for modul and rails per sqm = 15 kg
- Profile height L1 = 60 mm
- Mounting dimension over L2 = 30 mm

Compression and tensile forces were transferred through the solar fastener into the substructure. Permissible load is determined by technical approval Z-14.4-555.

