Install the future!

Magic PV Solution®:
Innovative mounting systems for photovoltaic systems

Building Connections

OBO
BETTERMANN

This is how safe solar can be!

With a photovoltaic system, continuous availability is of decisive significance. With OBO, you are always on the (b)right side: This is because we not only offer you a complete system for almost every electrical requirement of a photovoltaic system, but also future-oriented solutions for flexible installations. Leading the way are our innovative mounting systems for pitched roofs, flat roofs and free-standing systems: the Magic PV Solution®. For more efficiency from A to solar!

The benefits of the Magic PV Solution®

- Less work: A slim overall portfolio offers a simplified product selection and reduces warehouse storage to a minimum.
- More flexibility: With the Magic PV Solution®, countless customer-specific solutions and structural implementation options can be implemented.
- More security: Correct installation of all standard PV module dimensions is very simple.
- Versatile: The OBO systems can be adapted to different installation conditions with ease.
- More future: Digital planning tools and an innovative product configurator provide support in advising your customers.
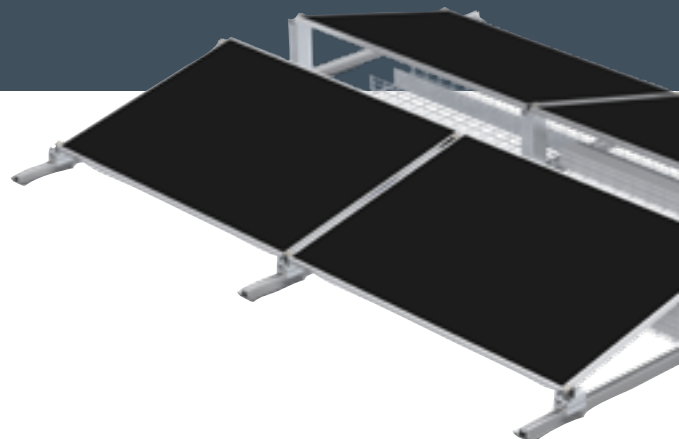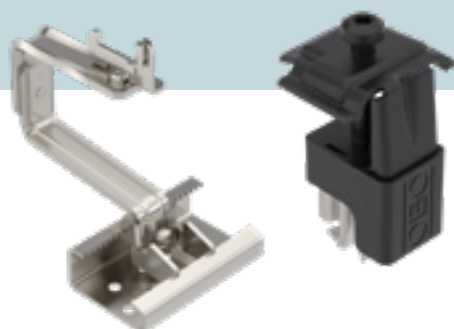
Magic PV Pitch
Pitched roof systems

Most pitched roof systems are mounted on existing building roofs as so-called on-roof systems. Here, the PV modules are attached to the roof rafters using roof hooks, mounting rails and module clamps made of metal.

- Magic technology: Enables the profiles to be installed without screws or tools, thus saving time.
- Roof hook solution: Can be mounted on all standard pitched roof types and adjusted infinitely and down to the millimetre in all directions at any time.
- Universal clamp: Simultaneously functions as an intermediate or end clamp, covering a clamping range of 30–50 mm. For easy fixing of all standard PV modules.

Fewer components, less work.

The products for flat and pitched roof systems can be combined. This considerably reduces the number of individual components required.

Magic PV Flat
flat roof systems

Photovoltaic systems can also be placed on flat roofs. The advantage here is that the PV modules can be mounted independently of a specific roof orientation. With the Magic PV Flat Basic and Magic PV Flat Pro systems, we offer the right solutions. Both systems feature the Magic click connection for screwless and tool-free installation.
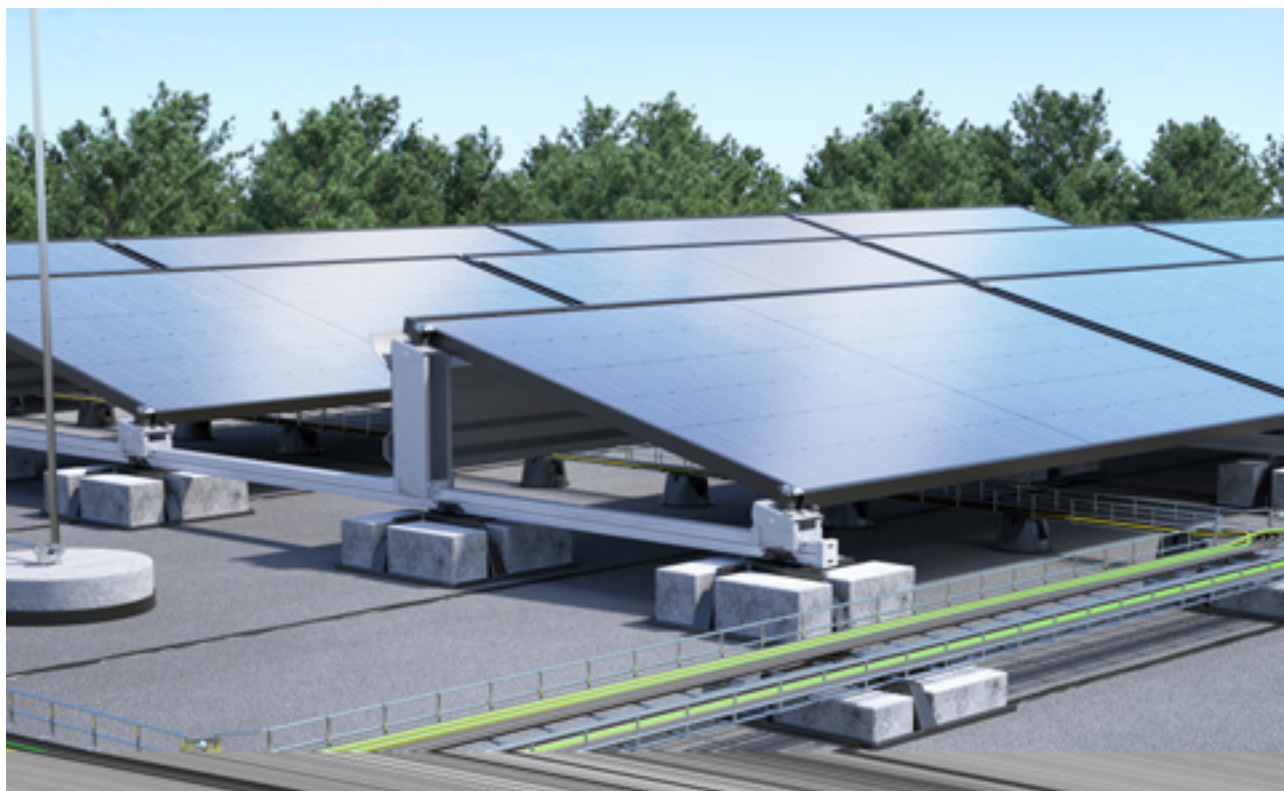

Magic PV Flat Basic

- Integrated system for cable routing and simultaneous ballasting
- Stepless system design thanks to flexible ridge gap
- Slender product portfolio with the greatest possible flexibility

Magic PV Flat Pro

- High-quality material selection and professional cable routing
- Flexible system components
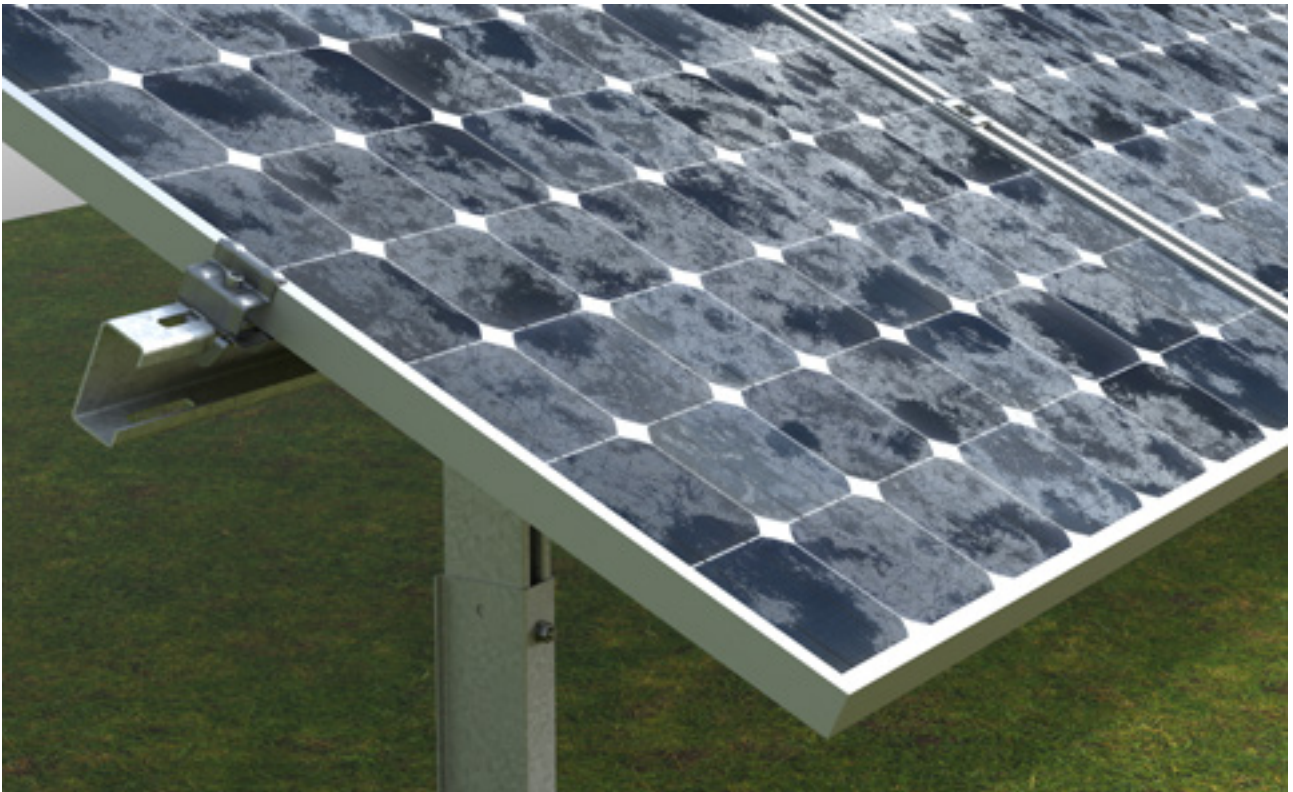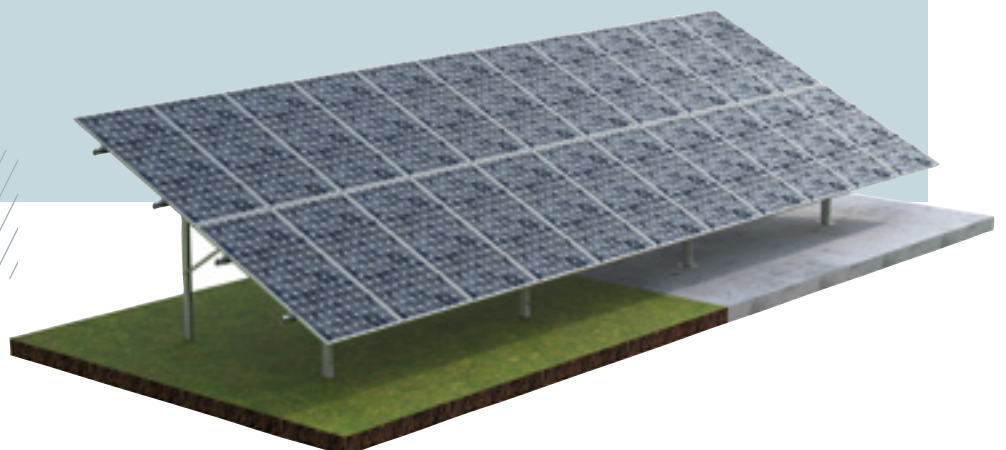- Uni-Base ballast system for variable weighting of the entire system
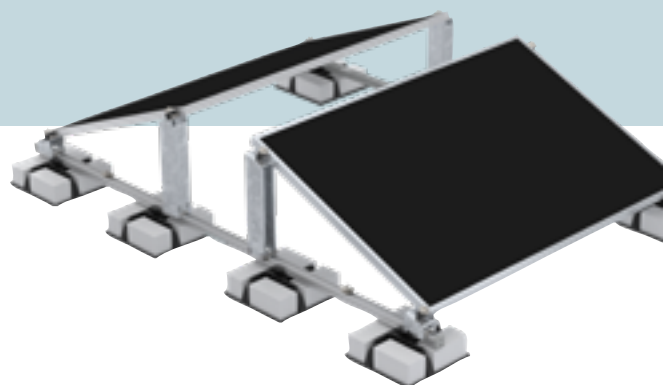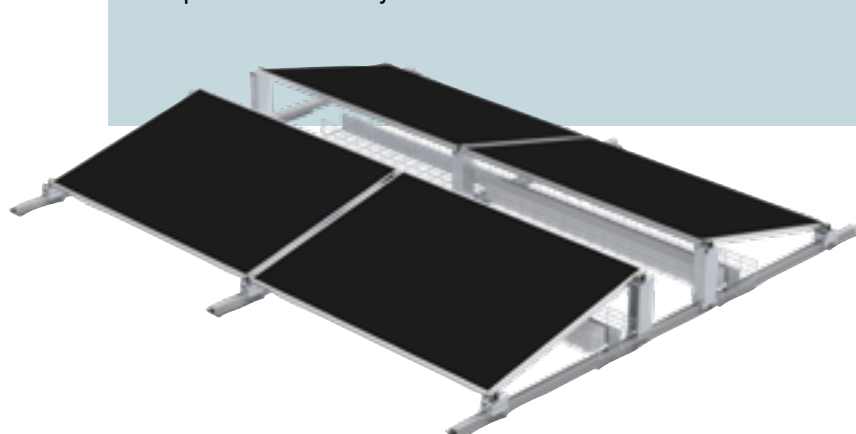
Magic PV Field
Free-standing systems

Free-standing photovoltaics means the erection of PV modules on large areas not used for agriculture. Under favourable conditions, these photovoltaic systems can produce increased yields.

- The highest level of flexibility: Both rammed and anchored versions are available.
- Little installation work: We can offer you system components pre-mounted at the factory.
- Maximum mounting options: The profile with flexible length and perforation allows almost type of mounting. Besides the intended OBO terminals, also using standard fastening materials, such as standard bolts.

A2 **2B**

CE

Universal roof hook for PV module mounting, tiled roof

Type	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
DHU A2	10		108.500	5901410

Roof hook to mount photovoltaic modules on pitched roofs in combination with the TP 45 support profile. Suitable for tiled roofs. Lockable fastening on support profile. Mounting on rafters with TKS wafer-head screws. Roof hook can be infinitely adjusted horizontally and vertically using glands, correct spanner Torx 40. Height adjustment in the range of the roof slat between 40–54 mm, side adjustment option up to 76 mm, height adjustment of the support profile up to 18 mm.

A2 **GB**

CE

Heavy roof hooks for PV module mounting, tiled roof

Type	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
DHS A2	10		137.000	5901416

Heavy roof hook to mount photovoltaic modules on pitched roofs in combination with the TP 45 support profile. Suitable for tiled roofs. Fastening on support profile through bolt with hammer nut, type SKSHM A2. Mounting on rafters with TKS wafer-head screws.

PE

CE

Support plate for ceiling hooks

Type	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
UP DH	20		2.440	5901490

Polyethylene support plate for the height compensation of roof hooks, as used during the mounting of PV modules on sloping roofs. Suitable for universal roof hooks and heavy-duty roof hooks. A combination of multiple support plates is possible. Plate thickness max. 2 mm.

A2

CE

Bolt with hammer nut for PV module mounting

Type	Thread	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
SKS HM A2	M8	20	2.500	5901850

Bolt with hammer nut to fasten metal roof plates of make Lehmann to TP 45 support profiles.

Wafer-head screw for roof hooks

A2 CE

Type	Length mm	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
TKS 8x100 A2	100	100	2.377	**5901800**
TKS 8x120 A2	120	100	2.789	**5901802**
TKS 8x200 A2	200	50	4.452	**5901804**

Wafer-head screw for fastening roof hooks to rafters when mounting photovoltaic modules on pitched roofs. Matching Torx 40 key.
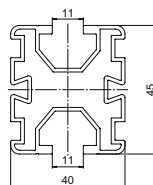
Support profile for PV module mounting

Alu BK CE

Type	Length mm	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
TP 45 2350 ALU	2350	4	242.520	**5900405**
TP 45 4700 ALU	4700	4	485.040	**5900410**

Support profile to mount photovoltaic modules on flat and pitched roofs. Flat roof mounting in combination with UniBase universal stand and STK and STL short and long supports. Lockable fastening of the profile on the stand with UniBase AMP adapter. Pitched roof mounting in combination with universal DHU roof hook. Lockable fastening of the profile on roof hooks. Screwable connection of multiple support profiles with LV 45 straight connectors and KV 45 cross-connectors. With 10 mm groove on both sides to accept slide nuts and universal and earthing clamps.

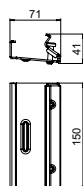## Support profile for PV module mounting

Alu EL

Type	Length mm	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
TP 45 4700 ALU S	4700	4	485.040	**5900412**

Support profile, black anodised, to mount photovoltaic modules on flat and pitched roofs. Flat roof mounting in combination with UniBase universal stand and STK and STL short and long supports. Lockable fastening of the profile on the stand with UniBase AMP adapter. Pitched roof mounting in combination with universal DHU roof hook. Lockable fastening of the profile on roof hooks. Screwable connection of multiple support profiles with LV 45 straight connectors and KV 45 cross-connectors. With 10 mm groove on both sides to accept slide nuts and universal and earthing clamps.

Straight connector for TP support profile

St DD CE

Type	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
LV 45 DD	20	38.600	**5901210**

Straight connector for TP support profiles. Can be screwed on with Torx 30 spanner.

St DD

CE

Cross-connector for TP support profiles

Type	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
KV 45 DD	20	5.000	**5901250**

Cross-connector for TP support profiles. Can be screwed on with Torx 40 spanner.

PE

CE

Support profile end cap

Type	Colour	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
EK 45 G	Grey	20	0.740	**5901722**
EK 45 S	Black	20	0.740	**5901720**

End cap for TP support profiles, as protection against injuries and contamination.

A2

Earthing terminal for PV mounting systems

Type	Fit mm	Lightning current carrying capacity kA	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
249 PV10 6-50V2A	RD8-10 + 6-50mm²	H/100	8	8.460	**5051520**

Pre-mounted earthing terminal for the inclusion of PV mounting systems in the equipotential bonding. Suitable for the inclusion of the PV mounting systems in an external lightning protection system.
• Lightning current-compatible up to 100 kA (10/350)
• Rapid mounting through integrated spring mechanism
• For round conductor fastening RD 8–10
• To fasten single/multi-wire cables: 6–50 mm²
• For profiles with 10 mm groove
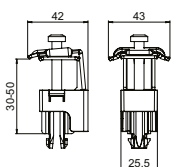• Meets the requirements of DIN EN 62561-1

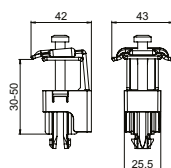A2 BK

CE

Universal clamp for PV module mounting

Type	For frame height mm	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
KLU A2	30-50	20	6.590	**5901010**

Universal clamp to mount photovoltaic modules on flat and pitched roofs, suitable as a clamp between 2 modules or as an end clamp. Lockable pre-fastening on TP 45 support profile and on STK and STL supports. Suitable for 10 mm slot width. Can be rotated through 90° after engaging. Lockable fastening of the PV module with Torx 30 wrench.
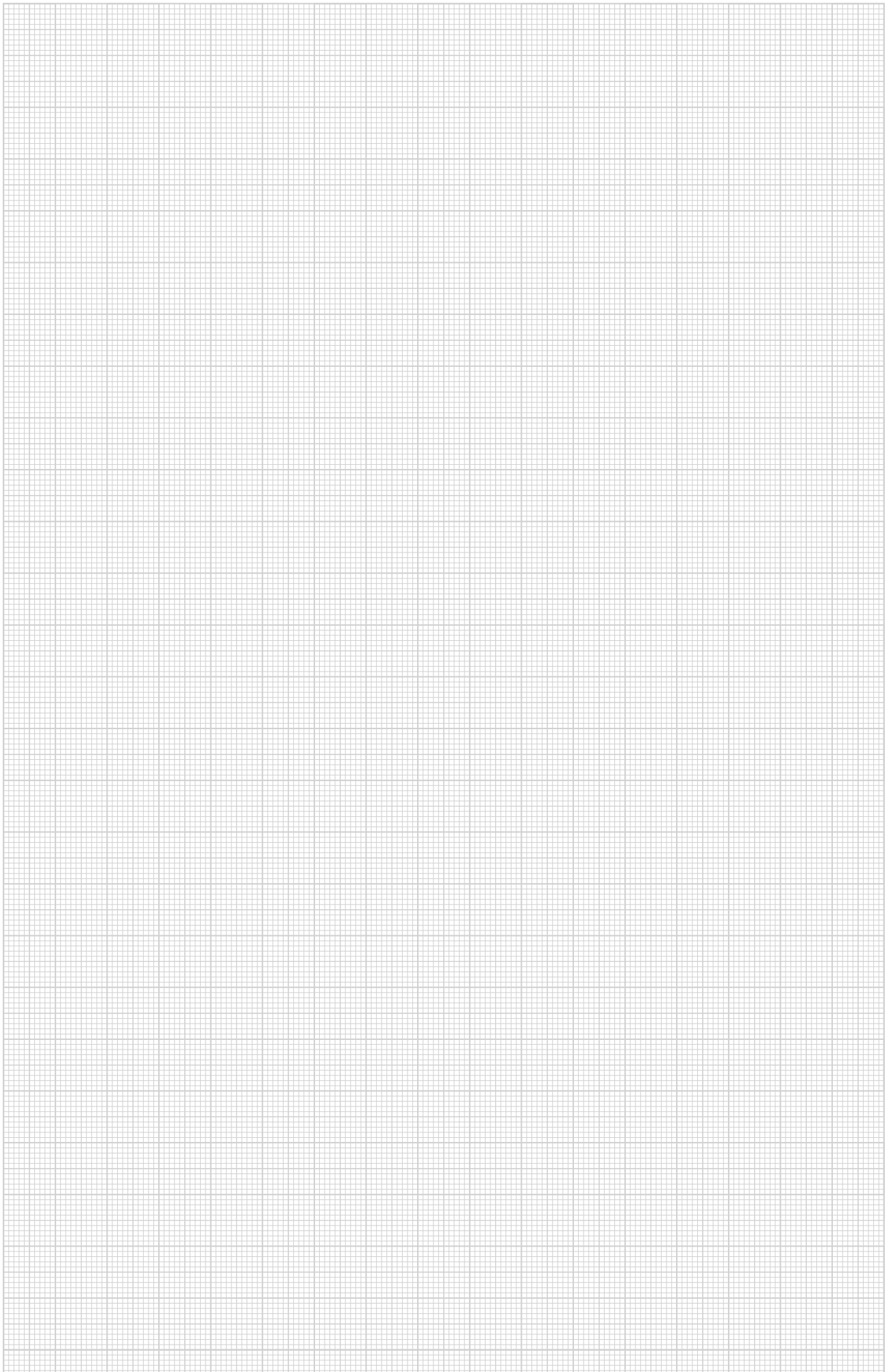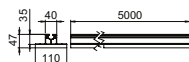
Universal clamp for PV module mounting

A2	K

CE

Type	For frame height mm	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
KLU A2 S	30-50	20	6.590	**5901012**

Universal clamp to mount photovoltaic modules on flat and pitched roofs, suitable as a clamp between 2 modules or as an end clamp. Lockable pre-fastening on TP 45 support profile and on STK and STL supports. Suitable for 10 mm slot width. Can be rotated through 90° after engaging. Lockable fastening of the PV module with Torx 30 wrench.

Magic PV Flat Basic

Support profile for PV module mounting, flat roof

Type	Length mm	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
TPF 35 5000 ALU	5000	4		716.300	**5900370**

Non-slip support profile for PV module mounting on flat roofs.
Basis for installation of short and long supports STK and STL. Screwable connection of multiple support profiles with LV 35 straight connectors.

Straight connector support profile, flat roof

CE
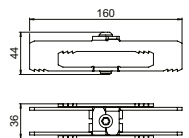
Type	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
LV 35 DD	20		36.800	**5901180**

Straight connector for connecting support profiles type TPF 35 for photovoltaic flat roof systems. Fastening with pre-installed M6 screw, screwable with Torx 30 key.

Earthing terminal for PV mounting systems

Type	Fit mm	Lightning current carrying capacity kA	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
249 PV10 6-50V2A	RD8-10 + 6-50mm²	H/100	8		8.460	**5051520**

Pre-mounted earthing terminal for the inclusion of PV mounting systems in the equipotential bonding. Suitable for the inclusion of the PV mounting systems in an external lightning protection system.
- Lightning current-compatible up to 100 kA (10/350)
- Rapid mounting through integrated spring mechanism
- For round conductor fastening RD 8–10
- To fasten single/multi-wire cables: 6–50 mm²
- For profiles with 10 mm groove
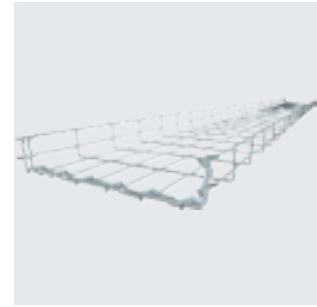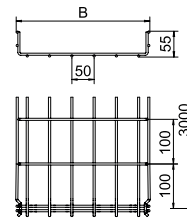- Meets the requirements of DIN EN 62561-1

Mesh cable tray GR-Magic® 55

Type	Width mm	Wire Ø mm	Length mm	Min. ordering quantity m	Weight kg/100 m	Item no.
GRM 55 200 FT	200	3.9	3000	3	102.000	**6001420**
GRM 55 300 FT	300	4.8	3000	3	200.667	**6001424**
GRM 55 400 FT	400	4.8	3000	3	245.000	**6001428**
GRM 55 500 FT	500	4.8	3000	3	288.333	**6001432**
GRM 55 600 FT	600	4.8	3000	3	331.333	**6001436**

Mesh cable tray with shaped connector of side height 55 mm.

Magnetic shield insulation without cover 15 dB, with cover 25 dB.
You can find detailed information regarding the UL classification in the respective certification.

No additional connection components are required for the mesh cable tray, it is simply interlocked. The grid width is 50 x 100 mm (exception: GRM 55/50 = 20 x 100 mm).

Magic PV Flat Basic
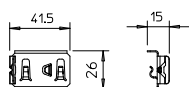
Barrier strip 45

Type	Dim. H mm	Metal thick-ness mm	Dim. L mm	Min. order-ing quan-tity m	Weight kg/100 m	Item no.
TSG 45 DD	45	0.75	3000	3	46.812	**6062321**

Barrier strip for separation of cables of different voltages or functions.

Clamping piece for separating retainer fastening in GRM

Type	Min. order-ing quan-tity Piece	Weight kg/100 pc.	Item no.
KS GR A2	30	0.830	**6062282**

Clamping piece for fastening separating retainer in mesh cable trays.

Separating retainer connector

Type	Min. order-ing quan-tity Piece	Weight kg/100 pc.	Item no.
TSGV A2	10	0.899	**6067970**

Separating retainer connector for screwless connection of the TSG separating retainer in all side heights.

Screw set mesh cable tray, PV mounting system flat roof

Type	Min. order-ing quan-tity Piece	Weight kg/100 pc.	Item no.
BF GR	20	5.000	**5901770**

Fastening set for fastening mesh cable trays to support profiles type TPF 35 for PV mounting systems for flat roofs. Consisting of clamping piece, sliding nut and screw.

Mesh cable tray GR-Magic® 105

St FT

Type	Width mm	Wire Ø mm	Min. ordering quantity m	Weight kg/100 m	Item no.
GRM 105 200 FT	200	4.8	3	202.333	**6002435**
GRM 105 300 FT	300	4.8	3	244.000	**6002437**
GRM 105 400 FT	400	4.8	3	288.333	**6002439**
GRM 105 500 FT	500	4.8	3	335.000	**6002443**
GRM 105 600 FT	600	4.8	3	375.000	**6002445**

Mesh cable tray with shaped connector of side height 105 mm.

Magnetic shield insulation without cover 15 dB, with cover 25 dB.

No additional connection components are required for the mesh cable tray, it is simply interlocked. The grid width is 50 x 100 mm.
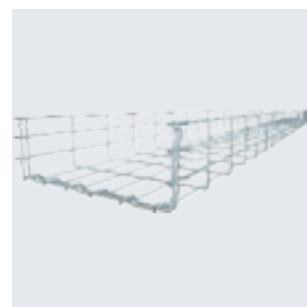
Type	Length mm	Dim. B mm	Usable cross-section cm²
GRM 105 200 FT	3000	200	175
GRM 105 300 FT	3000	300	268
GRM 105 400 FT	3000	400	363
GRM 105 500 FT	3000	500	459
GRM 105 600 FT	3000	600	554

Dimensions

Magic PV Flat Basic
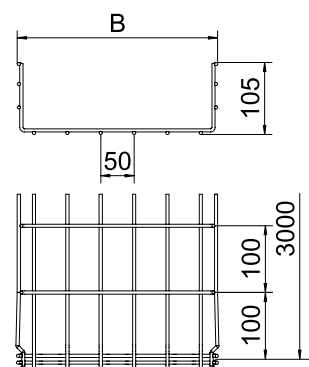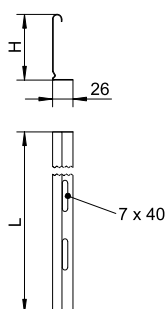
Barrier strip 85

Type	Dim. H mm	Metal thick-ness mm	Dim. L mm	Min. order-ing quan-tity m	Weight kg/100 m	Item no.
TSG 85 DD	85	0.75	3000	3	70.300	**6062331**

Barrier strip for separation of cables of different voltages or functions.

Clamping piece for separating retainer fastening in GRM

Type	Min. order-ing quan-tity Piece	Weight kg/100 pc.	Item no.
KS GR A2	30	0.830	**6062282**

Clamping piece for fastening separating retainer in mesh cable trays.
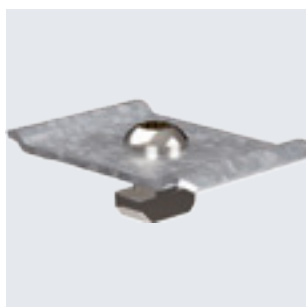
Separating retainer connector

Type	Min. order-ing quan-tity Piece	Weight kg/100 pc.	Item no.
TSGV A2	10	0.899	**6067970**

Separating retainer connector for screwless connection of the TSG separating retainer in all side heights.

Screw set mesh cable tray, PV mounting system flat roof

Type	Min. order-ing quan-tity Piece	Weight kg/100 pc.	Item no.
BF GR	20	5.000	**5901770**

Fastening set for fastening mesh cable trays to support profiles type TPF 35 for PV mounting systems for flat roofs. Consisting of clamping piece, sliding nut and screw.
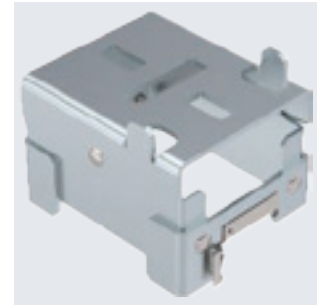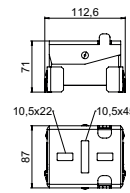
St **DD**

CE

Short support for PV module mounting, flat roof

Type	Min. order- ing quan- tity Piece		Weight kg/100 pc.	Item no.
STK DD	8		93.000	5901650

Short support to mount photovoltaic modules on flat roofs in combination with the TP 45/4700 support profile and KLU universal clamp. Slope angle 15°. Lockable fastening on support profile.
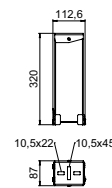
112,6
71
10,5x22 10,5x45
87

St **DD**

CE

Long support for PV module mounting, flat roof

Type	Min. order- ing quan- tity Piece		Weight kg/100 pc.	Item no.
STL 15 DD	4		210.000	5901655

Long support to mount photovoltaic modules on flat roofs in combination with the TP 45/4700 support profile and KLU universal clamp. Slope angle 15°. Lockable fastening on support profile.
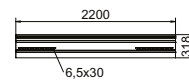
112,6
320
10,5x22 10,5x45
87

St **DD**

CE

Wind protection panel for photovoltaic systems

Type	Length mm	Min. order- ing quan- tity Piece	Weight kg/100 pc.	Item no.
WSB 2200 DD	2200	4	631.000	5901610

Wind protection panel for use with photovoltaic systems with south alignment and standard inclinations of 15°. As protection against wind loads during extreme wind conditions. Lockable and screwable fastening to STL 15 long support.

2200
318
6,5x30

A2 **2B**

CE

Flat-head screw for wind protection plate

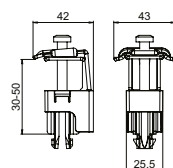| Type	Dimen- sion mm	Min. order- ing quan- tity Piece	Weight kg/100 pc.	Item no.
FKS M6x25 A2	M6x25	100	0.700	5901880

Flat-head screw with hexalobular internal to fasten wind protection plates to the STL 15 long support of the photovoltaic mounting systems for flat roofs. Matching Torx 30 key.


17

Universal clamp for PV module mounting

A2 BK
CE

Type	For frame height mm	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
KLU A2	30-50	20		6.590	5901010

Universal clamp to mount photovoltaic modules on flat and pitched roofs, suitable as a clamp between 2 modules or as an end clamp. Lockable pre-fastening on TP 45 support profile and on STK and STL supports. Suitable for 10 mm slot width. Can be rotated through 90° after engaging. Lockable fastening of the PV module with Torx 30 wrench.

Intermediate clamp with spring for PV module mounting

A2
CE
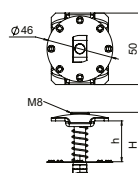
Type	For frame height mm	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
KLZ F 30 A2	30	50		6.330	5901063
KLZ F 25 A2	25	50		6.150	5901062
KLZ F 35 A2	35	50		6.620	5901064
KLZ F 40 A2	40	50		6.720	5901065

Intermediate clamp with spring for fastening photovoltaic modules on support profiles. Suitable for slot width 10 mm. Lockable fastening of the PV module with Allen key size 6.

## End clamp with spring for PV module mounting

A2
CE
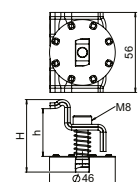
Type	For frame height mm	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
KLE F 30 A2	30	50		8.210	5901093
KLE F 25 A2	25	50		7.850	5901092
KLE F 35 A2	35	50		8.770	5901094
KLE F 40 A2	40	50		9.620	5901095

End clamp with spring for fastening photovoltaic modules on support profiles. Suitable for slot width 10 mm. Lockable fastening of the PV module with Allen key size 6.

Magic PV Flat Pro
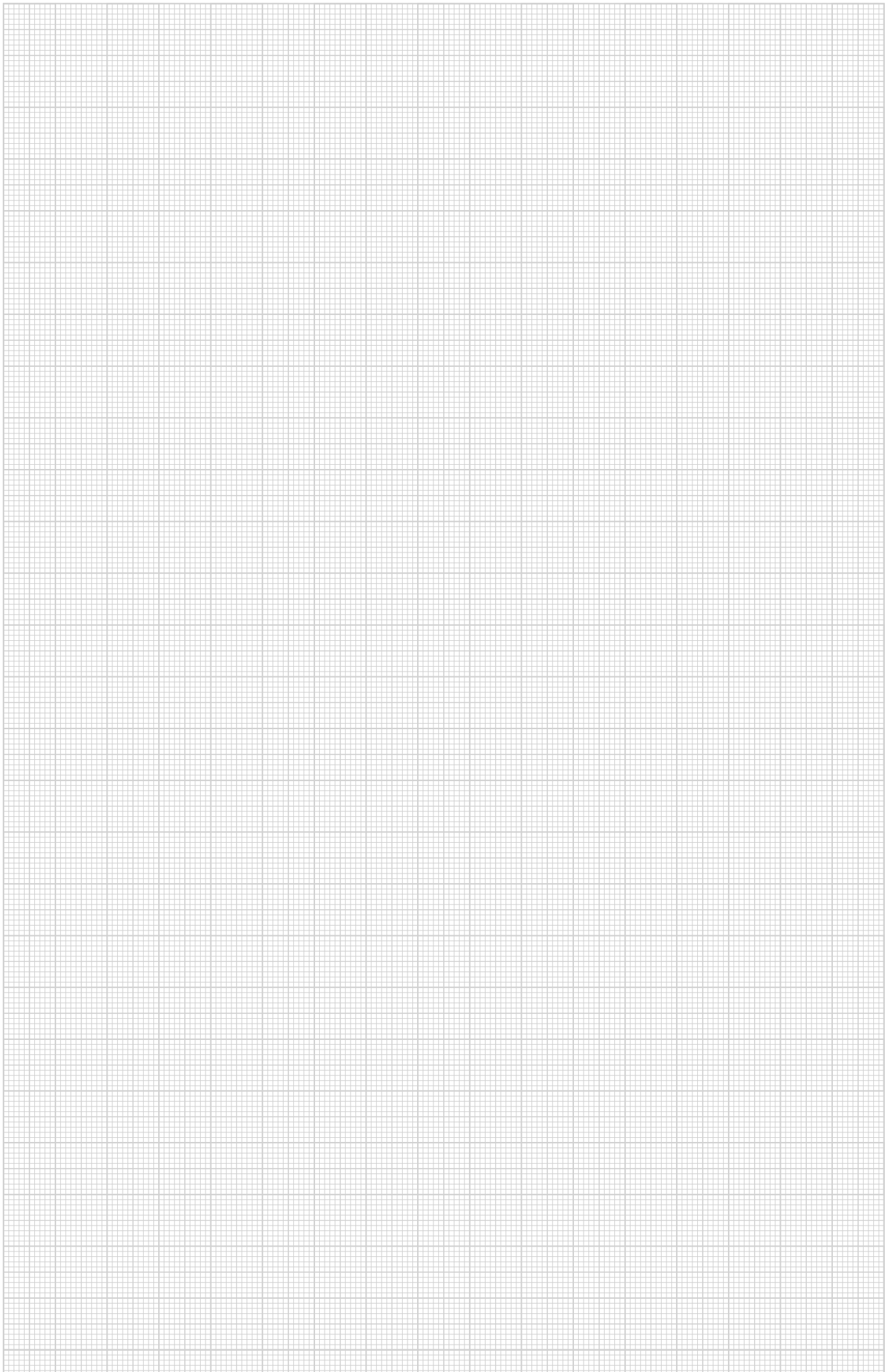
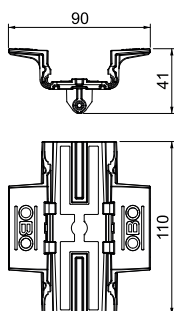## UniBase universal stand
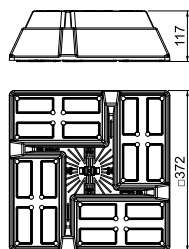
Type	Length mm	Width mm	Height mm	Fit mm	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
UniBase 10	372	372	117	5	8	91.500	5403393

Universal stand for ballasting with standard blocks up to a dimension of 200 x 100 x 100 mm. Can be used on flat roofs, e.g. for mounting PV mounting systems or for cable routing with cable trays or with mesh cable trays in conjunction with roof cable holder 165 MBG HGRM. Blocks not contained in the scope of delivery.

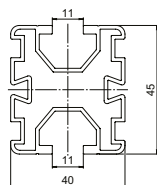## Adapter for TP 45 support profile

ASA

Type	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
UniBase TMP	16	4.200	5403397

Adapter for TP 45 support profile, for mounting on UniBase universal stand. Toolless mounting through snapping. With side holes for optional screwing. Toolless mounting and dismantling of the support profile possible. With non-slip support surface.

Support profile for PV module mounting
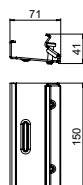
Alu BK
CE

Type	Length mm	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
TP 45 2350 ALU	2350	4	242.520	5900405
TP 45 4700 ALU	4700	4	485.040	5900410

Support profile to mount photovoltaic modules on flat and pitched roofs. Flat roof mounting in combination with UniBase universal stand and STK and STL short and long supports. Lockable fastening of the profile on the stand with UniBase AMP adapter. Pitched roof mounting in combination with universal DHU roof hook. Lockable fastening of the profile on roof hooks. Screwable connection of multiple support profiles with LV 45 straight connectors and KV 45 cross-connectors. With 10 mm groove on both sides to accept slide nuts and universal and earthing clamps.

Straight connector for TP support profile

St DD
CE

Type	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
LV 45 DD	20	38.600	5901210

Straight connector for TP support profiles. Can be screwed on with Torx 30 spanner.

St DD

CE

Cross-connector for TP support profiles

Type	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
KV 45 DD	20	5.000	**5901250**

Cross-connector for TP support profiles. Can be screwed on with Torx 40 spanner.

PE

CE

Support profile end cap

Type	Colour	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
EK 45 G	Grey	20	0.740	**5901722**

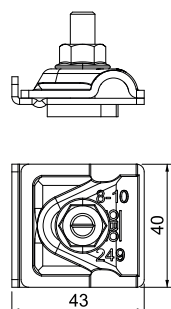End cap for TP support profiles, as protection against injuries and contamination.

A2

Earthing terminal for PV mounting systems

Type	Fit mm	Lightning current carrying capacity kA	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
249 PV10 6-50V2A	RD8-10 + 6-50mm²	H/100	8	8.460	**5051520**

Pre-mounted earthing terminal for the inclusion of PV mounting systems in the equipotential bonding. Suitable for the inclusion of the PV mounting systems in an external lightning protection system.
• Lightning current-compatible up to 100 kA (10/350)
• Rapid mounting through integrated spring mechanism
• For round conductor fastening RD 8–10
• To fasten single/multi-wire cables: 6–50 mm²
• For profiles with 10 mm groove
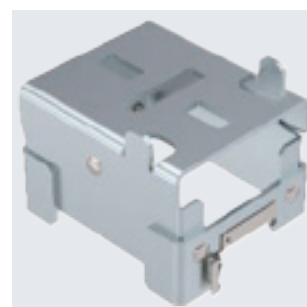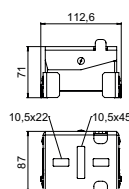• Meets the requirements of DIN EN 62561-1

St DD

CE

Short support for PV module mounting, flat roof

Type	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
STK DD	8	93.000	**5901650**

Short support to mount photovoltaic modules on flat roofs in combination with the TP 45/4700 support profile and KLU universal clamp. Slope angle 15°. Lockable fastening on support profile.

## Long support for PV module mounting, flat roof

St DD
CE
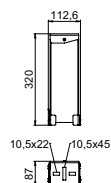
Type	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
STL 15 DD	4		210.000	**5901655**

Long support to mount photovoltaic modules on flat roofs in combination with the TP 45/4700 support profile and KLU universal clamp. Slope angle 15°. Lockable fastening on support profile.

Wind protection panel for photovoltaic systems

St DD
CE
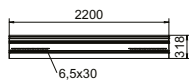
Type	Length mm	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
WSB 2200 DD	2200	4	631.000	**5901610**

Wind protection panel for use with photovoltaic systems with south alignment and standard inclinations of 15°. As protection against wind loads during extreme wind conditions. Lockable and screwable fastening to STL 15 long support.

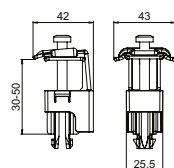## Flat-head screw for wind protection plate

A2 2B
CE

Type	Dimension mm	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
FKS M6x25 A2	M6x25	100	0.700	**5901880**

Flat-head screw with hexalobular internal to fasten wind protection plates to the STL 15 long support of the photovoltaic mounting systems for flat roofs. Matching Torx 30 key.

Universal clamp for PV module mounting

A2 BK
CE

Type	For frame height mm	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
KLU A2	30-50	20	6.590	**5901010**

Universal clamp to mount photovoltaic modules on flat and pitched roofs, suitable as a clamp between 2 modules or as an end clamp. Lockable pre-fastening on TP 45 support profile and on STK and STL supports. Suitable for 10 mm slot width. Can be rotated through 90° after engaging. Lockable fastening of the PV module with Torx 30 wrench.

A2 K

CE

Universal clamp for PV module mounting

Type	For frame height mm	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
KLU A2 S	30-50	20	6.590	**5901012**

Universal clamp to mount photovoltaic modules on flat and pitched roofs, suitable as a clamp between 2 modules or as an end clamp. Lockable pre-fastening on TP 45 support profile and on STK and STL supports. Suitable for 10 mm slot width. Can be rotated through 90° after engaging. Lockable fastening of the PV module with Torx 30 wrench.
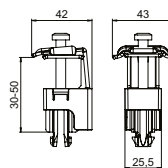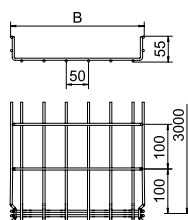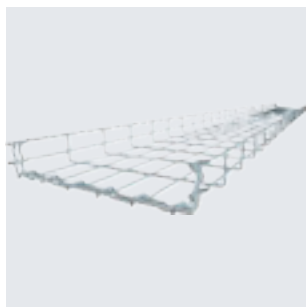
Mesh cable tray GR-Magic® 55

St FT

CE E30 E60 E90

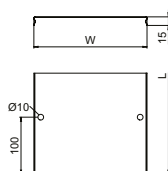| Type	Width mm	Wire Ø mm	Length mm	Min. ordering quantity m		Weight kg/100 m	Item no.
GRM 55 50 FT	50	3.9	3000	3		72.333	6001415
GRM 55 100 FT	100	3.9	3000	3		74.667	6001416
GRM 55 150 FT	150	3.9	3000	3		90.000	6001418
GRM 55 200 FT	200	3.9	3000	3		102.000	6001420
GRM 55 200 4.8FT	200	4.8	3000	3		156.667	6001421
GRM 55 300 FT	300	4.8	3000	3		200.667	6001424
GRM 55 400 FT	400	4.8	3000	3		245.000	6001428
GRM 55 500 FT	500	4.8	3000	3		288.333	6001432
GRM 55 600 FT	600	4.8	3000	3		331.333	6001436

Mesh cable tray with shaped connector of side height 55 mm.

Magnetic shield insulation without cover 15 dB, with cover 25 dB.
You can find detailed information regarding the UL classification in the respective certification.

No additional connection components are required for the mesh cable tray, it is simply interlocked. The grid width is 50 x 100 mm (exception: GRM 55/50 = 20 x 100 mm).

## Cover for mesh cable tray, latchable

St FT

CE

Type	Width mm	Min. ordering quantity m		Weight kg/100 m	Item no.
DGRR 50 FT	50	3		52.333	6001820
DGRR 100 FT	98	3		83.000	6001822
DGRR 150 FT	148	3		116.333	6001824
DGRR 200 FT	198	3		149.667	6001826
DGRR 300 FT	298	3		216.333	6001828
DGRR 400 FT	398	3		282.667	6001830
DGRR 500 FT	498	3		349.667	6001832
DGRR 600 FT	598	3		418.000	6001834

With transverse bead from 400 mm width.

Lockable cover for mesh cable trays of type GR and GRM. Protects cables from damage, contamination and moisture from above. Suitable for industrial areas such as mechanical engineering.

When using covers outdoors, additional measures against the influence of wind may need to be taken.

Cable tray RKS-Magic® 60

St FT

CE UKCA
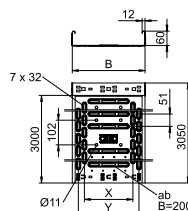
Type	Width mm	Metal thickness mm	BS	Min. ordering quantity m		Weight kg/100 m	Item no.
RKSM 610 FT	100	1.00	🔥	3		197.410	6047612
RKSM 615 FT	150	1.00	🔥	3		236.984	6047631
RKSM 620 FT	200	1.00	🔥	3		251.115	6047639
RKSM 630 FT	300	1.00	🔥	3		356.295	6047655
RKSM 640 FT	400	1.00	🔥	3		437.180	6047690
RKSM 650 FT	500	1.00		3		518.295	6047720
RKSM 660 FT	600	1.00		3		599.443	6047736

Cable tray with integrated quick fastening system. The usable length of the cable tray is 3,000 mm.
The cable tray has continuous side perforations of 7 x 20 mm for the installation of additional connection and mounting components.
The perforation for direct threaded rod suspension has a diameter of 11 mm.

Unperforated cover

St **DD**

CE 35 60 85 110 35 55 105

PE

Type	Width mm	Metal thickness mm	Length mm	Min. ordering quantity m		Weight kg/100 m	Item no.
DRLU 100 DD	100	1.00	3000	3		99.000	6052643
DRLU 150 DD	150	1.00	3000	3		138.267	6052647
DRLU 200 DD	200	1.00	3000	3		177.500	6052650
DRLU 300 DD	300	1.00	3000	3		256.000	6052656
DRLU 400 DD	400	1.00	3000	3		334.500	6052662
DRLU 500 DD	500	1.50	3000	3		619.234	6052668
DRLU 600 DD	600	1.50	3000	3		737.000	6052674
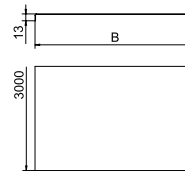
Cover for cable trays and mesh cable trays.

When using covers outdoors, additional measures against the influence of wind must be taken.
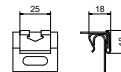
Transverse bead from 500 mm width.

Cover clamp

A2 **2B**

CE

Type	Min. ordering quantity Piece		Pack Piece	Weight kg/100 pc.	Item no.
DK DRLU A2	30		30	0.842	6052810

Cover clamp for secure fastening of covers on cable trays and cable ladders.

At least 6 cover clamps should be mounted for each 3 metres of cover.

SBR 8 tightening strap

A2 **K**

CE

Type	Avg. breaking load kN	Colour	Dim. B mm	Dim. t mm	Dim. B1 mm	Min. ordering quantity m	Pack m	Weight kg/100 m	Item no.
SBR 8 A2K	1.16	Jet black	9.3	1	8	40	40	1.704	6490192

Tightening strap made of rustproof steel with plastic jacketing to fasten cables on cable support systems.

SBR 15 tightening strap

A2 **K**

CE
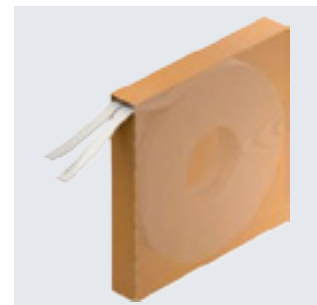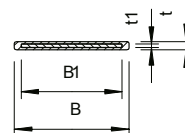
Type	Avg. breaking load kN	Colour	Min. ordering quantity m	Pack m	Weight kg/100 m	Item no.
SBR 15 A2K	4.19	Jet black	25	25	7.628	6490282

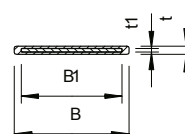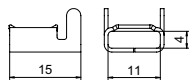Tightening strap made of rustproof steel with plastic jacketing to fasten cables on cable support systems.
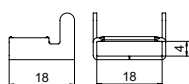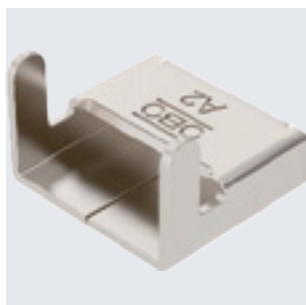
SBV 8 tightening strap lock

A2 · 2B

CE

Type	Colour	Min. ordering quantity Piece		Pack Piece	Weight kg/100 pc.	Item no.
SBV 8 A2	stainless steel	100		100	0.250	**6490942**

Tightening strap lock made of rustproof steel, suitable for portfolio with 8 mm width.

SBV 15 tightening strap lock

A2 · 2B

CE

Type	Colour	Min. ordering quantity Piece		Pack Piece	Weight kg/100 pc.	Item no.
SBV 15 A2	stainless steel	100		100	0.564	**6490964**

Tightening strap lock made of rustproof steel, suitable for a range of products with a 15 mm width.

Metal strip clips, wide

A2 · 2B

Type	Length mm	Width mm	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
MBS 075 A2	750	12	25		2.010	**7203109**
MBS 100 A2	1000	12	25		2.550	**7203111**
MBS 120 A2	1200	12	25		3.000	**7203113**
MBS 150 A2	1500	12	25		3.670	**7203115**

Metal strip clips, narrow

A2 · 2B

Type	Length mm	Width mm	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
MBS 015 A2	150	7.9	100		0.380	**7203099**
MBS 030 A2	300	7.9	100		0.610	**7203103**
MBS 045 A2	450	7.9	50		0.820	**7203105**
MBS 061 A2	610	7.9	50		1.080	**7203107**

Spring chuck

St

CE

Type	Item no.
576	6498027

Clamping tool for all OBO tightening straps in conjunction with appropriate tightening strap locks. With high clamping force, ratchet function, shortening unit and round grips for pleasant handling.
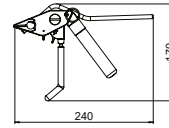
Pliers for metal strip clips

St

| Type	Item no.
MBS-Z	7203120

High-quality spring chuck with cutting tool for metal strip clips, type MBS.

UniBase universal stand

| Type	Length mm	Width mm	Height mm	Fit mm	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
UniBase 6	372	372	78	5	16	81.000	5403391

Universal stand for ballasting with standard blocks up to a dimension of 200 x 100 x 100 mm. Can be used on flat roofs, e.g. for mounting PV mounting systems or for cable routing with cable trays or with mesh cable trays in conjunction with roof cable holder 165 MBG HGRM. Blocks not contained in the scope of delivery.
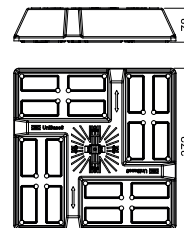
Building protection mat, flat roof

Type	Length mm	Width mm	Height mm	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
UniBase BSM	410	410	6	16	14.000	5403402
UniBase BSM ALU	410	410	6	16	14.000	5403404

Building protection mat as an underlay under stands of type UniBase 6 + UniBase 10 for flat roof PV mounting systems, as protection of the roof seal on flat roofs according to DIN 18531. Also suitable for height compensation of the PV mounting system. Made of recycled material; depending on the version, also available with aluminium lining.
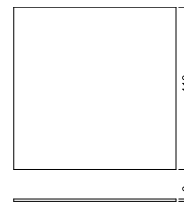
UniBase universal stand for gluing

ASA
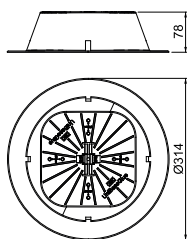
Type	Dim. D Ø mm	Height mm	Fit mm	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
UniBase Glue	314	78	5	16		39.400	5403395

Universal stand for gluing on flat roofs. Can be used for routing cables with cable trays or mesh cable trays in conjunction with 165 MBG HGRM roof conductor holders. Gluing collar must be selected according to the substrate.

Mesh cable tray adapter for roof conductor holder

PP
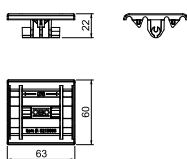
Type	Material	Fit mm	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
165 MBG HGRM	PP	Rd 8	50		1.340	5218886

• Adapter for GR-Magic® mesh cable trays with a mesh width of 50 mm or 20 mm
• For fastening to type 165 MBG 8-10 and UniBase
• Mounting without tools
• From polypropylene, black, UV-resistant and weatherproof
• Toolless installation

Magic PV Field
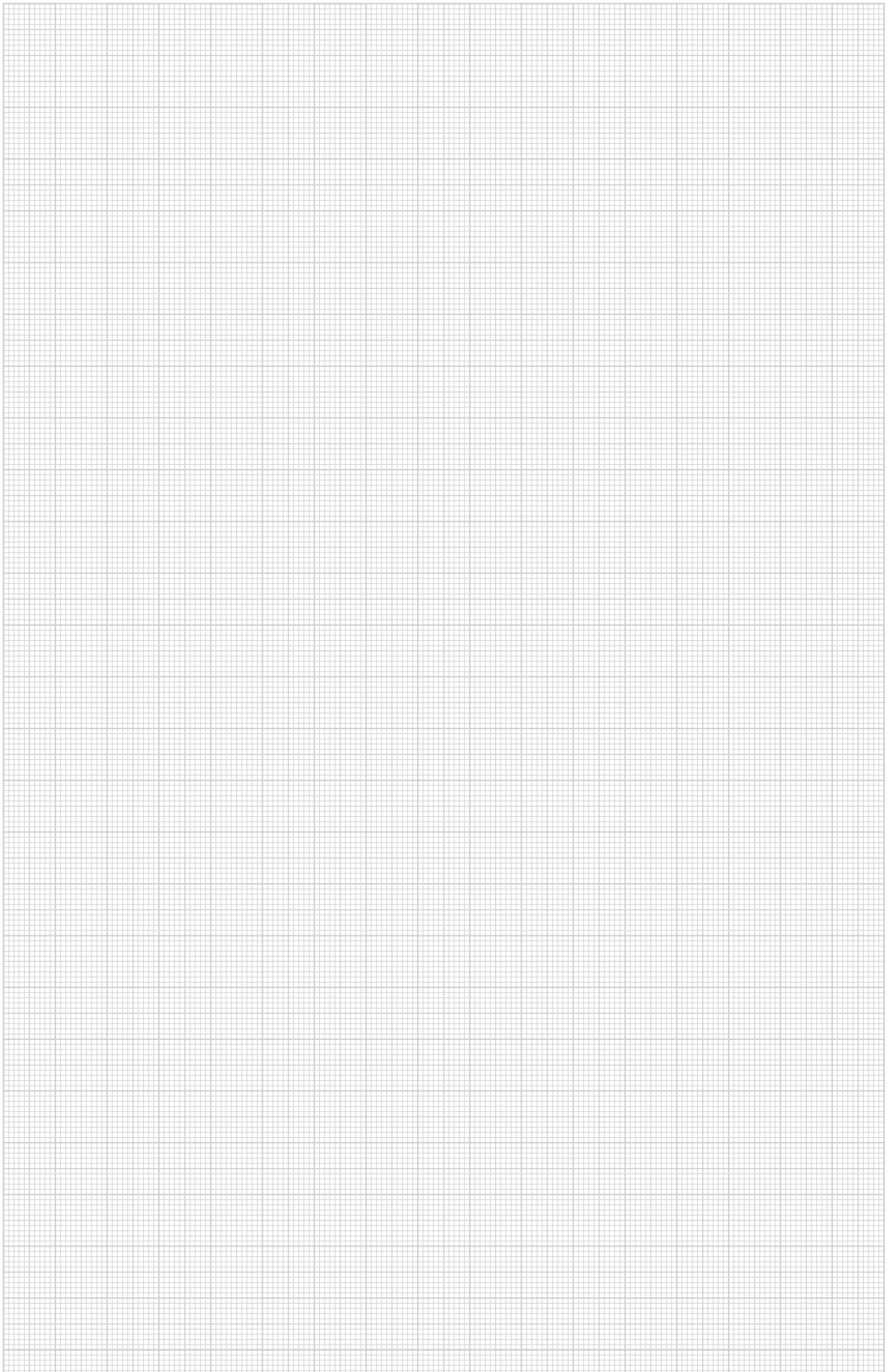
Ramming pile, free-standing system
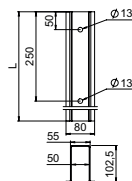
Type	Length mm	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
RP 1800 FT	1800	1	970.000	**5900106**
RP 2300 FT	2300	1	1,240.000	**5900110**

Ramming pile as a bracket for pre-mounted supports to mount free-standing photovoltaic systems. Mounting in the earth through ramming.

Stand, free-standing system
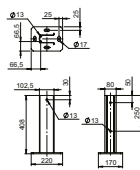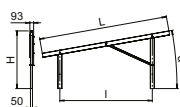
Type	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
SF 400 FT	1	431.000	**5900900**

Stand as a bracket for pre-mounted supports to mount free-standing PV systems. Mounting on concrete foundations with M16 bolt ties. Fastening material must be ordered separately.

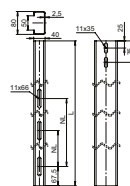## Pre-mounted supports for PV module mounting, free-standing system

Type	Angle α °	Dim. H mm	Dim. L mm	Dim. l mm	Module height mm	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
VT 10S FT	10	1.38	2.71	2.27	1600 - 1850	1	2,900.000	**5901550**
VT 10M FT	10	1.41	3.12	2.27	1850 - 2100	1	3,150.000	**5901552**
VT 10L FT	10	1.45	3.49	2.27	2100 - 2400	1	3,350.000	**5901554**
VT 25S FT	25	2.00	2.52	2.09	1600 - 1850	1	3,250.000	**5901556**
VT 25M FT	25	2.09	2.90	2.09	1850 - 2100	1	3,450.000	**5901558**
VT 25L FT	25	2.16	3.24	2.09	2100 - 2400	1	3,650.000	**5901560**
VT 30S FT	30	2.19	2.41	1.99	1600 - 1850	1	3,350.000	**5901562**
VT 30M FT	30	2.29	2.78	1.99	1850 - 2100	1	3,550.000	**5901564**
VT 30L FT	30	2.29	2.78	1.99	1850 - 2100	1	3,750.000	**5901566**

Pre-mounted support in small, medium or large size to mount free-standing photovoltaic systems in combination with support profiles and end/connection clamps. Mounting with ramming piles in the earth or with stands on concrete foundations.

Support profile for PV module mounting, free-standing system

Type	Length mm	Module width mm	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
TP 1000 FT	5650	990 - 1000	1		1,900.000	5900500
TP 1010 FT	5705	1000 - 1010	1		1,920.000	5900502
TP 1020 FT	5760	1010 - 1020	1		1,940.000	5900504
TP 1030 FT	5815	1020 - 1030	1		1,960.000	5900506
TP 1040 FT	5780	1030 - 1040	1		1,980.000	5900508
TP 1050 FT	5925	1040 - 1050	1		2,000.000	5900510
TP 1060 FT	5980	1050 - 1060	1		2,015.000	5900512
TP 1100 FT	5090	1090 - 1100	1		1,710.000	5900520
TP 1140 FT	5270	1130 - 1140	1		1,770.000	5900522
TP 1310 FT	6035	1300 - 1310	1		2,030.000	5900530

Support profile to mount photovoltaic modules on free-standing systems. Mounting of support profile on pre-mounted supports with KV FT cross-connectors. Mounting of the PV modules on the support profile with end and/or connection clamps. Connection of multiple support profiles with LV FT straight connectors and KV FT cross-connectors, screw-on.

Straight connector for support profiles, free-standing system

Type	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
LV FT	20		59.000	5901215

Straight connector to connect support profiles for free-standing photovoltaic systems. Fastening with pre-installed M6 screw, screw-on with Torx 30 wrench.

Cross-connector for TP support profiles, free-standing system

Type	Min. ordering quantity Piece		Weight kg/100 pc.	Item no.
KV FT	50		19.000	5901255

Cross-connector to connect support profiles for free-standing photovoltaic systems. Fastening with pre-installed M8 screw, screw-on with Torx 40 wrench.

Hook-head screw

A4 2B

CE
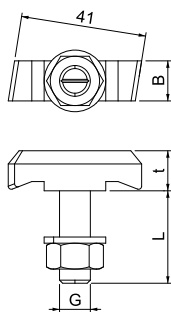
Type	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
MS50HB M12x30 A4	50	9.000	1148276
MS50HB M12x60 A4	25	11.650	1148280

Hook-head screw for use with MS5030 profile rail

Perforated strip for PV free-standing system

St FT

CE
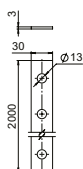
Type	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
LB FT	10	144.000	5901950

Perforated strip for cross-connecting the rear supports of pre-mounted supports type VT 10/25/30. For stiffening PV mounting systems free-standing. Fastening with screw set for perforated strip type SVLB. Fastening material not included in scope of delivery.

Screw set for perforated strip

A2

CE
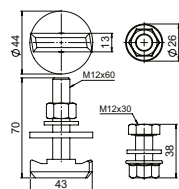
Type	Min. ordering quantity Piece	Weight kg/100 pc.	Item no.
SVLB	1	23.800	5901960

Screw set consisting of hexagon head screws M12, hexagon nuts with flange M12, hook-head screw and washers, for fastening perforated strips type LB FT to support profiles of the PV mounting system free-standing.
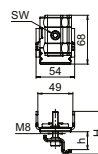
A2

CE

End clamp for PV module mounting, free-standing system

Type	For frame height mm	Min. order-ing quan-tity Piece		Weight kg/100 pc.	Item no.
KLE 20 A2	20	50		16.000	**5901070**
KLE 25 A2	25	50		16.900	**5901072**
KLE 30 A2	30	50		17.400	**5901074**
KLE 35 A2	35	50		18.300	**5901076**
KLE 40 A2	40	50		18.800	**5901078**
KLE 45 A2	45	50		19.700	**5901080**
KLE 50 A2	50	50		20.200	**5901082**

End clamp for fastening photovoltaic modules on support profiles of free-standing systems. Lockable pre-fastening of the module frames on the support profile. Suitable for slot width 10 mm. Lockable fastening of the PV module with Torx 30 wrench.

A2

CE

Intermediate clamp for PV module mounting, free-standing system

Type	For frame height mm	Min. order-ing quan-tity Piece		Weight kg/100 pc.	Item no.
KLZ 2030 A2	20-30	50		13.800	**5901050**
KLZ 3040 A2	30-40	50		14.400	**5901054**
KLZ 4050 A2	40-50	50		14.800	**5901058**

Connection clamp for fastening photovoltaic modules on support profiles of free-standing systems. Lockable pre-fastening of the module frames on the support profile. Suitable for slot width 10 mm. Lockable fastening of the PV module with Torx 30 wrench.
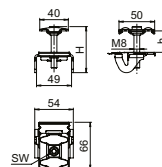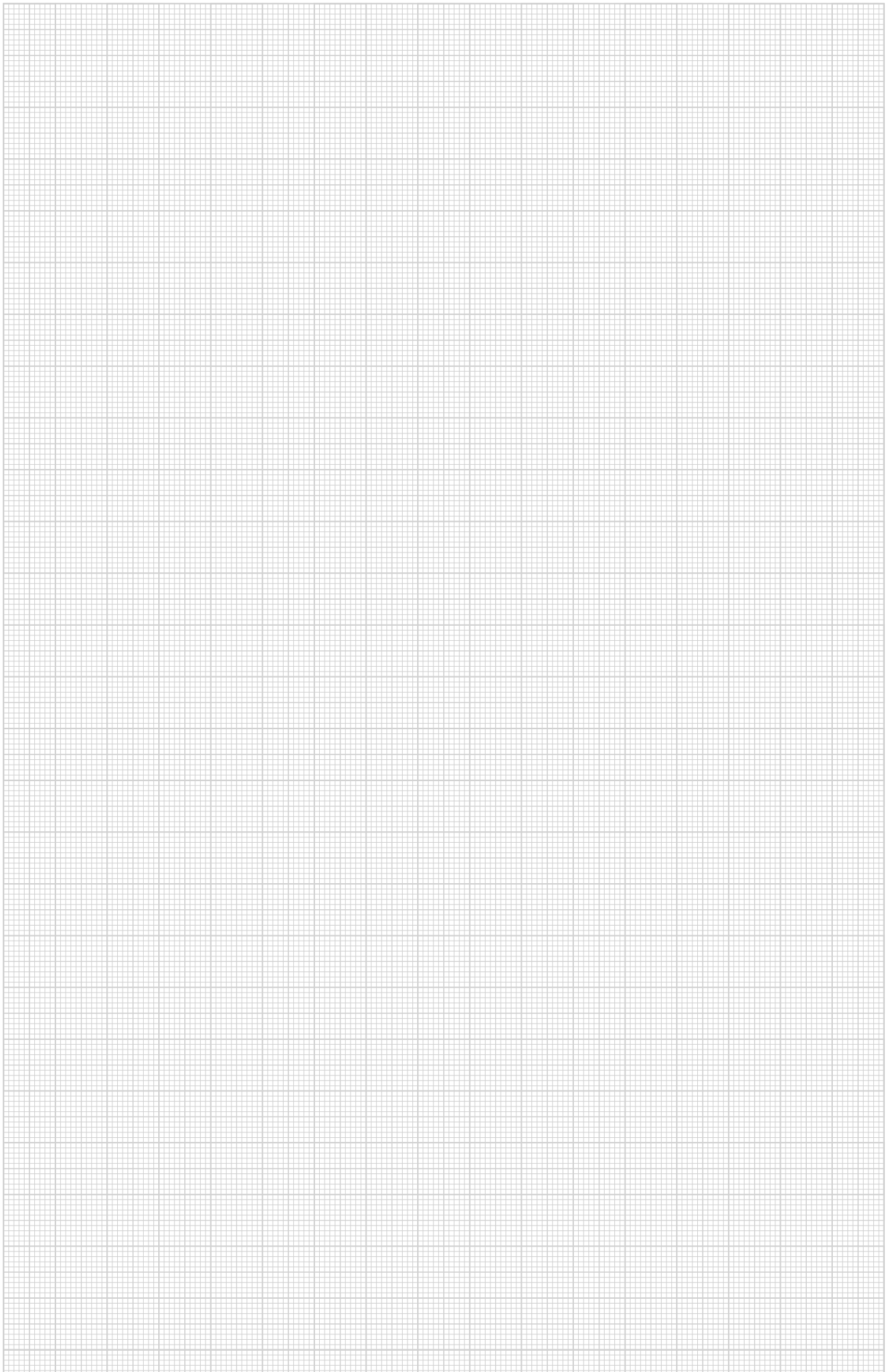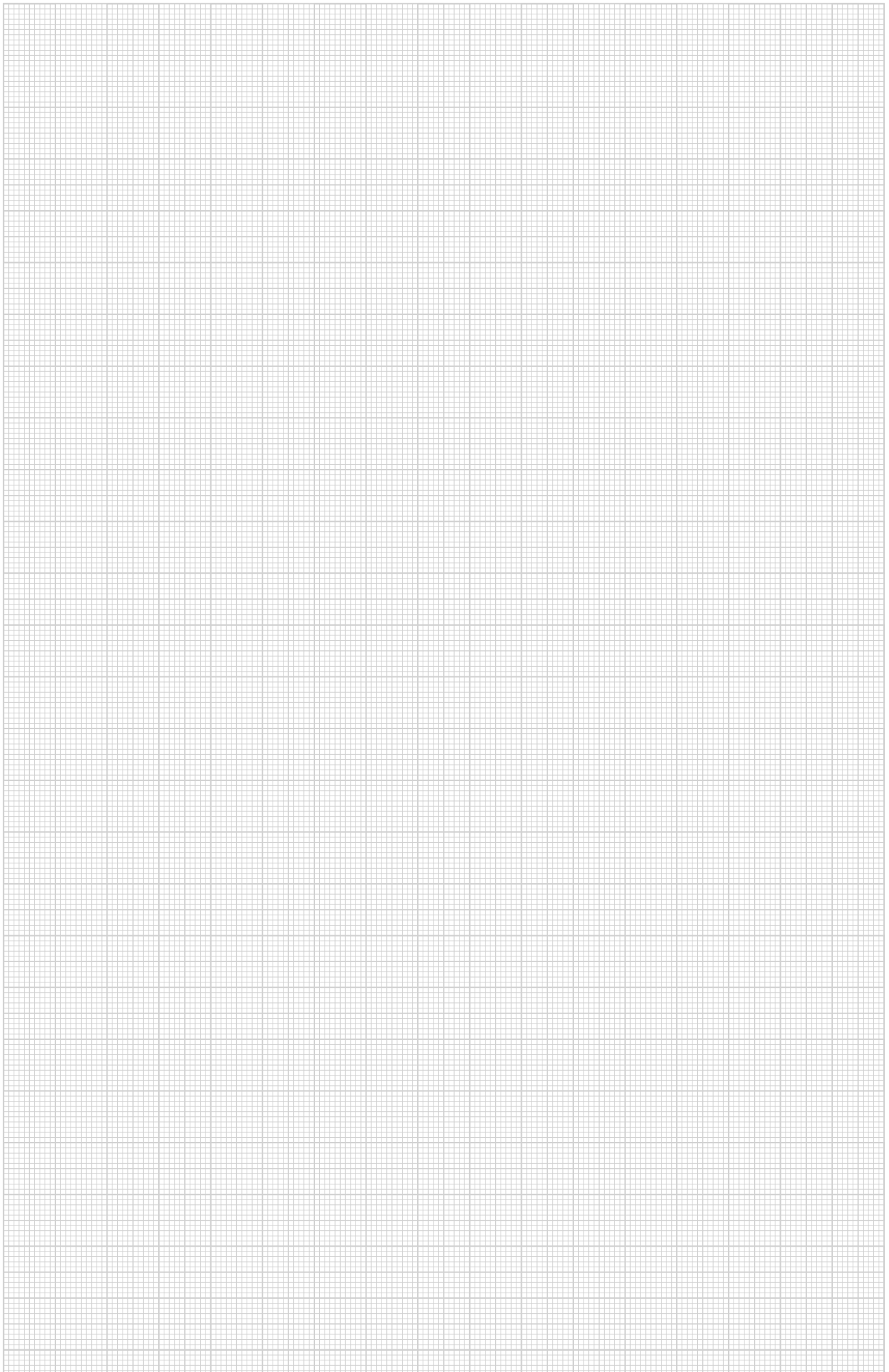
You can find additional information on the OBO Magic PV Solution®
mounting systems at **obo.eu/photovoltaik**

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