

Schletter Solar Mounting Systems



Component Overview 2016/17



 **SCHLETTER**

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Component Overview

General information:

Production-specific tolerances are to be considered with all dimension specifications.

On customer request, all companies of the Schletter Group can purchase goods from the Schletter factories in Germany, China (Shanghai) or the USA. All these three factories have been certified according to ISO 9001. Further details about the certifications are available on the respective Schletter websites.

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FASTENING ELEMENTS

Roof hooks

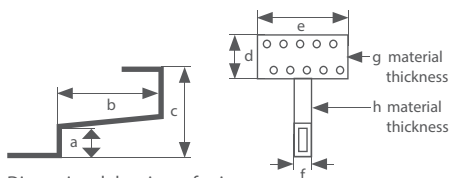
Corrugated roof fastening

Sheet metal roof fastening

FixE / FixT

Roof Hooks

Fastening Elements



Dimensional drawing referring to the charts



Assembly diagram

Overview - Roof hooks

- All roof hooks are made of high-grade (stainless) steel
- Adjustable hooks are fully pre-assembled

Wood screws, hexagon nuts (M10x25 mm) and flange nuts must be ordered separately!

Also available in black on request!

Roof hooks for light snow loads and normal wind loads

- In stainless steel quality
- Welded
- Symmetric bar arrangement

100002-000 Roof hook Eco G

	a	b	c	d	e	f	g	h
mm	45	110	132	60	150	30	5	5

100002-001 Roof hook Eco G KlickTop

discontinued!



KlickTop



KlickTop

100003-000 Roof hook Eco V (adjustable)

	a	b	c	d	e	f	g	h
mm	45	105	120-147	60	150	30	5	5

100003-001 Roof hook Eco V KlickTop

discontinued!

Roof hooks for heavy snow loads and higher wind loads

- In stainless steel quality
- Welded
- Symmetric bar arrangement
- Various sizes available for improved rear ventilation

100004-000 Roof hook Eco S 135 (normal height 135 mm)

	a	b	c	d	e	f	g	h
mm	45	110	135	60	150	35	5	6

100004-001 Roof hook Eco S 135 KlickTop

discontinued!



KlickTop



KlickTop

100007-000 Roof hook Eco S 165 (special height 165 mm)

	a	b	c	d	e	f	g	h
mm	45	110	165	60	150	35	5	6

100013-001 Roof hook Eco S 165 KlickTop

discontinued!



KlickTop

100009-000 Roof hook Eco SV (extra stable, adjustable)

	a	b	c	d	e	f	g	h
mm	45	110	125-150	60	150	35	5	6

100009-001 Roof hook Eco SV KlickTop

discontinued!

Special designs of the roof hook Eco S 135

100006-000 Roof hook Eco S 135 35 mm

For low battens a = 35 mm

100006-001 Roof hook Eco S 135 35 mm KlickTop

For low battens a = 35 mm

discontinued!

100005-000 Roof hook Eco S 135 bar 130

For large tile formats b = 130 mm

Roof hook for particularly heavy snow loads

- In stainless steel quality
- Welded
- Symmetric bar arrangement



KlickTop

100010-000 Roof hook VaMax

	a	b	c	d	e	f	g	h
mm	45	120	145	80	180	35	6	8

100010-001 Roof hook VaMax KlickTop

discontinued!

**100011-000** Roof hook VaMax (adjustable)

	a	b	c	d	e	f	g	h
mm	45	120	125-165	80	180	35	6	8

Roof hook Universal

- In stainless steel quality
- Variable bar arrangement
- Adjustable at the front and rear
- Middle bar can be set in three different positions



KlickTop

100001-000 Roof hook Universal (pantile "Frankfurter Pfanne" or interlocking tile)

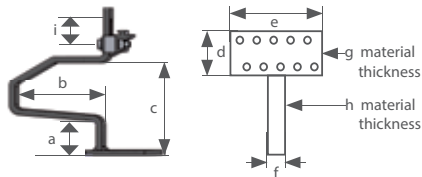
	a	b	c	d	e	f	g	h
mm	42-52	115	102-135	74	150	30	5	6

100001-001 Roof hook Universal KlickTop

discontinued!

Roof Hooks

Fastening Elements



Dimensional drawing referring to the charts



Roof hooks Rapid²⁺

- In stainless steel quality
- Welded
- Symmetric bar arrangement
- Pre-assembled

101001-000 Roof hook Rapid²⁺ 45

	a	b	c	d	e	f	g	h	i
mm	45	110	118	60	150	35	5	6	30

Comparable to: Eco S 100004-000, 100004-001, 100009-000

101001-001 Roof hook Rapid²⁺ 45V

	a	b	c	d	e	f	g	h	i
mm	45	110	118	60	150	35	5	6	30

Like 101001-000, but for vertical rail mounting (in portrait)

Comparable to: Eco S 100004-000, 100004-001, 100009-000

101002-000 Roof hook Rapid²⁺ 35

	a	b	c	d	e	f	g	h	i
mm	35	110	108	60	150	35	5	6	30

Like 101001-000, but 35 mm / 1.38 inch bracket height for low battens

Comparable to: Eco S 100006-000

101003-000 Roof hook Rapid²⁺ 55

	a	b	c	d	e	f	g	h	i
mm	55	110	128	60	150	35	5	6	30

Like 101001-000, but 55 mm / 2.17 inches bracket height for high battens or large tile formats

101004-000 Roof hook Rapid²⁺ Universal

	a	b	c	d	e	f	g	h	i
mm	40-52	110	115-127	74	150	35	5	6	30

Universally adjustable, for vertical rail mounting (in portrait)

Comparable to: Universal 100001-000

101005-000 Roof hook Rapid²⁺ Max

	a	b	c	d	e	f	g	h	i
mm	45	120	125	80	180	35	6	8	30

Like 101001-000, but with 35x8 mm / 1.38x0.31 inch bar height for heavy snow loads

Comparable to: VaMax 100010-000, 100010-001, 100011-000, 100011-001



101005-001 Roof hook Rapid²⁺ Max 150

	a	b	c	d	e	f	g	h	i
mm	43	150	125	80	180	35	6	8	30

Like 101005-000, but with extended bar (size b) for large tile formats

Comparable to: VaMax 100010-000, 100010-001, 100011-000, 100011-001



101006-000 Roof hook Rapid²⁺ MaxV

	a	b	c	d	e	f	g	h	i
mm	45	120	125	80	180	35	6	8	30

Like 101005-000, but for vertical rail mounting (in portrait)

Comparable to: VaMax 100010-000, 100010-001, 100011-000, 100011-001

Roof hooks Rapid 2L

Roof hooks for system roofs made up of insulating roof elements



101008-000 Roof hook Rapid 2L

	a	b	c	d	e	f	g	h	i
mm	20	127	74	88	35	35	6	6	30

Roof hooks Rapid²⁺ Slate

- Quick and easy assembly
- Suitable for many types of shingles
- Covering plate with elastic corrugated ribbon
- Direct transmission of load into the rafters



102002-001 Roof hook Rapid²⁺ Slate 75 Kit

for slate overlaps up to 75 mm

102002-002 Roof hook Rapid²⁺ Slate 125 Kit

for slate overlaps up to 125 mm

Roof Hooks

Fastening Elements



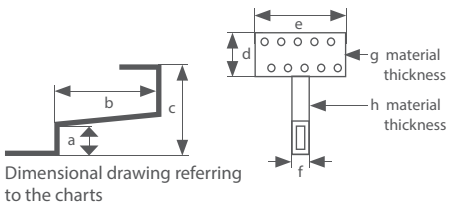
Alu-Tile substitute tile made of aluminium

Replaces a complete roof tile. Particularly suited to areas with high snow loads, incl. system hook with Rapid attachment.

Comparison list (sorted by tile manufacturer)

	Item number	Non-coated aluminium
Braas / Monier		
Pantile "Frankfurter Pfanne"	103003-000	Alu-Tile sheet metal substitute tile H+V type000 kit
Taunus pantile	103003-000	Alu-Tile sheet metal substitute tile H+V type000 kit
Harzer pantile	103003-000	Alu-Tile sheet metal substitute tile H+V type000 kit
Double-S tile	103003-000	Alu-Tile sheet metal substitute tile H+V type000 kit
Topas 11V (Batten distance: not less than 330 mm!)	103003-009	Alu-Tile sheet metal substitute tile H+V type009 kit
Topas 13V	103003-009	Alu-Tile sheet metal substitute tile H+V type009 kit
Tegalit ¹	103003-014	Alu-Tile sheet metal substitute tile H+V type014 kit
Harzer pantile 7 (BIG)	103003-017	Alu-Tile sheet metal substitute tile H+V type017 kit
Rubin 13V	103003-024	Alu-Tile sheet metal substitute tile H+V type024 kit
Hainstädter Rubin 11V	103003-026	Alu-Tile sheet metal substitute tile H+V type026 kit
Heisterholzer Rubin 11V	103003-026	Alu-Tile sheet metal substitute tile H+V type026 kit
Turmalin	103003-028	Alu-Tile sheet metal substitute tile H+V type028 kit
Bramac		
Classic / Donau	103003-000	Alu-Tile sheet metal substitute tile H+V type000 kit
Ceda		
Mareno / Asimmetrica	103003-000	Alu-Tile sheet metal substitute tile H+V type000 kit
Creaton		
Rustico interlocking tile	103003-001	Alu-Tile sheet metal substitute tile H+V type001 kit
Domino	103003-003	Alu-Tile sheet metal substitute tile H+V type003 kit
MZ3	103003-005	Alu-Tile sheet metal substitute tile H+V type005 kit
Gratus	103003-007	Alu-Tile sheet metal substitute tile H+V type007 kit
Ratio	103003-009	Alu-Tile sheet metal substitute tile H+V type009 kit
Magnum ¹	103003-016	Alu-Tile sheet metal substitute tile H+V type016 kit
Rapido	103003-019	Alu-Tile sheet metal substitute tile H+V type019 kit
Premion	103003-020	Alu-Tile sheet metal substitute tile H+V type20 kit
Futura	103003-020	Alu-Tile sheet metal substitute tile H+V type20 kit
Harmonie	103003-024	Alu-Tile sheet metal substitute tile H+V type024 kit
Maximum	103003-025	Alu-Tile sheet metal substitute tile H+V type025 kit
Ergoldsbacher		
Interlocking tile	103003-002	Alu-Tile sheet metal substitute tile H+V type002 kit
Large interlocking tile	103003-003	Alu-Tile sheet metal substitute tile H+V type003 kit
Erlus E58 / S	103003-004	Alu-Tile sheet metal substitute tile H+V type004 kit
Erlus large interlocking tile XXL	103003-006	Alu-Tile sheet metal substitute tile H+V type006 kit
Erlus retro-style pantile XXL	103003-006	Alu-Tile sheet metal substitute tile H+V type006 kit
Erlus Karat ¹	103003-008	Alu-Tile sheet metal substitute tile H+V type008 kit
Erlus E58 plus ¹	103003-013	Alu-Tile sheet metal substitute tile H+V type013 kit
Erlus Linea	103003-015	Alu-Tile sheet metal substitute tile H+V type015 kit
Forma	103003-022	Alu-Tile sheet metal substitute tile H+V type022 kit
Eternit (fibre cement)		
Göteborg / Heidelberg	103003-000	Alu-Tile sheet metal substitute tile H+V type000 kit
Jungmeier		
Interlocking tile Mondo 15	103003-002	Alu-Tile sheet metal substitute tile H+V type002 kit
Koramic		
Migeon Tuile Actua (batten distance: not less than 345mm!)	103003-023	Alu-Tile sheet metal substitute tile H+V type023 kit
Nelskamp		
S-pantile	103003-000	Alu-Tile sheet metal substitute tile H+V type000 kit
Finkenberger pantile	103003-010	Alu-Tile sheet metal substitute tile H+V type010 kit
Nibra F7 ¹	103003-021	Alu-Tile sheet metal substitute tile H+V type021 kit
Redland		
Stoneworld II	103003-030	Alu-Tile sheet metal substitute tile H+V type030 kit
Rupp Keramik		
Rubin	103003-020	Alu-Tile sheet metal substitute tile H+V type020 kit
Swiss manufacture - ZZWancor Swiss		
Flat interlocking tile Jura 13	103003-009	Alu-Tile sheet metal substitute tile H+V type009 kit
Züricher Ziegelei Istigh. 290	103003-009	Alu-Tile sheet metal substitute tile H+V type009 kit
Flat interlocking tile Fama	103003-009	Alu-Tile sheet metal substitute tile H+V type009 kit
Pantile Pada 13	103003-011	Alu-Tile sheet metal substitute tile H+V type011 kit
Swiss manufacture - Istighofener Swiss		
Double interlock 425 x 250 mm	103003-012	Alu-Tile sheet metal substitute tile H+V type012 kit
Tejas Borja		
TB-12	103003-029	Alu-Tile sheet metal substitute tile H+V type029 kit
Tondach		
SULM shifting tile	103003-018	Alu-Tile sheet metal substitute H + V tile type018 kit
Biberfalz (extruded interlocking tile)	103003-031	Alu-Tile sheet metal substitute tile H+V type031 kit

¹ Additional measures: The tiles must be slightly modified! Please also read our mounting instruction supplements attached to the mounting instructions. Prices vary!



Roof hook plain tile "Biberschwanz"

In stainless steel quality

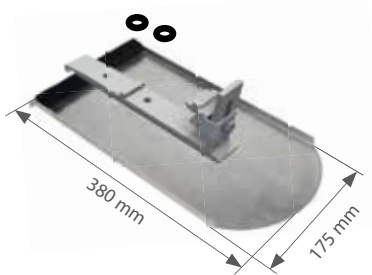
Please check if the hook design is suitable for the respective roof material.



103001-001 Roof hook plain tile (basic)

	a	b	c	d	e	f	g	h
mm	45	255	125	60	30	30	5	5

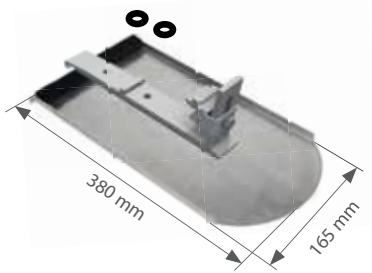
Design made of high-grade (stainless) steel 1.4301



103014-000 Plain tile fastening kit Rapid 180 x 380

	a	b	c	d	e	f	g	h
mm	--	228	--	--	35	35	--	7

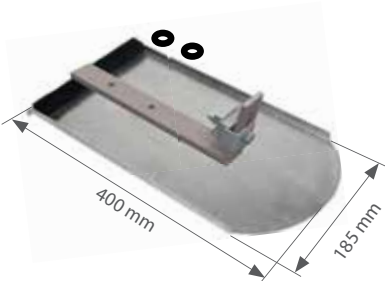
Plain tile (Biberschwanz) aluminium substitute tile with aluminium system hook
Suitable for plain tile (Biberschwanz) format 180/380 mm



103014-001 Plain tile fastening kit Rapid 170 x 380

	a	b	c	d	e	f	g	h
mm	--	228	--	--	35	35	--	7

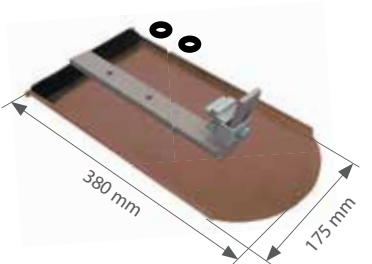
Plain tile (Biberschwanz) aluminium substitute tile with aluminium system hook
Suitable for plain tile (Biberschwanz) format 170/380 mm



103014-002 Plain tile fastening kit Rapid 190 x 400

	a	b	c	d	e	f	g	h
mm	--	250	--	--	35	35	--	6

Plain tile (Biberschwanz) aluminium substitute tile with system hook made of high-grade (stainless) steel 1.4301
Suitable for plain tile (Biberschwanz) format 190/400 mm



103014-010 Plain tile fastening kit Rapid copper 180 x 380

	a	b	c	d	e	f	g	h
mm	--	250	--	--	35	35	--	6

Plain tile (Biberschwanz) copper substitute plate with system hook made of high-grade (stainless) steel 1.4301
Suitable for plain tile (Biberschwanz) format 180/380 mm

Roof Hooks

Fastening Elements



SlatePlan for fastening with hanger bolts

SlatePlan can be used on roofs with shingle covering, made of e.g. bitumen (asphalt shingle), fibre cement or slate, for connecting hanger bolt systems.

Accessories: see **Corrugated Roof Fastening (page 16)**

109017-000 SlatePlan with seal 270 x 200 x 0.5 mm

109017-001 SlatePlan with seal 370 x 200 x 0.5 mm

109017-002 SlatePlan with seal 580 x 200 x 0.5 mm

Roof hooks for metal tiles (for example Prefa)

- In stainless steel quality
- Without plate

The roof pitch is the main criterion to determine the optimum type of mounting for slate roofs!



KlickTop

102001-000 Roof hook Slate (basic)

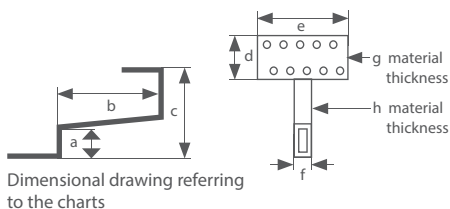
	Length	Height	Width	Thickness
mm	235	75	30	5

102001-003 Roof hook Slate KlickTop

discontinued!

102001-007 Roof hook for metal shingles V 206 mm

	Length	Height	Width	Thickness
mm	206	70-87	50/30	5/6



Roof hook PP

For purlin roofs with pan-tile roofing

Due to the arrangement of purlins, this hook must generally be combined with a cross rail system.



109004-000 Roof hook system PP Purlin Pan

	a	b	c	d	e	f	g	h
mm	50	110	135	200	50	35	5	6

Roof hook Spanish tile

- For special tile designs - Spanish tile
- Particularly in South European countries.

109005-000 Roof hook Spanish tile - purlin (adjustable)

	a	b	c	d	e	f	g	h
mm	100-130	110	185-215	200	50	35	5	6

109005-001 Roof hook Spanish tile - rafter (adjustable)

	a	b	c	d	e	f	g	h
mm	100-130	110	185-215	60	150	35	5	6

Designs for rafters or concrete



Roof hook accessories

109007-012 Shim 2 mm plastic

109007-015 Shim 5 mm plastic

Spacer for roof hook mounting (to be applied in pairs)

973000-017 Spacer plate 2 mm EcoG / EcoS / Rapid Standard

973000-018 Spacer plate 5 mm EcoG / EcoS / Rapid Standard

973000-019 Spacer plate 2 mm VaMax / Rapid Max

973000-020 Spacer plate 5 mm VaMax / Rapid Max

Spacer for roof hook mounting

973000-683 Roof hook sealing tape grey TP600 10m



Roof Hooks

Fastening Elements



Application example



109008-000 KlickTop attachment for roof hooks

Designed particularly for special roof hooks which are not available as KlickTop version.

Not appropriate for roof hooks on bitumen (asphalt shingle)!



Application example



109009-002 Plastic spacer bushing custom cut

- For on-rafter insulation
- Applicable as a spacer for on-rafter insulations in combination with extra long fastening bolts
- Plastic design prevents thermal bridges
- Please specify desired length when ordering
- Screws/bolts must be ordered separately!
- Consider the reduced permissible load per hook!

109010-000 Additional angle bracket Iso07

for roof hook fastening - Iso07 system

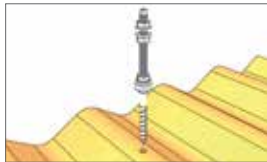
Technical data

Material	Roof hooks and screws/bolts: high-grade (stainless) steel 1.4301; Spacers, compensating spacer plates, KlickTop and Rapid rail clamping: aluminium; Sheet metal parts: high-grade (stainless) steel 1.4301
Planning aid	Configuration and structural dimensioning with the AutoCalculator Easy and the Schletter Configurator
Structural analysis	Structural analysis in accordance with current national standards (in Germany DIN EN 1991, EC1). Structural analysis annex for the dimensioning of the number of required fastening points, based on the structural analysis. Please make sure you observe the structural analysis information in each case! The verification of the adhesive force of the roof to the substructure is not included in the general structural analysis annexes!

Further information at www.schletter.eu

Corrugated Roof Fastening

Fastening Elements



Assembly diagram



Overview of fasteners for corrugated roofs

For corrugated eternit or trapezoidal sheet metal roofs, so-called corrugated roof fastening kits are used, comprising a special hanger bolt with EPDM gasket and a mounting plate. Please note that the thread lengths can deviate from the corresponding figures.

110010-200 Hanger bolt kit 10 x 200 assembled M10 x 200 mm

110012-200 Hanger bolt kit 12 x 200 assembled M12 x 200 mm

110012-250 Hanger bolt kit 12 x 250 assembled M12 x 250 mm

110012-300 Hanger bolt kit 12 x 300 assembled M12 x 300 mm

Hanger bolt kit, compiled to customer requirements, with vulcanized EPDM gasket (UV-resistant) and 3 high-grade steel flange nuts (V4A), assembled

111110-200 Corrugated roof fastening kit 10 x 200 KlickTop M10 x 200 mm

111112-200 Corrugated roof fastening kit 12 x 200 KlickTop M12 x 200 mm

111112-250 Corrugated roof fastening kit 12 x 250 KlickTop M12 x 250 mm

KlickTop corrugated roof fastening kit incl. KlickTop kit, hanger bolt with vulcanized EPDM gasket (UV-resistant) and 3 high-grade steel flange nuts (V4A)

111312-200 Corrugated roof Plus 12x200 M12 x 200 mm

111312-250 Corrugated roof Plus 12x250 M12 x 250 mm

111312-300 Corrugated roof Plus 12x300 M12 x 300 mm

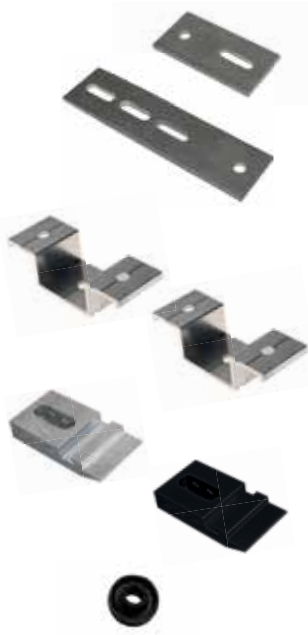
Corrugated roof Plus (WelldachPlus) fastening kit incl. Rapid attachment, hanger bolt with vulcanized EPDM gasket (UV-resistant), thread sealant and 3 high-grade steel flange nuts (V4A)

111412-200 Twin fastening kit for corrugated roofs Plus M12 x 200 mm

111412-250 Twin fastening kit for corrugated roofs Plus M12 x 250 mm

111412-300 Twin fastening kit for corrugated roofs Plus M12 x 300 mm

Twin fastening kit for corrugated roofs incl. Rapid attachment, hanger bolt with vulcanized EPDM gasket (UV-resistant), thread sealant and 6 high-grade steel flange nuts (V4A), suitable for fibre cement plates or "Berliner Welle" 133/177 mm



119002-000	Mounting plate for hanger bolt M10 / M12 For hanger bolts M10 / M12, individual, aluminium 120 x 60 x 6 mm
119003-000	Twin mounting plate for hanger bolts M10 / M12 For hanger bolts M10 / M12, individual, aluminium Extra stable design
119014-001	Top-hat section 50mm long d11 d11 d11 For hanger bolts M10 (center hole), individual, aluminium Center hole: 11 mm, outer holes: 11 mm
119014-000	Top-hat section 50mm long d11 d13 d11 For hanger bolts M12 (center hole), individual, aluminium Center hole: 13 mm, outer holes: 11 mm
119001-000	KlickTop attachment for hanger bolt For hanger bolts M10 / M12, individual, aluminium
119001-900	KlickTop attachment for hanger bolt, black anodized For hanger bolts M10 / M12, individual, aluminium
973000-002	EPDM seal for hanger bolt M10 / M12 EPDM, UV-resistant

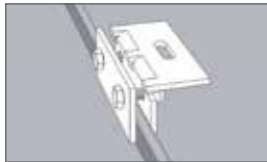
Technical data

Material	Screws/bolts: high-grade (stainless) steel 1.4301 Mounting plate / KlickTop attachment: aluminium Rubber seal: vulcanized EPDM gasket (UV-resistant)
Planning aid	Configuration and structural dimensioning with the AutoCalculator Easy and the Schletter Configurator
Structural analysis	Structural analysis in accordance with current national standards (in Germany DIN EN 1991, EC1). Structural analysis annexes on the dimensioning of the number of required fastening points, based on structural calculations. Please make sure you observe the structural analysis information in each case! The verification of the adhesive force of the roof to the substructure is not included in the general structural analysis annexes!

Further information at www.schletter.eu

Fastening on Sheet Metal Roofs

Fastening Elements



Assembly diagram

Overview of clamps for sheet metal roofs

For almost every type of application!

Please note: Please limit the tightening torque to avoid deformation of the standing seams and to ensure that thermal expansion of the metal sheets is not impeded!

Abbreviations

AL = Aluminium clamp
 VA = High grade steel clamp
 KK = Klick channel e.g. for KlickTop cross connector
 KT = with KlickTop connector
 Rapid = for Rapid module clamps
 * = general technical approval has been applied for



For KlickTop

112001-000 Seam clamp 503 VA for standing seam roof

Please note: In case of roofs made of titanium zinc sheet metal, please verify that the standing seams have sufficient load-bearing capacity!

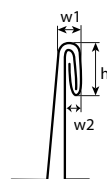


For KlickTop

112001-001 Seam clamp 503 AL KK for standing seam roof

112001-010 Seam clamp 504 AL KK for standing seam roof

Especially suitable for double lock standing seam roofs made of titanium zinc sheet metal



Possible dimensions of the seam (see dimension drawing on the left)
 $h = 11 - 13 \text{ mm}$, $w1 = 4 - 6 \text{ mm}$, $w2 = \text{max. } 3 \text{ mm}$

The seam clamp 504 has been developed in cooperation with the company Rheinzink for double lock standing seam roofs made of titanium zinc sheet metal and has been confirmed by Rheinzink as a good solution. Profiles (rails) that are fastened to standing seam clamps must not exceed a length of about 3 meters without thermal separation.



For KlickTop

112002-000 Seam clamp 510 AL for KalZip and similar designs

For KalZip, Bemo, Monteco Eurorib E500 and similar designs



For KlickTop

112002-002 Seam clamp 510 AL KK for KalZip and similar designs

112003-000 Seam clamp 520 AL for Zambelli RibRoof465

For Zambelli RibRoof, design width 465 and similar designs

112003-001 Seam clamp 520 VA for Zambelli RibRoof465

112003-002 Seam clamp 520 AL KK for Zambelli RibRoof465



For KlickTop

112004-000 Seam clamp 522 AL for Zambelli RibRoof500
For Zambelli RibRoof, design width 500 and similar designs

112004-001 Seam clamp 522 AL KK for Zambelli RibRoof500

112005-000 Seam clamp 522 VA for Zambelli RibRoof500



For KlickTop

112006-000 Seam clamp 524 AL for Fischer KlipTec52-400*
For Fischer KlipTec 52/400
and similar designs

112006-001 Seam clamp 524 AL KK for Fischer KlipTec52-400*



112007-000 Seam clamp 525 VA for Domico Domitec*
For Domico and similar designs



112010-000 Seam clamp 530 VA KT for Riverclack
For Riverclack and similar designs



112010-002 Seam clamp 530 VA Rapid for Riverclack
For Riverclack and similar designs



112012-002 Seam clamp 540 AL KK for KlipLok 700/406
For KlipLok 700 HiStrength, Classic 700, 406
and similar designs



112014-000 Seam clamp 550 AL KK Universal
For seams of max. 47 mm width and 25 mm height



129004-000 KlickTop cross connector kit M8
With bolts, Klick insert and square nut for Klick groove M8
for the mounting of rails to the standing seam clamps using
KlickTop



129063-000 Rapid cross connector
Completely pre-assembled for Klick groove M8
for cross rail system

Fastening on Sheet Metal Roofs

Fastening Elements



Assembly diagram

Trapezoidal clamp Fix2000

The universal fastening for trapezoidal sheet metal for steel plates starting from a thickness of 0.55 mm and for aluminium plates starting from a thickness of 0.8 mm; Also available for steel plates and aluminium plates starting from 0.5 mm; Customized production (the measurement checklist is available for download)! **Instructions for use should be carefully observed!**



113002-001 Fix2000 KlickTop with seal

Design with glued-in EPDM rubber seal
Incl. 4 sheet metal screws

113002-050 Fix2000 KlickTop - Metecno G4

Design with glued-in EPDM rubber seal
Incl. 4 sheet metal screws

113002-051 Fix2000 KlickTop - Fischer Therm/Fireproof

Design with glued-in EPDM rubber seal
Incl. 4 sheet metal screws



113001-001 Fix2000 Standard with rubber seal

Design with glued-in EPDM rubber seal
Incl. 4 sheet metal screws and 1 screw kit M10



973000-014 EPDM rubber seal for do-it-yourself assembly

10 m roll (48 mm wide)

119009-000 Fix2000 gauge

For measuring trapezoidal sheet dimensions

VarioFix System

The universal fastening for trapezoidal steel and aluminium sheet metal starting from a thickness of 0.5 mm;

Instructions for use should be carefully observed!



113009-100 SingleFix-V Solo pair kit

(2 x SingleFix-V Solo, 4 sheet metal screws)

For use with e.g. mounting rail Solo

113009-103 SingleFix-V Solo 20 pair kit - for low bead heights starting from 20 mm

113009-104 SingleFix-V Solo pair kit - Fischer



113009-101 SingleFix-V Profi pair kit

(2 x SingleFix-V Solo, 4 sheet metal screws)

For use with e.g. mounting rail Profi

113009-105 SingleFix-V Solo pair kit - Fischer



113009-205 SingleFix-V Light mounting kit

(2 x SingleFix-V Solo, 4 sheet metal screws,

Rail profile EcoLight 450 mm)

113009-206 SingleFix-V Light 20 mounting kit - for low bead heights starting from 20 mm



113009-200 SingleFix-V Solo mounting kit

(2 x SingleFix-V Solo, 4 sheet metal screws, Rail profile Solo 450 mm)

113009-202 SingleFix-V Solo 20 mounting kit - for low bead heights starting from 20 mm

113009-203 SingleFix-V Solo mounting kit - Fischer



113011-100 SingleFix-HU kit

(2 x SingleFix-V Solo, 4 sheet metal screws, SingleFix-HU rail)

113011-101 SingleFix-HU 20 kit - for low bead heights starting from 20 mm

113011-102 SingleFix-HU kit - Fischer



119015-002 Punched mounting tape 6 - 50 m

For connecting individual clamps as a potential connection or for fastening the string cabling if mounting rails cannot be deployed

Fastening on Sheet Metal Roofs

Fastening Elements

ClampFit-H System

The cost-optimized fastening system for trapezoidal sheet metal made of steel sheet and aluminum sheet starting from a thickness of 0.5 mm;

Instructions for use should be carefully observed!



130004-001 ClampFit-H middle clamp 30 - 35 mm kit

130004-002 ClampFit-H middle clamp 36 - 40 mm kit

130004-003 ClampFit-H middle clamp 41 - 45 mm kit

130004-004 ClampFit-H middle clamp 46 - 51 mm kit



130003-030 ClampFit-H end clamp 30 mm kit

130003-031 ClampFit-H end clamp 31 mm kit

130003-032 ClampFit-H end clamp 32 mm kit

130003-033 ClampFit-H end clamp 33 mm kit

130003-034 ClampFit-H end clamp 34 mm kit

130003-035 ClampFit-H end clamp 35 mm kit

130003-038 ClampFit-H end clamp 38 mm kit

130003-040 ClampFit-H end clamp 40 mm kit

130003-042 ClampFit-H end clamp 42 mm kit

130003-045 ClampFit-H end clamp 45 mm kit

130003-046 ClampFit-H end clamp 46 mm kit

130003-048 ClampFit-H end clamp 48 mm kit

130003-050 ClampFit-H end clamp 50 mm kit

FixPlan Fastening component

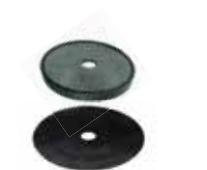
The alternative for flat sheet metal roofs where fastening to the seams is not possible (for example titanium zinc metal roofs).



114003-001 FixPlan 10 x 200 KlickTop with hanger bolt 10 x 200

114001-001 FixPlan 12 x 200 KlickTop with hanger bolt 12 x 200

114002-001 FixPlan 12 x 300 KlickTop with hanger bolt 12 x 300



114003-000 FixPlan sealing plate

114004-000 Bituplan additional seal for FixPlan

For mounting on bitumen (asphalt shingle) roof coverings

Important information on structural safety

- A sufficient holding force of the metal sheet to the substructure is compulsory when mounting a structure on the roof cladding. Please note that these structural verifications must be provided by the customer!
- Sheet metal is particularly prone to stress caused by inclined solar plants. Please ensure a sufficient number of fastening points and provide proof of the holding capacity of the roof covering.
- The verified holding force of the standing seam clamp to the roof can be taken from the respective system structural analysis.
- Please absolutely take into account the additional stress at roof edges and in the corner zones, or avoid these areas altogether when planning the plant assembly.
- The self-weight of the PV plant must be added to the snow load in order to calculate the maximal load incurred on the roof covering.







Technical data

Material	Screws/bolts: high-grade (stainless) steel 1.4301 Profiles (rails): EN AW 6063 T66 / AlMgSi0.5 Sheet metal components: high-grade (stainless) steel 1.4302
Planning aid	Configuration and structural dimensioning with the AutoCalculator Easy and the Schletter Configurator
Structural analysis	Structural analysis in accordance with current national standards (in Germany DIN EN 1991, EC1). Structural analysis annexes on the dimensioning of the number of required clamping points, based on structural calculations and on verifications by tensile tests. Please make sure you observe the structural analysis information in each case! The verification of the adhesive force of the roof to the substructure is not included in the general structural analysis annexes!

Further information at www.schletter.eu

FixE and FixT

Fastening Elements

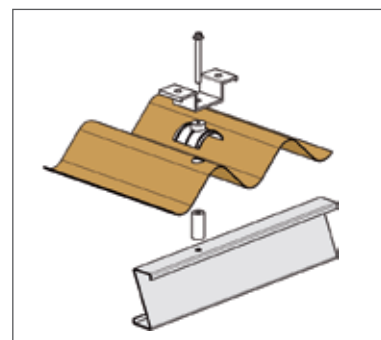
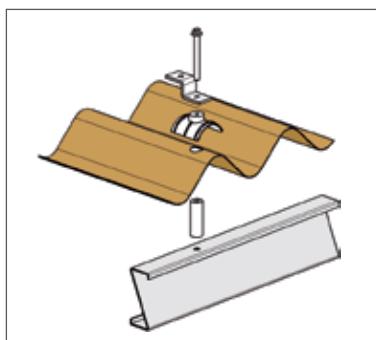
					Wood
					Steel
1	2	3	4	5	FixE/T Size

Applicable sizes

FixE and FixT Overview

The innovative fastening solution with steel and wooden purlins.
Order to be submitted only by means of ↻ FixE / FixT - Checklist

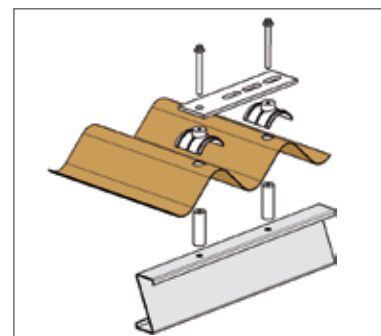
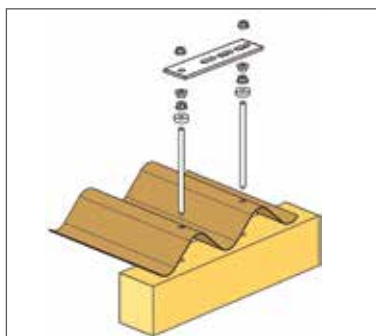
111006-000 FixE size 1 single fastening kit



111007-000 FixE size 2 twin fastening kit plate

For distances between corrugation crowns
 • of 133 and 177 mm, +/- 10 mm

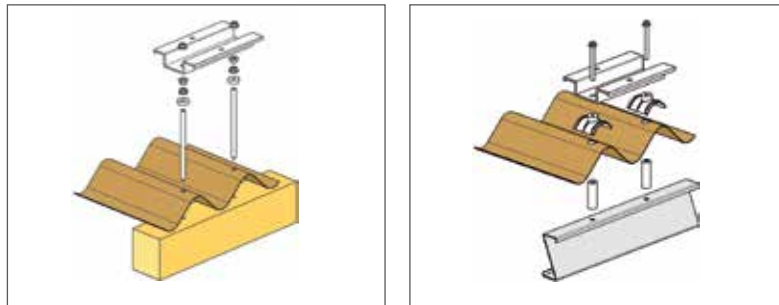
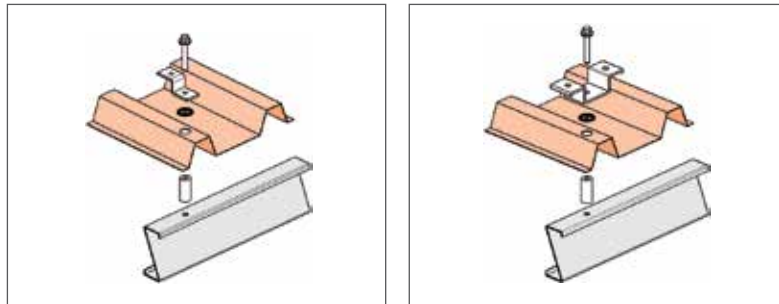
Slotted holes allow for adjustment



Attention!
 Twin fastening kit for
 corrugated roofs: Item
 numbers and info on
 Page 17

111008-000 FixE size 3 twin fastening kit top-hat rail

Manufactured according to data provided in the Checklist

**113004-000 FixT size 1 single fastening kit****113005-000 FixT size 2 twin fastening kit**

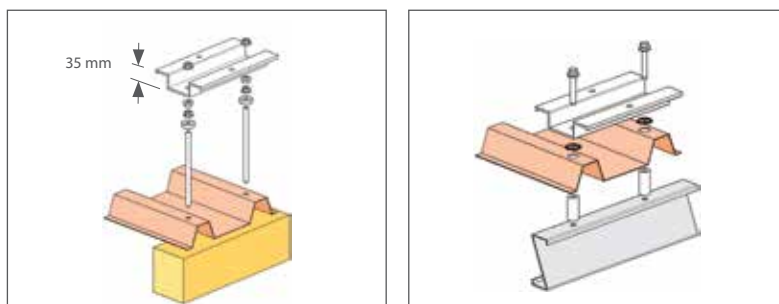
For distances between corrugation crowns

- up to 250 mm
- up to hanger bolt size M10

113006-000 FixT size 3 twin fastening kit

For distances between corrugation crowns

- more than 250 mm



FixE and FixT

Fastening Elements

113007-000 FixT size 4 quadruple fastening kit

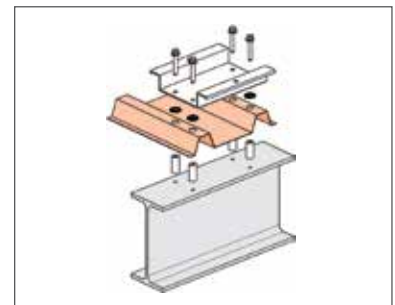
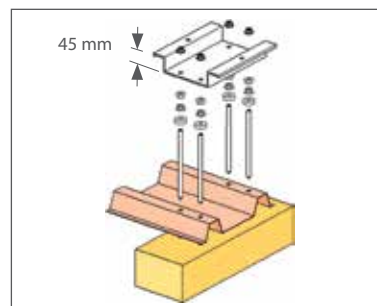
For distances between corrugation crowns

- up to 250 mm

113008-000 FixT size 5 quadruple fastening kit

For distances between corrugation crowns

- more than 250 mm



Area of application

Elevation systems such as CompactVario and CompactGrid

Important information on structural safety

Based on the specifications in the checklist, the support elements are adapted to the roof covering, the corresponding screws are selected and the length of the spacer bushings is determined. The structural dimensioning of the complete construction (roof connections, support plates, elevation) is carried out using a convenient structural analysis program.

Technical data

Material	Screws/bolts: high-grade (stainless) steel 1.4301, 8 mm for steel purlins, M10 resp. M12 hanger bolts for wooden purlins. Spacer bushings: aluminium, diameter 20 resp. 16 mm (only with steel purlins). Concentric EPDM-seal, UV-resistant in steel purlin assemblies. Custom-designed sealing top or rubber seal for corrugated roofs with wooden purlin assemblies. Sealing collar, EPDM rubber-moulded part, UV-resistant. Load-bearing elements: Top-hat rails / FixT/FixE-attachments: aluminium; Stainless steel fastening brackets (FixE1) or aluminium mounting plates (FixE2).
Planning aid	Configuration and structural dimensioning with the AutoCalculator Easy and the Schletter Configurator
Structural analysis	Structural analysis in accordance with current national standards (in Germany DIN EN 1991, EC1). a) Roof-parallel mounting: Tables specifying the number of fastening points b) Elevation / tilted systems: Structural analysis project planning design program CompactVario

Further information at www.schletter.eu

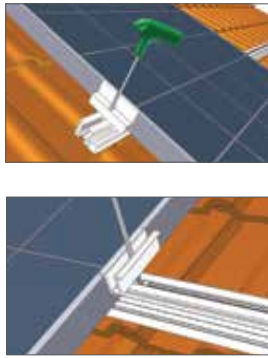
MODULE CLAMPS

Clamps for framed modules

Clamps for unframed modules

For Framed Modules

Module Clamps



Assembly diagram

For framed modules

Module clamps compatible with almost any module design.

Aluminium module end clamps for framed modules

Optimum adhesive force in the critical edge zones of the plant

Module middle clamps, length 100 mm, bars 3 mm

Optimal distribution of clamping pressure along the module frame

Clearance between modules: approx. 20 mm

Module clamps without accessories

Frame height mm	End clamp	Middle clamp	Grounding middle clamp	Compatible hex socket screw mm
30	130001-030	130002-000	135001-000	35
31	130001-031	130002-001	135001-001	20
32	130001-032	130002-001	135001-001	20
34	130001-034	130002-001	135001-001	20
35	130001-035	130002-001	135001-001	20
36	130001-036	130002-001	135001-001	25
38	130001-038	130002-001	135001-001	25
40	130001-040	130002-001	135001-001	25
42	130001-042	130002-001	135001-001	30
45	130001-045	130002-001	135001-001	30
46	130001-046	130002-001	135001-001	35
50	130001-050	130002-001	135001-001	35

➔ see screws/bolts and accessories



135004-000 Metal plate for module grounding

139003-000 Module clamp "claw" in stainless steel (for example for Sanyo module, accessories: M8 x 35)

Rapid²⁺ aluminium module clamps, assembled
 Incl. screw/bolt for M8 TX wrench
 Underhead serration and anti-friction coating

Rapid²⁺ module clamps assembled, alignment: vertical (in portrait)

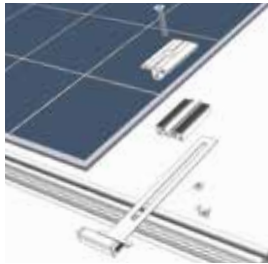
Frame height mm	Standard				Anodized in black			
	End clamp	End clamp Universal	Middle clamp	Grounding middle clamp	End clamp	End clamp Universal	Middle clamp	Grounding middle clamp
30	131001-030	131002-000	131003-000	135002-000	131001-930	131002-900	131003-900	135002-900
31	131001-031	131002-000	131003-000	135002-000	131001-931	131002-900	131003-900	135002-900
32	131001-032	131002-000	131003-000	135002-000		131002-900	131003-900	135002-900
33	131001-033	131002-000	131003-000	135002-000	131001-933	131002-900	131003-900	135002-900
34	131001-034	131002-000	131003-000	135002-000	131001-934	131002-900	131003-900	135002-900
35	131001-035	131002-000	131003-000	135002-000	131001-935	131002-900	131003-900	135002-900
36	131001-036	131002-000	131003-000	135002-000	131001-936	131002-900	131003-900	135002-900
37	131001-037	131002-000	131003-000	135002-000		131002-900	131003-900	135002-900
38	131001-038	131002-000	131003-000	135002-000	131001-938	131002-900	131003-900	135002-900
39		131002-000	131003-000	135002-000		131002-900	131003-900	135002-900
40	131001-040	131002-001	131003-001	135002-001	131001-940	131002-901	131003-901	135002-901
41	131001-041	131002-001	131003-001	135002-001		131002-901	131003-901	135002-901
42	131001-042	131002-001	131003-001	135002-001	131001-942	131002-901	131003-901	135002-901
43		131002-001	131003-001	135002-001	131001-943	131002-901	131003-901	135002-901
44	131001-044	131002-001	131003-001	135002-001		131002-901	131003-901	135002-901
45	131001-045	131002-001	131003-001	135002-001	131001-945	131002-901	131003-901	135002-901
46	131001-046	131002-001	131003-001	135002-001	131001-946	131002-901	131003-901	135002-901
47		131002-001	131003-001	135002-001		131002-901	131003-901	135002-901
48		131002-001	131003-001	135002-001		131002-901	131003-901	135002-901
49		131002-001	131003-001	135002-001		131002-901	131003-901	135002-901
50	131001-050	131002-001	131003-001	135002-001	131001-950	131002-901	131003-901	135002-901

Alignment: horizontal (in landscape), (linear clamping: Clamping wedge turned by 90°)

30		131011-000	131012-000					
31	131010-031	131011-000	131012-000					
32	131010-032	131011-000	131012-000					
33		131011-000	131012-000					
34		131011-000	131012-000					
35	131010-035	131011-000	131012-000					
36		131011-000	131012-000					
37		131011-000	131012-000					
38	131010-038	131011-000	131012-000					
39	131010-039	131011-000	131012-000					
40	131010-040	131011-001	131012-001	135011-001	131010-940	131011-901	131012-901	135011-901
41		131011-001	131012-001	135011-001		131011-901	131012-901	135011-901
42	131010-042	131011-001	131012-001	135011-001		131011-901	131012-901	135011-901
43		131011-001	131012-001	135011-001		131011-901	131012-901	135011-901
44		131011-001	131012-001	135011-001		131011-901	131012-901	135011-901
45	131010-045	131011-001	131012-001	135011-001		131011-901	131012-901	135011-901
46	131010-046	131011-001	131012-001	135011-001	131010-946	131011-901	131012-901	135011-901
47	131010-047	131011-001	131012-001	135011-001		131011-901	131012-901	135011-901
48		131011-001	131012-001	135011-001		131011-901	131012-901	135011-901
49		131011-001	131012-001	135011-001		131011-901	131012-901	135011-901
50	131010-050	130011-001	131012-001	135011-001	131010-950	131011-901	131012-901	135011-901

For Unframed Modules

Module Clamps



Assembly diagram

For unframed modules

Laminate Profi, Eco & GS series

For different module thicknesses

Note: Observe tightening torque!

(see also: General information on laminate mounting)

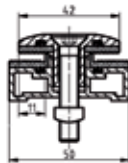
Laminate Profi series

for laminate thickness of 3 - 14 mm

Clamp engagement length into the glass: Profi narrow: 11 mm, Profi wide: 15 mm

Length: 80 mm, clearance between modules: approx. 20 mm

Incl. countersunk head screw and square nut



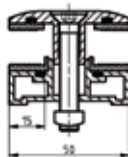
132201-308 Middle clamp Profi narrow 3 - 8 mm kit

132201-914 Middle clamp Profi narrow 9 - 14 mm kit



132101-308 End clamp Profi narrow 3 - 8 mm kit

132101-914 End clamp Profi narrow 9 - 14 mm kit



132202-308 Middle clamp Profi wide 3 - 8 mm kit

132202-914 Middle clamp Profi wide 9 - 14 mm kit



132102-308 End clamp Profi wide 3 - 8 mm kit

132102-914 End clamp Profi wide 9 - 14 mm kit

Laminate Eco series

Length of the aluminium clamp: 70 mm, clamp engagement length into the glass: 11 mm, clearance between modules: about 22 mm, (no pressing of the laminate)



133260-168 Middle clamp Eco6 laminate 6.8mm kit

133160-168 End clamp Eco6 laminate 6.8mm kit

*With accessories M8x20, without KlickIn click component
With EPDM rubber seal lining the aluminium clamp*



133264-168 Middle clamp Eco6-S4 laminate 6.8mm kit

133164-168 End clamp Eco6-S4 laminate 6.8 mm kit

*With accessories M8x20, without KlickIn click component
With EPDM rubber seal lining the aluminium clamp*

Certified clamps for First Solar module series 4 made of highly insulating EPDM rubber material. You can look up the certifications in the download area at www.schletter.eu

Eco clamps also available on request in customized lengths

Non-coated aluminium

Anodized in black

139004-000 139004-900 Bearing plate for middle clamp Eco

To raise the contact surface



973000-012

Module spacer

For laminate thickness of 4 - 10 mm



Non-coated aluminium

139008-000

Safety hook for laminate thickness of 6.8 mm



STANDARD RAILS AND ACCESSORIES

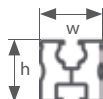
Standard rails
and accessories

Rail Series 05

Rail Series 05

Standard Rails (Profiles) and Accessories

Rail Series 05



The rail series 05 for the proven Klick system with compatible accessories. Assembly with square nuts, Klick system and Rapid2+

- ➔ **Structural analysis charts for cross beams**
- ➔ **Load determination software on the internet: www.schletter.eu**
(Download > Solar Mounting Systems > Software & Calculation)



For narrow spans

Module-bearing rail EcoLight

Mechanical connection

At the top: M8 Klick groove
At the bottom: M10 screw duct

w	h
30 mm	30 mm

Non-coated aluminium

120011-001	Custom cut
120011-04200	4.2 m
120011-006	6.0 m
120011-06200	6.2 m



For narrow spans

Module-bearing rail Eco05

Mechanical connection

At the top: M8 Klick groove
At the bottom: M10 screw duct

w	h
30 mm	30 mm

Non-coated aluminium

120001-001	Custom cut
120001-04200	4.2 m
120001-006	6.0 m
120001-06200	6.2 m



Module-bearing rail SoloLight

Mechanical connection

At the top: M8 Klick groove

At the bottom: M10 screw duct

(Not to be combined with 129009-xxx)

w	h
40 mm	40 mm

Non-coated aluminium Anodized in black

120005-001		Custom cut
120005-04200	120005-94200	4.2 m
120005-006	120005-906	6.0 m
120005-06200		6.2 m



For wider spans

Module-bearing rail Solo05

Mechanical connection

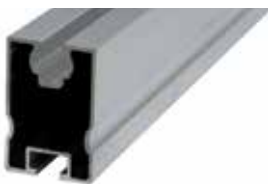
At the top: M8 Klick groove

At the bottom: M10 screw duct

w	h
40 mm	40 mm

Non-coated aluminium Anodized in black

120002-001		Custom cut
120002-04200	120002-94200	4.2 m
120002-006	120002-906	6.0 m
120002-06200		6.2 m



Module-bearing rail SoloPlus

Mechanical connection

At the top: M8 Klick groove

At the bottom: M10 screw duct

w	h
40 mm	60 mm

Non-coated aluminium Anodized in black

120006-001		Custom cut
120006-04200	120006-94200	4.2 m
120006-006	120006-906	6.0 m
120006-06200		6.2 m



Non-coated aluminium Anodized in black

129001-003	129001-903	Connector E Eco, pre-assembled
129002-002	129002-902	Connector E Solo, SoloLight, FixZ-7, FixZ-15, pre-assembled

Rail Series 05

Standard Rails (Profiles) and Accessories



129001-004	Eco interior connector kit
------------	----------------------------

129060-001	Slide-in connector Solo / Profi kit
------------	-------------------------------------

Non-coated aluminium Anodized in black

129004-000	129004-900	KlickTop cross connector kit M8 With bolt, Klick and square nut for Klick groove M8 for cross rail system ↪ GridNorm - Product Sheet
------------	------------	---

129063-000	129063-900	Rapid cross connector Completely pre-assembled for Klick groove M8 for cross rail system ↪ Rapid Cross Connector - Product Sheet
------------	------------	---

Grey Black

129011-000	129011-900	Plastic end cap Solo Profi05 Available with company logo on request with large volume orders.
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129061-001	Ridge connector kit
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Technical data

Material	Screws/bolts: high-grade (stainless) steel 1.4301; Profiles (rails): EN AW 6063 T66 / AlMgSi0.5 Sheet metal components: high-grade (stainless) steel 1.4301
Planning aid	Configuration and structural dimensioning with the AutoCalculator Easy and the Schletter Configurator
Structural analysis	Structural analysis in accordance with current national standards (in Germany DIN EN 1991, EC1). Structural analysis annexes on the dimensioning of the number of required fastening points, based on structural calcula- tions. Please make sure you observe the structural analysis information in each case! The verification of the adhesive force of the roof to the substructure is not included in the general structural analysis annexes!

Further information at www.schletter.eu

SYSTEM- RELATED COMPONENTS

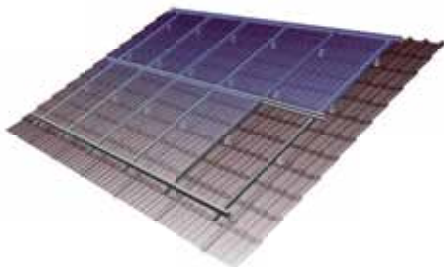
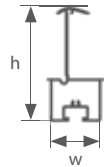
Lay-in system

Plandach5

FixZ-7, FixZ-15

Lay-in System

System-related Components

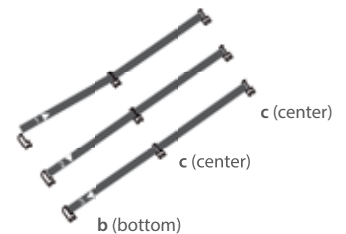


Lay-in System Overview

The Schletter lay-in system for roofs

➔ **Structural analysis tables for cross beams**

➔ **Load determination software on the internet: www.schletter.eu**
(Download > Solar Mounting Systems > Software & Calculation)



Important information

Modules with a special frame certification can be mounted in lay-in systems, in so far as the certification is available. The module frame must be designed to withstand larger loads, as the self-supported span is much greater if the modules are mounted in portrait.

For roof applications



Module-bearing rail RI 1 - b			
Module height	Non-coated aluminium	Anodized in black	Rail length
34 - 36 mm	124812-001		Custom cut
(w x h = 40 x 75 mm)	124812-006	124812-906	6 m
40 - 42 mm	124806-001		Custom cut
(w x h = 40 x 81 mm)	124806-006	124806-906	6 m
50 mm	124803-001		Custom cut
(w x h = 40 x 89 mm)	124803-006	124803-906	6 m

Mechanical connection: M10 screw duct



Module-bearing rail RI 1 - c			
Module height	Non-coated aluminium	Anodized in black	Rail length
34 - 36 mm	124811-001		Custom cut
(w x h = 40 x 77 mm)	124811-006	124811-906	6 m
40 - 42 mm	124805-001		Custom cut
(w x h = 40 x 83 mm)	124805-006	124805-906	6 m
50 mm	124802-001		Custom cut
(w x h = 40 x 92 mm)	124802-006	124802-906	6 m

Mechanical connection: M10 screw duct



129057-000 Connector for mod-bear.rail RI 1, with self-drilling screws

Non-coated aluminium Anodized in black

149028-001 **149028-901** Cover plate RI 1-b34-36

149021-001 **149021-901** Cover plate RI 1-b40-42

149022-001 **149022-901** Cover plate RI 1-b44-46

149003-001 **149003-901** Cover plate RI 1-b50



Non-coated aluminium Anodized in black

149028-003 **149028-903** Cover plate RI 1-c34-36

149021-003 **149021-903** Cover plate RI 1-c40-42

149022-003 **149022-903** Cover plate RI 1-c44-46

149003-003 **149003-903** Cover plate RI 1-c50



943000-329 Clout nail with barbed thread A2



149004-000 Spacer lay-in system bottom

149004-001 Spacer lay-in system top

FixZ-7 and FixZ-15

System-related Components

FixZ-7 and FixZ-15 - Overview

The simple additional inclination



Assembly diagram

Anodized in black available on request!

FixZ-7 system rail top



Mechanical connection

At the top: M8 Klick groove
At the bottom: M10 screw duct

Width	Height
40 mm	130 mm

121001-001	Custom cut
121001-04200	4.2 m
121001-06200	6.2 m

FixZ-7 system rail bottom



Mechanical connection

At the top: M8 Klick groove
At the bottom: M10 screw duct

Width	Height
40 mm	51 mm

121002-001	Custom cut
121002-04200	4.2 m
121002-06200	6.2 m



129002-002	Connector E, pre-assembled For application above and below!
-------------------	--



FixZ-15 system rail top

Mechanical connection

At the top: M8 Klick groove

At the bottom: M10 screw duct

Width	Height
40 mm	262 mm

121003-001 Custom cut

121003-04200 4.2 m

121003-06200 6.2 m



FixZ-15 system rail bottom 20

Clamping area approx. 20 % of the module height

Mechanical connection

At the top: M8 Klick groove

At the bottom: M10 screw duct

Width	Height
40 mm	76 mm

121004-001 Custom cut

121004-04200 4.2 m

121004-06200 6.2 m



FixZ-15 system rail bottom 25

Clamping area approx. 25 % of the module height

Mechanical connection

At the top: M8 Klick groove

At the bottom: M10 screw duct

Width	Height
40 mm	103 mm

121005-001 Custom cut

121005-04200 4.2 m

121005-06200 6.2 m



129002-002 Connector E, pre-assembled
For application above and below!

129019-001 Additional connector kit for FixZ-15 top
To be bolted to the rail (profile)!

FLAT ROOF SYSTEMS

Supports and Accessories

Flat Roof Systems

Flat Roof Systems



Application example

Flat roof systems

With all fastening systems for solar plants on flat roofs, a diagonal bracing of the supports can be recommendable depending on the substructure.

These bracings can be added by the customer or can be ordered specifically with the system, if required! Custom dimensions, special angles etc. on request.

Mounting beam



Series07



Flex Console



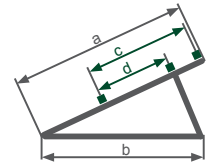
Light U



Prof U



Supports, 30 degrees
other angles available on request



Flat roof support Light U (30 degrees, aluminium, bolted)

Series07	Module height	a	b	c	d
150001-130	approx. 1300 mm	1195 mm	995 mm	850 mm	600 mm
150001-150	approx. 1500 mm	1445 mm	1390 mm	960 mm	690 mm



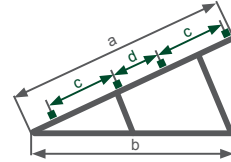
Flat roof support Light U (30 degrees, aluminium, bolted)

Flex Console	Module height	a	b	c	d
150101-130	approx. 1300 mm	1195 mm	995 mm	850 mm	600 mm
150101-150	approx. 1500 mm	1445 mm	1390 mm	960 mm	690 mm



Flat roof support Prof U (30 degrees, aluminium, bolted)

Series07	Module height	a	b	c	d
151001-150	approx. 1500 mm	1445 mm	1390 mm	960 mm	690 mm
151001-180	approx. 1800 mm	1815 mm	1800 mm	--	990 mm



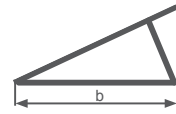
Flat roof support Profi U (30 degrees, aluminium, bolted)

Series07	Module height	a	b	c	d
151001-220	approx. 2200 mm	2200 mm	1995 mm	747 mm	460 mm



Flat roof support XL (30 degrees, aluminium, bolted)

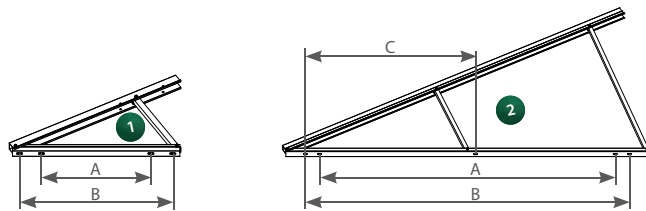
Series07	Module height	a	b	c	d
155001-320	approx. 3200 mm	3195 mm	2795 mm	approx. 1080 mm	733 mm



Hole spacing in mm

Module height approx.	1300	1500	1800	2200	3200
Base rail (b)	995	1390	1800	1995	2795
Dimensioned drawing	1	1	1	1	2
A	635	940	1350	1525	2275
B	855	1160	1570	1715	2495
C					1310

The slotted holes in the base rail allow for a mounting tolerance of +/- 8 mm.



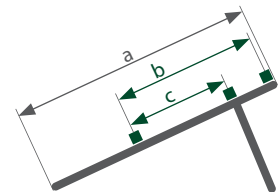
Supports and Accessories

Flat Roof Systems



Support upper parts for application with systems incorporating continuous beams

So-named fastening kits must be considered when compiling and ordering systems.



Flat roof support upper part Light

Series07	Module height	a	b	c
150003-001	approx. 1300 mm	1195 mm	850 mm	600 mm
150003-002	approx. 1500 mm	1445 mm	960 mm	690 mm



Flat roof support upper part Light

Flex Console	Module height	a	b	c
150103-001	approx. 1300 mm	1195 mm	850 mm	600 mm
150103-002	approx. 1500 mm	1445 mm	960 mm	690 mm



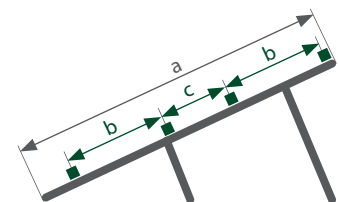
Flat roof support upper part Profi

Series07	Module height	a	b	c
151003-000	approx. 1500 mm	1445 mm	960 mm	690 mm



Flat roof support upper part Profi

Flex Console	Module height	a	b	c
151103-000	approx. 1500 mm	1445 mm	960 mm	690 mm



Flat roof support upper part Profi

Series07	Module height	a	b	c
151003-001	approx. 2200 mm	2200 mm	747 mm	460 mm



Flat roof support upper part Profi

Flex Console	Module height	a	b	c
151103-001	approx. 2200 mm	2200 mm	747 mm	460 mm

Auxiliary equipment / accessories

So-named fastening kits must be considered when compiling and ordering systems.



159000-002 Fastening kit 07 for CompactVario, basic
For mounting support upper parts to the base beam

Non-coated aluminium Anodized in black



129004-000 **129004-900** **KlickTop cross connector kit M8**
With bolt, Klick and square nut
for Klick groove M8 for cross rail system

➔ [GridNorm - Product Sheet](#)



129063-000 **129063-900** **Rapid cross connector**
Completely pre-assembled for Klick
groove M8 for cross rail system

➔ [Rapid Cross Connector - Product Sheet](#)

Windsafe (project-specific)

Rear-wall covering for inclined photovoltaic plants to minimize wind loads.



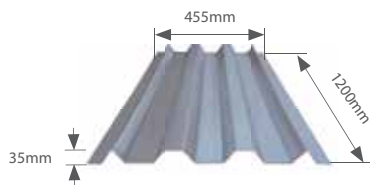
164160-180 Windsafe Vario aluminum 160 x 1830 mm

164250-180 Windsafe Vario aluminum 250 x 1830 mm

164500-180 Windsafe Vario aluminum 500 x 1830 mm

Supports and Accessories

Flat Roof Systems



Loading

159000-007 Concrete block loading kit, aluminium

For loading with concrete slabs or similar
- in pairs incl. 2 screw/bolt kits

160002-001 SolRack aluminium (1 plate)

Material thickness: 1 mm
Surface area: 0.55 m²

SolRack accessories

(order 2 pieces for each plate!)

943610-025 Screw/bolt M10x25 hexagon DIN933 A2 GMC

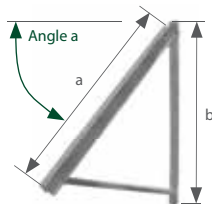
943922-010 M10 Large Washer DIN9021 A2

943912-010 Flange nut M10 serrated DIN6923 A4

Special supports

Facade support with 15, 20, 25 [...5°-steps], 70, 75 degrees

To select the support angle (angle a), please specify the module inclination relative to the horizontal - aluminium, screwed



Facade support

		Module height	a	b
156001-160	Light 16	approx. 1.3 - 1.6 m	1285 mm	1260 mm

Vegetated-roof support for modules of up to 1.6 m at 15, 20, 25, 30 degrees

Please specify the desired inclination!

Aluminium, screwed; approx. 0.4 m ground clearance

Length of the module angle: approx. 1.5 m

Compatible accessories: as for support Profi



152001-000 Vegetated-roof support for modules of up to 1.6 m



FixGrid (project-specific)

FixGrid is a system optimized regarding material and tools. The modules are mounted in closed rows with a tilt angle of 6° respectively 13°. The system only requires minimal superimposed loads. The components are interconnected using the Schletter Klick system.

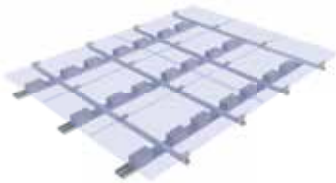
➔ [FixGrid - Product Sheet](#)



AluGrid (project-specific)

The tilted system with continuous beam and a permanent inclination angle of 15° or alternatively 10° with minimal superimposed loads. The components are interconnected using the AluGrid Klick system. Modules are mounted and fastened to the substructure using screwless clamps (spring clamps).

➔ [AluGrid - Brochure](#)



FlatGrid (project-specific)

FlatGrid is a cost-efficient system for slightly inclined flat roofs. It has been designed for mounting solar modules parallel to the roof without roof perforations. The opposing parts of the solar plants are connected over the ridge which impedes sliding-off.

➔ [FlatGrid - Product Sheet](#)

SPECIAL RAILS

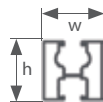
DN Rail Series

DN Rail Series

Special Rails (Profiles)

Available lengths

m	inches
6	236
and custom cuts	



DN rail series - Overview

Double groove rails available with a variety of span widths as load distribution beams and continuous beams for the different systems, e.g. cross rail mounting, CompactVario, CompactGrid. Optimal combination potential with the well-proven Klick-system.

Anodized in black on request!



DN0 mounting beam

Mechanical connection

At the top: M10 Klick groove
At the bottom: M10 screw duct

Width	Height
40 mm	40 mm

123001-001 Custom cut

123001-006 6 m



DN1 mounting beam

Mechanical connection

At the top: M10 Klick groove
At the bottom: M10 screw duct

Width	Height
40 mm	80 mm

123002-001 Custom cut

123002-006 6 m



DN2.5 mounting beam

Mechanical connection

At the top: M10 Klick groove
At the bottom: M10 screw duct

Width	Height
50 mm	110 mm

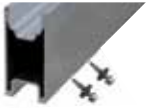
123004-001 Custom cut

123004-006 6 m

Accessories for DN rail series



129025-000 Connector rail DN0 DN1 kit
incl. bolts and nuts



129006-000 Slide-in connector DN1 kit
incl. safety screws



129029-000 Slide-in connector DN 2.5 kit
incl. safety screws



129023-000 Dowel clamp DN0/Solo05
for special applications

129024-000 Dowel clamp DN1
for special applications



129004-001 KlickTop cross connector kit M10
with bolt, KlickIn and square nut for Klick groove M10
suitable for DN0 and DN1
[↪ GridNorm- Product Sheet](#)

Technical data

Material	Screws/bolts: high-grade (stainless) steel 1.4301; Profiles (rails): EN AW 6063 T66 / AlMgSi0.7 Sheet metal components: high-grade (stainless) steel 1.4301
Planning aid	Configuration and structural dimensioning with the AutoCalculator Easy and the Schletter Configurator
Structural analysis	Structural analysis in accordance with current national standards (in Germany DIN EN 1991, EC1). Structural analysis annexes on the dimensioning of the number of required fastening points, based on structural calculations. Please ensure you observe the structural analysis information in each case! The verification of the adhesive force of the roof to the substructure is not included in the general structural analysis annexes!

Further information at www.schletter.eu

LARGE-SCALE PROJECTS

SystemFS, Solar Tracker, PvMax3, Park@Sol, IsoTop

Large-scale Projects

Large-scale Projects

SystemFS, Solar Tracker, PvMax3, Park@Sol, IsoTop

Large-scale projects are individually calculated and are compiled in-house prior to dispatch. We are looking forward to your inquiry!



Ground-mounted solar plants

Each FS system for ground-mounted solar plants is custom-designed for the respective location. Apart from the pile-driving technology, we also provide the PvMax3 system which is a system for concrete foundations.

The solar tracker designed by Schletter is a tracker system that can be pivoted around its horizontal north-south axis (single-axis tracking system). The rotational axis allows optimum area utilization.

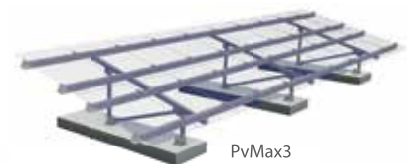
- ➔ SystemFS / TerraGrid / PvMax3 / PvMax-S - Product Sheets
- ➔ FS Track-2 - Product Sheet
- ➔ System Overview Ground Mount Systems - Brochure



FS Uno



FS Duo



PvMax3



FS Track-2

Carports - Park@Sol

Parking lots with solar carports are an ideal completion for large-scale generation and use of solar power.

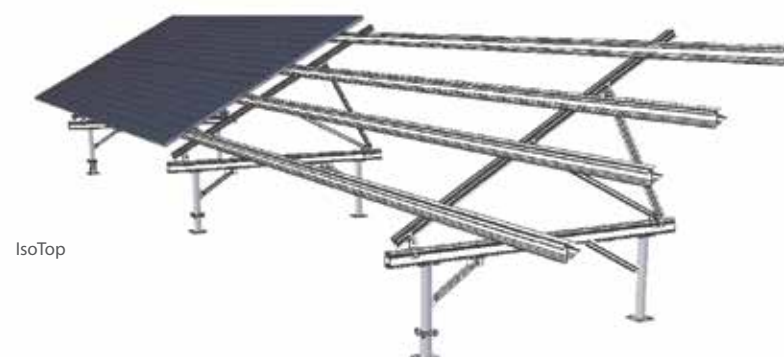
- ➔ [Park@Sol / Park@Sol Pro - Product Sheet](#)
- ➔ [Park@Sol - Brochure](#)



Membrane roofs of industrial buildings – IsoTop

The substructure of membrane roofs of industrial buildings generally has very large distances between girders. The IsoTop system (with special support distances of up to 10 m) allows for project-specific solutions requiring no additional loading of the roof covering.

- ➔ [IsoTop - Product Sheet](#)



AUXILIARY EQUIPMENT / ACCESSORIES

Fasteners

Cable routing

Other

Fasteners

Accessories

Fasteners



Hexagon head screw/bolt, stainless steel (VA)

- 943608-025 M8 x 25
- 943610-020 M10 x 20
- 943610-025 M10 x 25
- 943610-030 M10 x 30
- 943610-035 M10 x 35
- 943610-040 M10 x 40
- 943610-090 M10 x 90
- 943610-100 M10 x 100



Square head screw/bolt, stainless steel (VA)

- 943410-025 M10 x 25



Carriage bolt, stainless steel (VA)

- 943510-025 M10 x 25



Serrated flange nut with integrated anti-twist device in the flange, stainless steel (VA)

- 943912-008 M8
- 943912-010 M10
- 943912-012 M12



Hexagon nut, stainless steel (VA)

943916-010 M10



Washer, stainless steel (VA)

943921-008 M8

943921-010 M10

943921-012 M12



Large washer, stainless steel (VA)

943922-008 M8

943922-010 M10

943922-012 M12



Hexagon socket head screw/bolt

943308-120 M8 x 20 with underhead serration

943308-125 M8 x 25 with underhead serration

943308-130 M8 x 30 with underhead serration

943308-135 M8 x 35 with underhead serration

943308-040 M8 x 40

943308-055 M8 x 55

Fasteners

Accessories



943914-008 Square nut M8, A4

Compatible with all Schletter system rails in combination with Klick groove and KlickIn click component



129010-008 KlickIn click component for M8 nut

For a simplified insertion of the M8 square nut at any point of the M8 KlickIn groove



943914-010 Square nut M10, A4



943914-108 Special square nut M8, A4 (design as with M10)

Compatible with all Schletter system rails, can be combined with Klick groove M10 and KlickIn click components



129010-001 KlickIn click component for M10 nut

For a simplified insertion of the M10 square nut at any point of the M10 KlickIn groove

Self-locking nut, stainless steel A4 (V4A)



943911-008 M8



943911-010 M10



943911-012 M12

Lock washer, stainless steel (VA)



943931-010 M10

Self-tapping threaded screw/bolt

for steel with a thickness of up to 2 mm



943765-050 6.5 x 50

943765-075 6.5 x 75

943765-100 6.5 x 100

943765-125 6.5 x 125

943765-150 6.5 x 150

943765-200 6.5 x 200



for steel with a thickness of at least 1.5 mm

943718-064 8 x 64

943718-100 8 x 100

943718-125 8 x 125

943718-150 8 x 150

943718-200 8 x 200



Drilling screws with seal (gasket)

943755-925 5.5 x 25 self drilling JT3-6 A2 (e.g. for connectors)

943000-360 6.0 x 25 self-tapping A2

943000-700 JF3-2- 5.5 x 25 E16 A2

943772-019 Repair screw 7.2 x 19 self-tapping FABA-A A2

EPDM-rubber inlay 3 mm self-adhesive, 10m-roll, UV-resistant

e.g. for clamps for trapezoidal sheet metal or for laminate modules



973000-013 25 mm wide

973000-014 48 mm wide

973000-015 80 mm wide



Grounding and lightning protection

135003-000 Lightning protection clamp for 8 mm

Aluminium, completely pre-assembled (for 8 mm wire diameter)

135003-002 Grounding and lightning protection clamp stainless steel (VA) M8

Clamping range edge 8-10 mm; connection one/multi-wire 4-50 mm²

119015-002 Punched mounting tape 6 - 50 m

119015-003 Punched mounting tape 16 - 50 m

capable of carrying lightning current

Fasteners

Accessories

Wood screw

We recommend at least 80 mm for non-boarded roofs, and at least 120 mm for roofs with boarding and counter battens!



Wood screw, stainless steel (VA)

- 943108-080 8 x 80
- 943108-100 8 x 100
- 943108-120 8 x 120
- 943108-150 8 x 150
- 943108-200 8 x 200

discontinued!



Galvanized wood screw

- 942108-080 8 x 80
- 942108-100 8 x 100
- 942108-120 8 x 120
- 942108-150 8 x 150
- 942108-200 8 x 200

discontinued!



Wafer-head wood screw, stainless steel (VA)

- 943208-080 8 x 80
- 943208-100 8 x 100
- 943208-120 8 x 120
- 943208-160 8 x 160
- 943208-200 8 x 200
- 943208-240 8 x 240
- 943208-260 8 x 260
- 943208-300 8 x 300
- 943208-340 8 x 340
- 943208-360 8 x 360
- 943208-400 8 x 400

Double-thread wafer-head wood screw, stainless steel (VA)

for example for Iso07

- 943001-040 8 x 240
- 943001-041 8 x 300
- 943001-042 8 x 360



Wafer-head wood screw, galvanized

942208-080 8 x 80

942208-100 8 x 100

942208-120 8 x 120

942208-160 8 x 160

942208-200 8 x 200

942208-240 8 x 240

942208-260 8 x 260

942208-300 8 x 300

942208-340 8 x 340

942208-360 8 x 360

942208-400 8 x 400

discontinued!

Seal (gasket) for wafer-head screws



119016-000 Seal f. wafer-head screw diam 8 EPDM

Countersunk wood screw, galvanized

for example for Iso07

942000-688 8 x 260

942000-689 8 x 340

942000-690 8 x 400

Cable Routing

Accessories & Miscellaneous

Cable routing

Cable fasteners made of UV and temperature-resistant plastic material



129065-008 Proklip-Multi 8

Profiles/rails	Systems	Number of cables
Klick or screw channel M8, module-bearing rails S, module-bearing rails Solo05, Profi05, ProfiPlus05 and Eco05, FixZ-7, FixZ-15, AluGrid100 supports and AluGrid Windsafe sheets	AluGrid (all systems), FixZ-7, FixZ-15, FS System, carport, special projects	about 6*

129065-010 Proklip-Multi 10

Profiles/rails	Systems	Number of cables
BF girder, T girder, Klick or screw channel M10	IsoTop, PvMax3, FS System (all designs), special projects	about 6*

129065-001 Proklip-Multi 10S

Profiles/rails	Systems	Number of cables
Module-bearing rails Roof-In, Solo05, Profi05, SoloLight and screw channel M10	Roof-In	about 4*

129065-000 Proklip-Multi C

Profiles/rails	Systems	Number of cables
Solo05, Profi05, SoloLight	GridNorm, special projects	about 6*

129012-004 Proklip-U

Profiles/rails	Systems	Number of cables
---	AluGrid, special projects	about 3*

129012-002 Proklip2000-P

Profiles/rails	Systems	Number of cables
Module-bearing rails FS lay-in 40, module-bearing rails S	FS System, FS-In, IsoTop, PvMax3, Carport, special projects	about 2*



149023-001 Cable fastening retainer 1.0 - 3.0 mm, guidance at the top

Fastening to edges with a width from 1.0 to 3.0 mm; cable retainer length: 200 mm



149023-002 Cable fastening retainer 1.0 - 3.0 mm, guidance at the side

Fastening to edges with a width from 1.0 to 3.0 mm; cable retainer length: 200 mm



149023-003 Cable fastening retainer 3.0 - 6.0 mm

Fastening to edges with a width from 3.0 to 6.0 mm; cable retainer length: 200 mm

Miscellaneous

Brochures and software

You will always find current brochures, product sheets, mounting instructions and further technical information as well as software in the download area at www.schletter.eu.



If you are interested, we will be happy to send you our brochures in digital format.

Trade fair display stands (RollUp)

For a great variety of our products, there are trade fair display stands available on request.



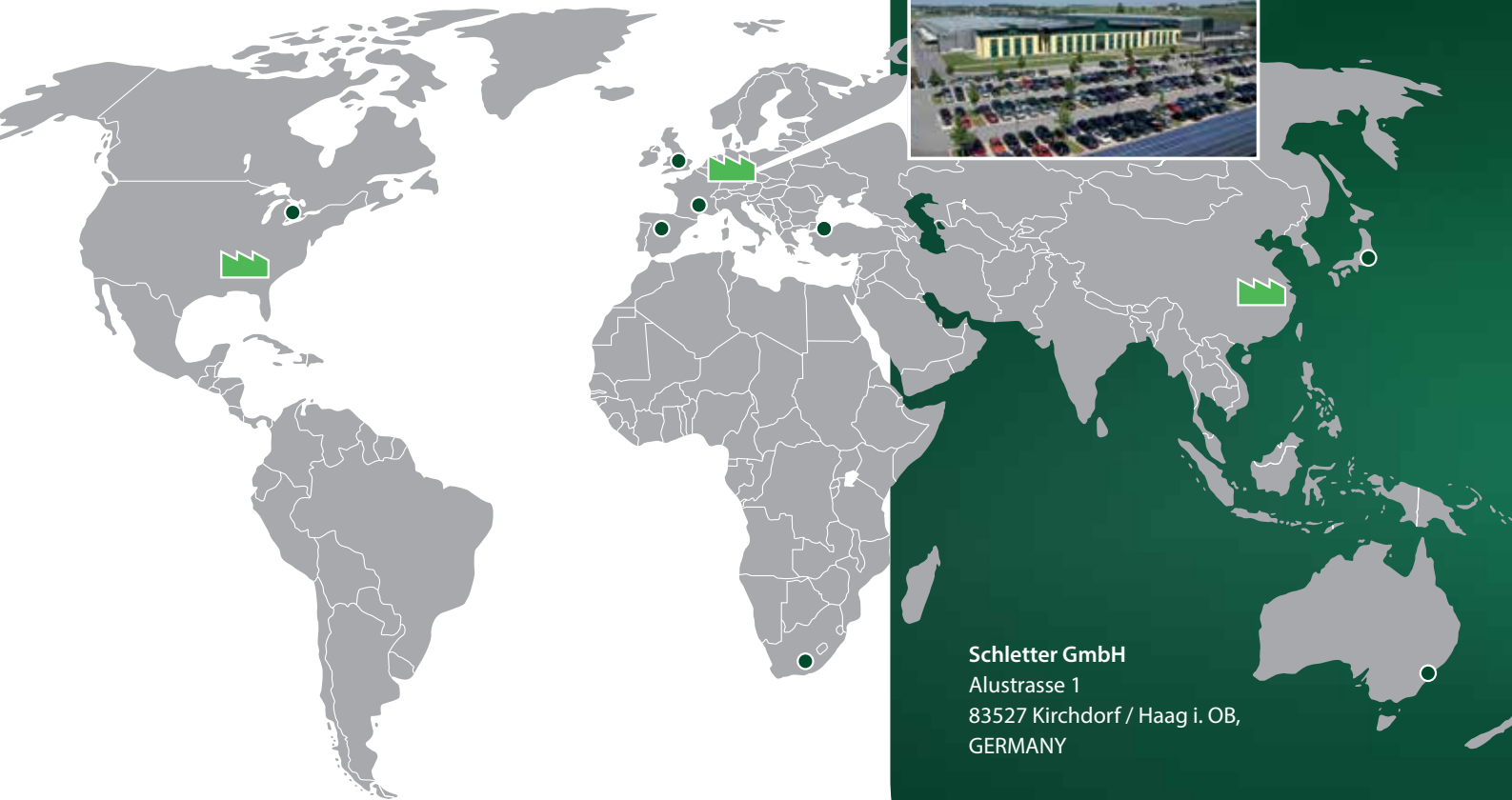
Configuration may differ from photo

Sample case

Including the current systems!

195000-004 Sample case

Contains specimen of current Schletter mounting system products



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Our members of staff are available to provide comprehensive and competent technical advice for the planning of your solar plant and to answer questions relating to logistics and order processing.