

# Install the future!

Magic PV Solution:  
Innovative mounting systems for photovoltaic systems



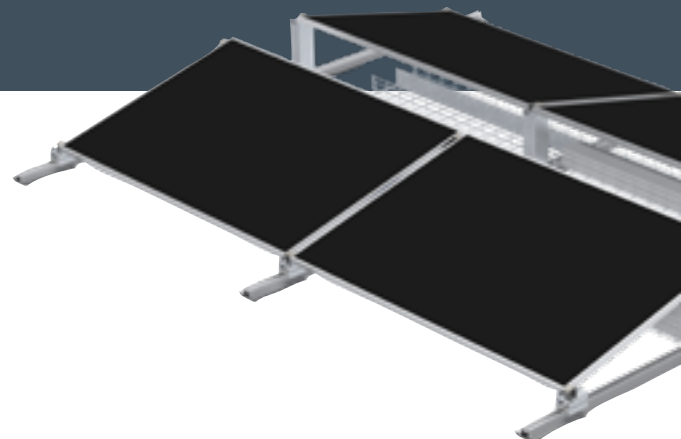
# This is how safe solar can be!

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

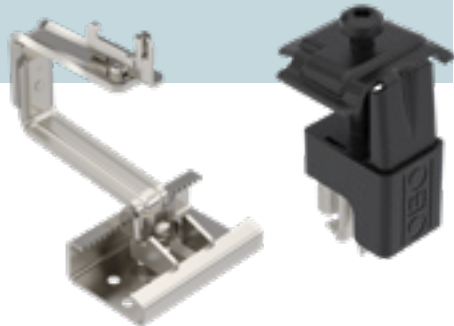
Most pitched roof systems are mounted on existing building roofs as so-called on-roof systems. Here, the PV modules are attached to the roof rafters using roof hooks, mounting rails and module clamps made of metal.



- 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.**

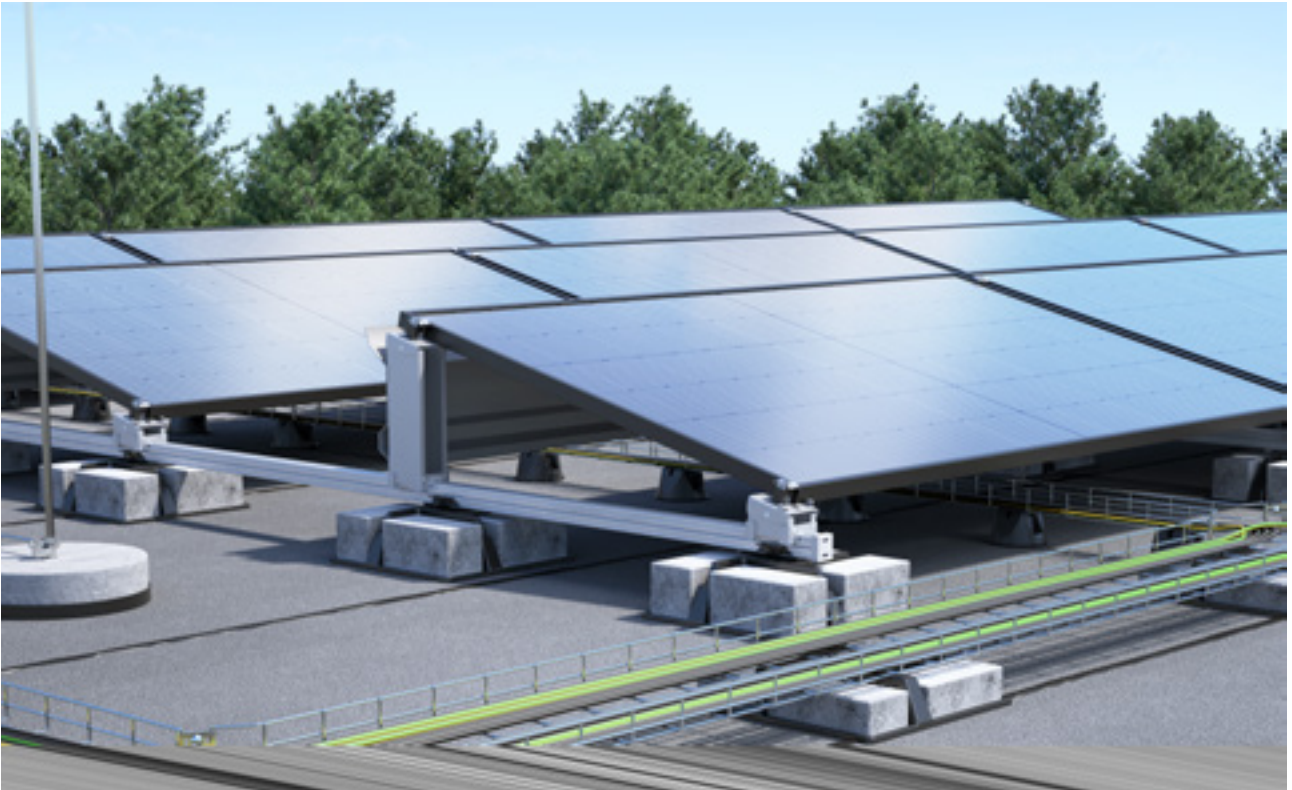
The products for flat and pitched roof systems can be combined. This considerably reduces the number of individual components required.





# 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.

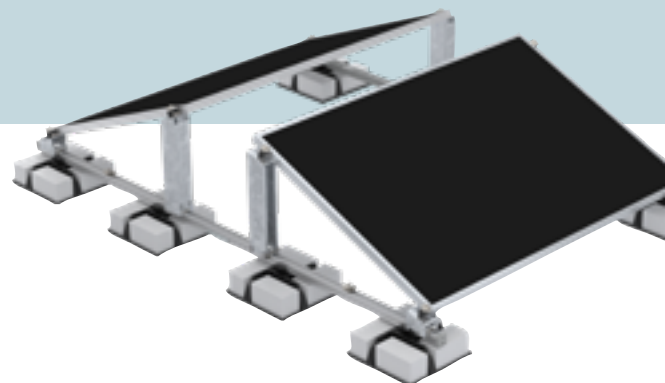
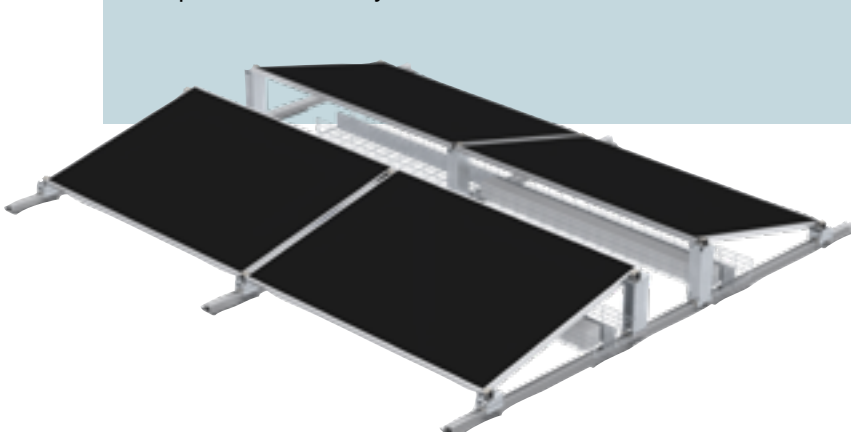


## Magic PV Flat Basic

- 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

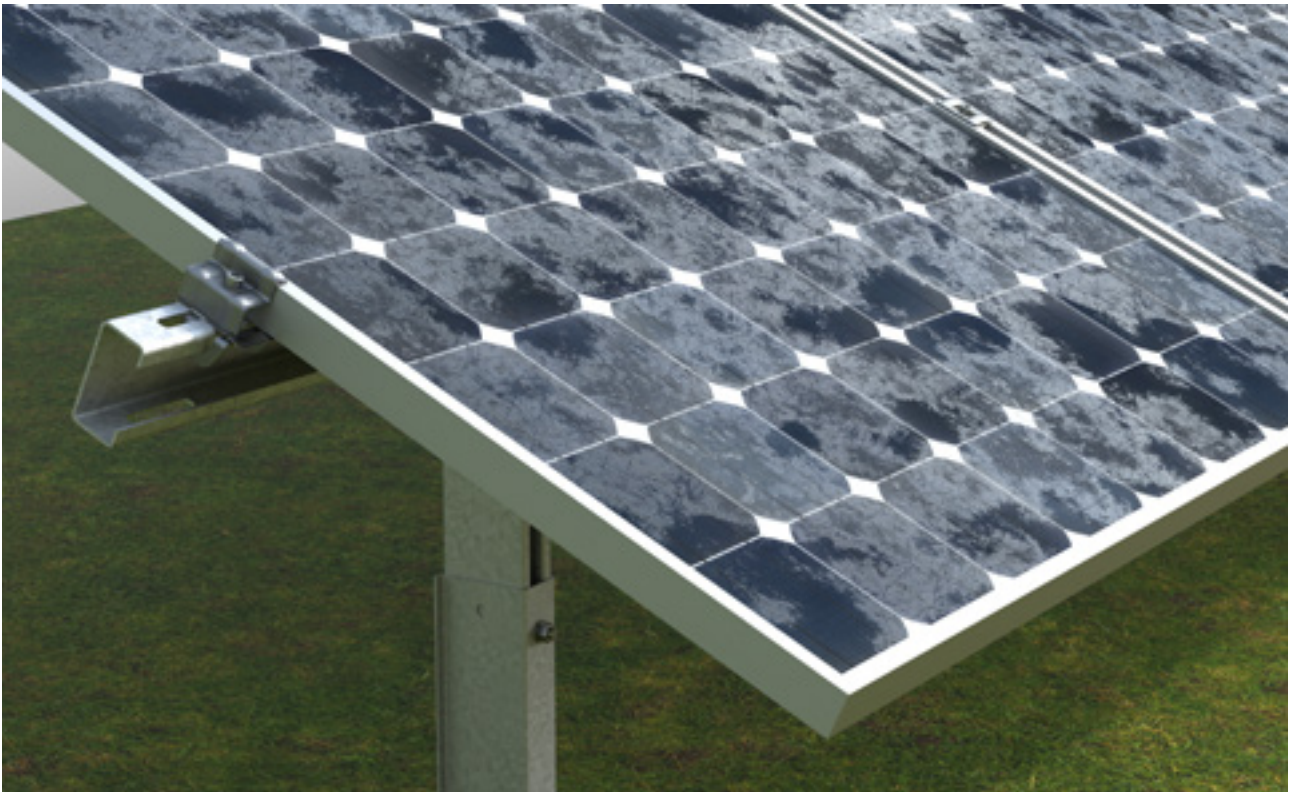
- High-quality material selection and professional cable routing
- Flexible system components
- Uni-Base ballast system for variable weighting of the entire system



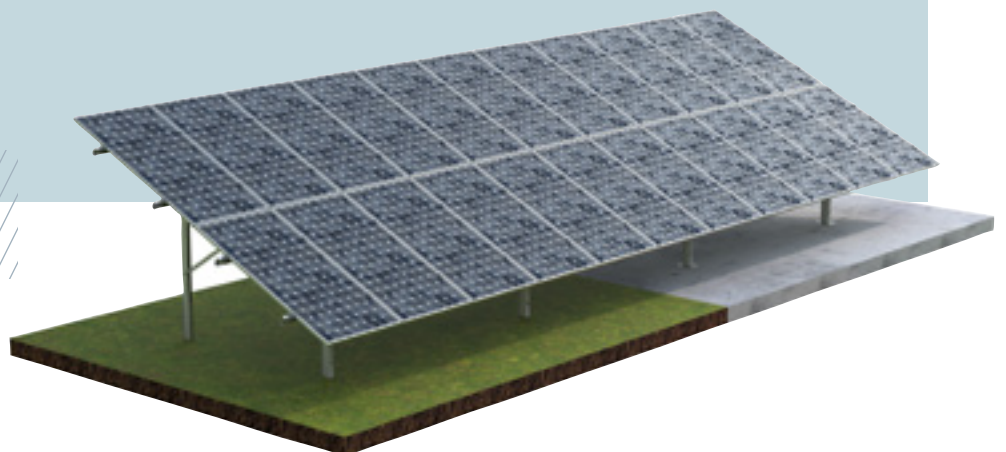
# Magic PV Field

## 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.



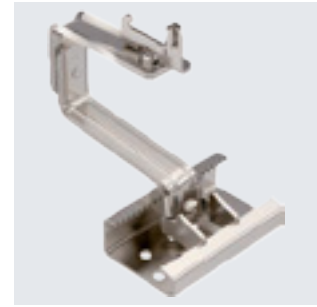
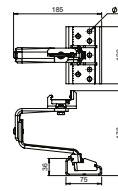
A2 2B

## Universal roof hook for PV module mounting, tiled roof



| Type   | Min. ordering quantity | 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.



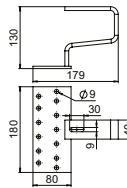
A2 GB

## Heavy roof hooks for PV module mounting, tiled roof



| Type   | Min. ordering quantity | 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.



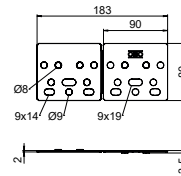
PE



## Support plate for ceiling hooks

| Type  | Min. ordering quantity | 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.



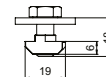
A2



## Bolt with hammer nut for PV module mounting

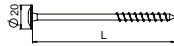
| Type      | Thread | Min. ordering quantity | Weight kg/100 pc. | Item no. |
|-----------|--------|------------------------|-------------------|----------|
| SKS HM A2 | M8     | 20                     | 2.500             | 5901850  |

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



### Wafer-head screw for roof hooks

A2

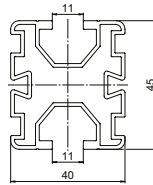


| Type         | Length<br>mm | Min.<br>order-<br>ing<br>quan-<br>tity<br>Piece | Weight<br>kg/100 pc. | Item no. |
|--------------|--------------|---|----------------------|----------|
| TKS 8x100 A2 | 100          | 100   | 2.377                | 5901800  |
| TKS 8x120 A2 | 120          | 100   | 2.789                | 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

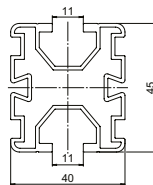


| Type           | Length<br>mm | Min.<br>order-<br>ing<br>quan-<br>tity<br>Piece | Weight<br>kg/100 pc. | Item no. |
|----------------|--------------|---|----------------------|----------|
| TP 45 2350 ALU | 2350         | 4   | 242.520              | 5900405  |
| TP 45 4700 ALU | 4700         | 4   | 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

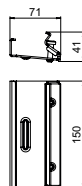


| Type             | Length<br>mm | Min.<br>order-<br>ing<br>quan-<br>tity<br>Piece | Weight<br>kg/100 pc. | Item no. |
|------------------|--------------|---|----------------------|----------|
| TP 45 4700 ALU S | 4700         | 4   | 485.040              | 5900412  |

Support profile, black anodized, 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



| Type     | Min.<br>order-<br>ing<br>quan-<br>tity<br>Piece | Weight<br>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.



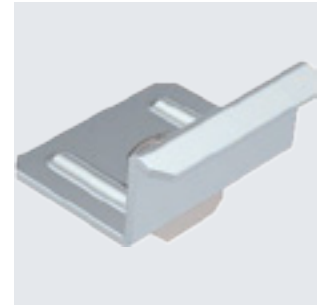
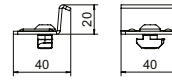
St DD

### Cross-connector for TP support profiles



| Type            | Min. ordering quantity | Weight kg/100 pc. | Item no.       |
|-----------------|------------------------|-------------------|----------------|
| <b>KV 45 DD</b> | 20                     | 5.000             | <b>5901250</b> |

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



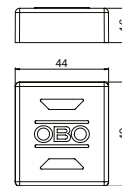
PE

### Support profile end cap



| Type           | Colour | Min. ordering quantity | Weight kg/100 pc. | Item no.       |
|----------------|--------|------------------------|-------------------|----------------|
| <b>EK 45 G</b> | Grey   | 20                     | 0.740             | <b>5901722</b> |
| <b>EK 45 S</b> | Black  | 20                     | 0.740             | <b>5901720</b> |

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



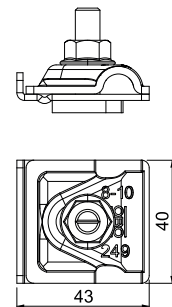
A2

### Earthing terminal for PV mounting systems

| Type                    | Fit mm                       | Lightning current carrying capacity kA | Min. ordering quantity | Weight kg/100 pc. | Item no.       |
|-------------------------|------------------------------|--|------------------------|-------------------|----------------|
| <b>249 PV10 6-50V2A</b> | RD8-10 + 6-50mm <sup>2</sup> | H/100                                  | 8                      | 8.460             | <b>5051520</b> |

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 mm<sup>2</sup>
- For profiles with 10 mm groove
- Meets the requirements of DIN EN 62561-1



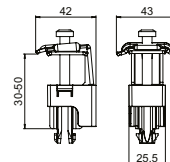
A2 BK

### Universal clamp for PV module mounting

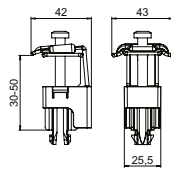


| Type          | For frame height mm | Min. ordering quantity | Weight kg/100 pc. | Item no.       |
|---------------|---------------------|------------------------|-------------------|----------------|
| <b>KLU A2</b> | 30-50               | 20                     | 6.590             | <b>5901010</b>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

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.

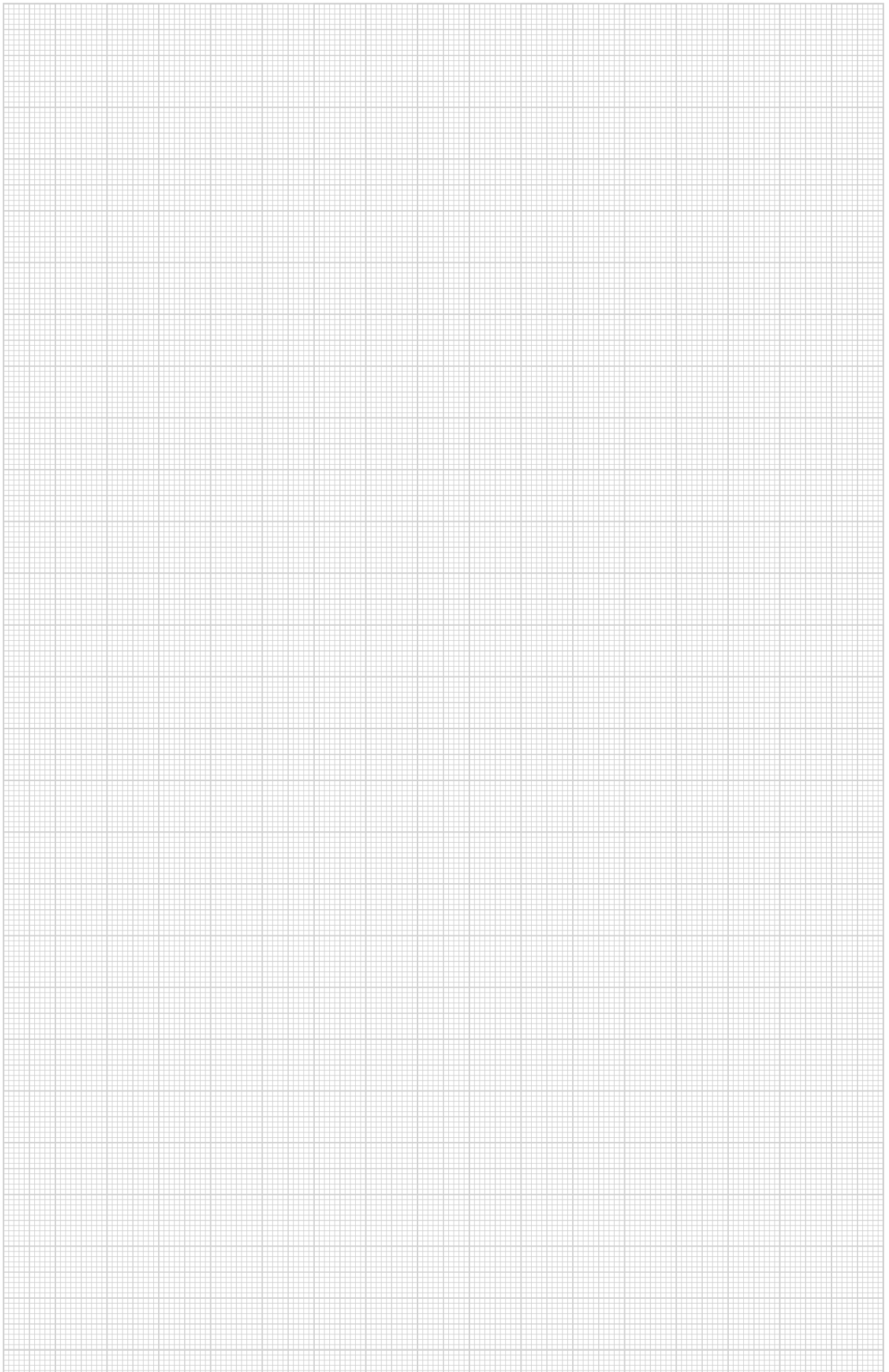


Universal clamp for PV module mounting



| Type            | For frame height<br>mm | Min.<br>order-<br>ing<br>quan-<br>tity<br>Piece | Weight<br>kg/100 pc. | Item no.       |
|-----------------|------------------------|---|----------------------|----------------|
| <b>KLU A2 S</b> | 30-50                  | 20  | 6.590                | <b>5901012</b> |

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.



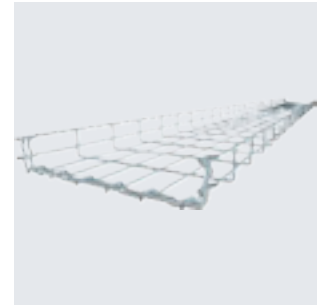
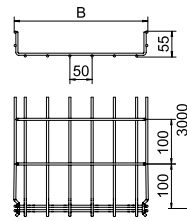


St FT



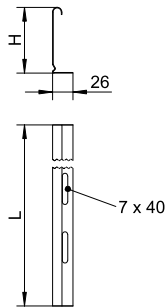
Mesh cable tray GR-Magic® 55

| Type          | Wire     |      |           | Min. ordering quantity | Weight kg/100 m | Item no. |
|---------------|----------|------|-----------|------------------------|-----------------|----------|
|               | Width mm | Ø mm | Length mm |                        |                 |          |
| 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).

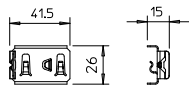
Barrier strip 45



| Type      | Dim. H mm | Metal thickness mm | Dim. L mm | Min. ordering quantity 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.

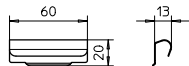
Clamping piece for separating retainer fastening in GRM



| Type     | Min. ordering quantity Piece | Weight kg/100 pc. | Item no. |
|----------|------------------------------|-------------------|----------|
| KS GR A2 | 30                           | 0.830             | 6062282  |

Clamping piece for fastening separating retainer in mesh cable trays.

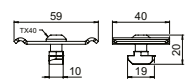
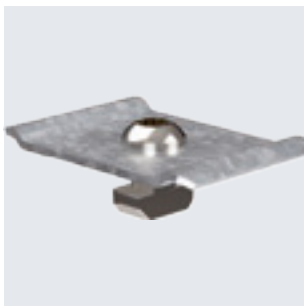
Separating retainer connector



| Type    | Min. ordering quantity 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. ordering quantity Piece | Weight kg/100 pc. | Item no. |
|-------|------------------------------|-------------------|----------|
| BF GR | 20                           | 5.000             | 5901770  |

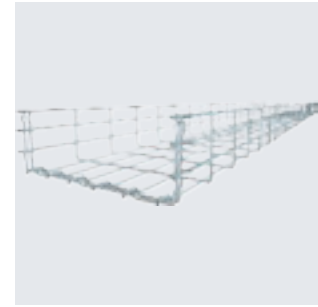
Fastening set for fastening mesh cable trays to support profiles type TPF 35 for PV mounting systems for flat roofs. Consisting of clamping piece, sliding nut and screw.

St FT



Mesh cable tray GR-Magic® 105

| Type           | Width<br>mm | Wire<br>Ø<br>mm | Wire<br>quan-<br>tity<br>m | Weight<br>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  |



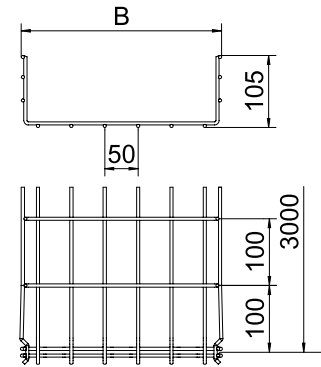
Mesh cable tray with shaped connector of side height 105 mm.

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

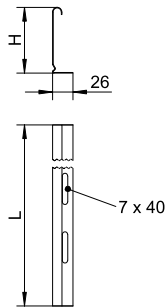
No additional connection components are required for the mesh cable tray, it is simply inter-locked. The grid width is 50 x 100 mm.

| Type           | Length<br>mm | Dim.<br>B<br>mm | Usable<br>cross-<br>section<br>cm <sup>2</sup> |
|----------------|--------------|-----------------|--|
| 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



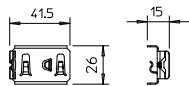
Barrier strip 85



| Type      | Dim. H mm | Metal thickness mm | Dim. L mm | Min. ordering quantity 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.

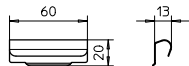
Clamping piece for separating retainer fastening in GRM



| Type     | Min. ordering quantity Piece | Weight kg/100 pc. | Item no. |
|----------|------------------------------|-------------------|----------|
| KS GR A2 | 30                           | 0.830             | 6062282  |

Clamping piece for fastening separating retainer in mesh cable trays.

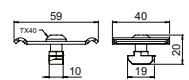
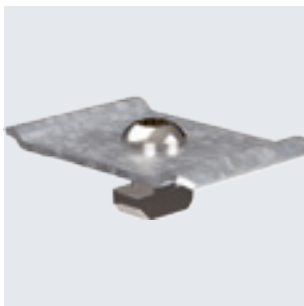
Separating retainer connector



| Type    | Min. ordering quantity 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. ordering quantity 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.



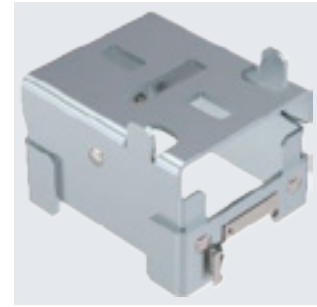
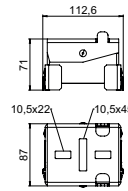
St DD

### Short support for PV module mounting, flat roof

CE

|               |   |                        |  |            |  |                |
|---------------|---|------------------------|--|------------|--|----------------|
|               |   | Min. ordering quantity |  | Weight     |  | Item no.       |
| <b>Type</b>   |   | Piece                  |  | kg/100 pc. |  |                |
| <b>STK DD</b> | 8 |                        |  | 93.000     |  | <b>5901650</b> |

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.



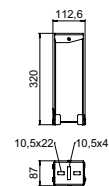
St DD

### Long support for PV module mounting, flat roof

CE

|                  |   |                        |  |            |  |                |
|------------------|---|------------------------|--|------------|--|----------------|
|                  |   | Min. ordering quantity |  | Weight     |  | Item no.       |
| <b>Type</b>      |   | Piece                  |  | kg/100 pc. |  |                |
| <b>STL 15 DD</b> | 4 |                        |  | 210.000    |  | <b>5901655</b> |

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.



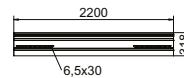
St DD

### Wind protection panel for photovoltaic systems

CE

|                    |           |                        |  |            |  |                |
|--------------------|-----------|------------------------|--|------------|--|----------------|
|                    |           | Min. ordering quantity |  | Weight     |  | Item no.       |
| <b>Type</b>        | Length mm | Piece                  |  | kg/100 pc. |  |                |
| <b>WSB 2200 DD</b> | 2200      | 4                      |  | 631.000    |  | <b>5901610</b> |

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.



A2 2B

### Flat-head screw for wind protection plate

CE

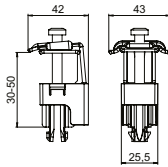
|                     |              |                        |  |            |  |                |
|---------------------|--------------|------------------------|--|------------|--|----------------|
|                     |              | Min. ordering quantity |  | Weight     |  | Item no.       |
| <b>Type</b>         | Dimension mm | Piece                  |  | kg/100 pc. |  |                |
| <b>FKS M6x25 A2</b> | M6x25        | 100                    |  | 0.700      |  | <b>5901880</b> |

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

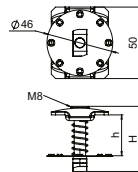


| Type          | For frame height mm | Min. ordering quantity Piece | Weight kg/100 pc. | Item no.       |
|---------------|---------------------|------------------------------|-------------------|----------------|
| <b>KLU A2</b> | 30-50               | 20                           | 6.590        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

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

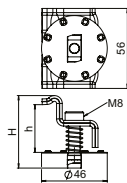


| Type               | For frame height mm | Min. ordering quantity Piece | Weight kg/100 pc. | Item no.       |
|--------------------|---------------------|------------------------------|-------------------|----------------|
| <b>KLZ F 30 A2</b> | 30                  | 50                           |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

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.

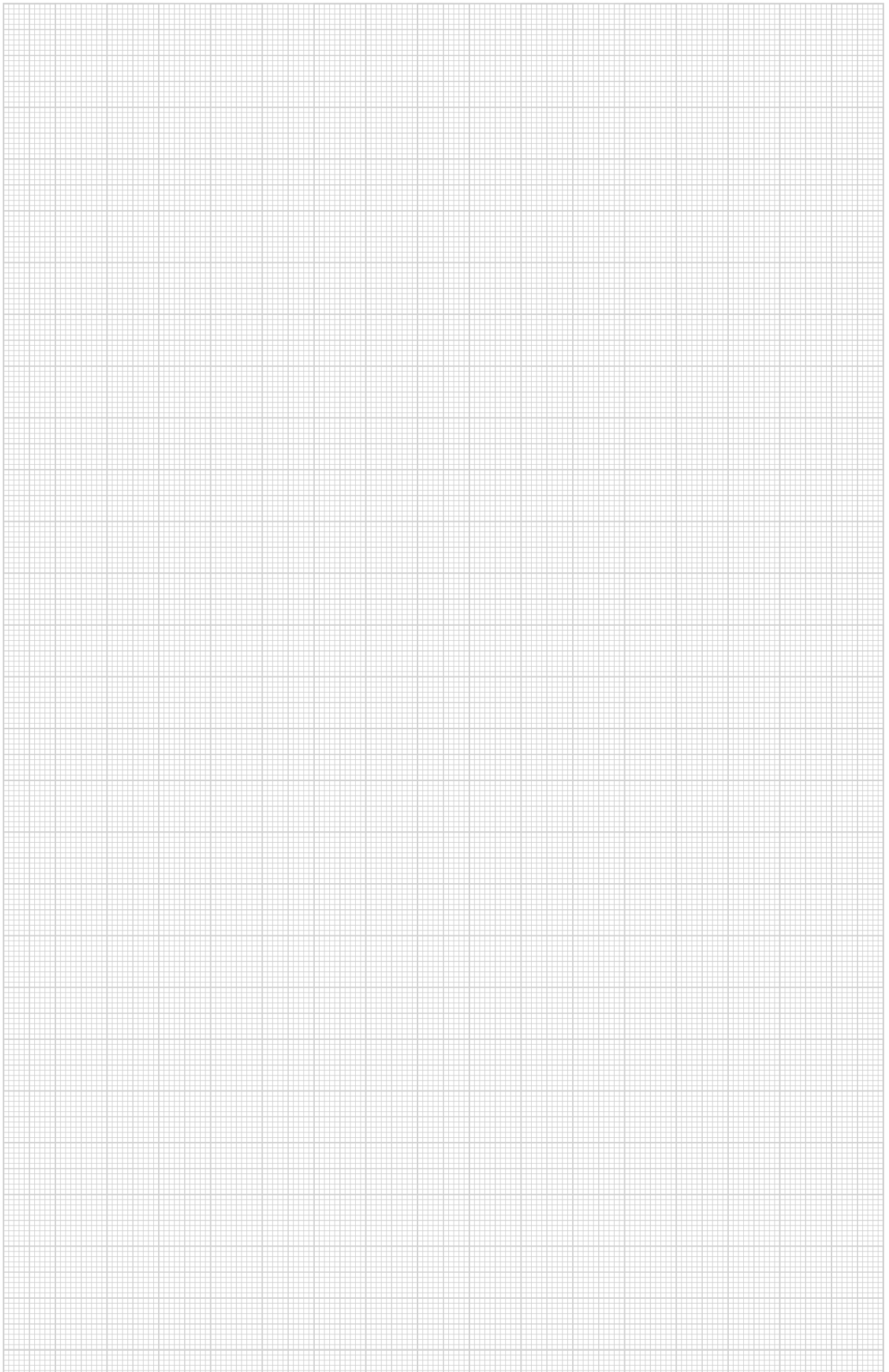
End clamp with spring for PV module mounting

A2

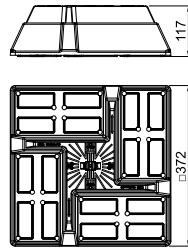


| Type               | For frame height mm | Min. ordering quantity Piece | Weight kg/100 pc. | Item no.       |
|--------------------|---------------------|------------------------------|-------------------|----------------|
| <b>KLE F 30 A2</b> | 30                  | 50                           |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

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.



### UniBase universal stand

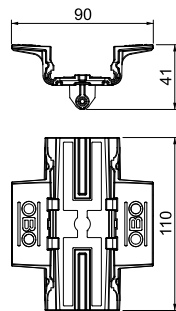


| Type       | Length<br>mm | Width<br>mm | Height<br>mm | Fit<br>mm | Min.<br>order-<br>ing<br>quan-<br>tity<br>Piece | Weight<br>kg/100 pc. | Item no. |
|------------|--------------|-------------|--------------|-----------|---|----------------------|----------|
| UniBase 10 | 372          | 372         | 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

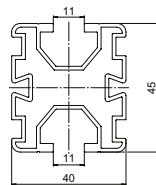


| Type        | Min.<br>order-<br>ing<br>quan-<br>tity<br>Piece | Weight<br>kg/100 pc. | Item no. |
|-------------|---|----------------------|----------|
| UniBase TMP | 16  | 4.200                | 5403397  |

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

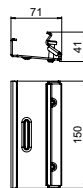


| Type           | Length<br>mm | Min.<br>order-<br>ing<br>quan-<br>tity<br>Piece | Weight<br>kg/100 pc. | Item no. |
|----------------|--------------|---|----------------------|----------|
| TP 45 2350 ALU | 2350         | 4   | 242.520              | 5900405  |
| TP 45 4700 ALU | 4700         | 4   | 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.<br>order-<br>ing<br>quan-<br>tity<br>Piece | Weight<br>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.

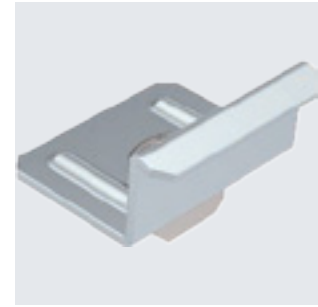
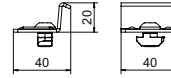
St DD



### Cross-connector for TP support profiles

| Type            | Min. ordering quantity | Piece | Weight kg/100 pc. | Item no.       |
|-----------------|------------------------|-------|-------------------|----------------|
| <b>KV 45 DD</b> | 20                     |       | 5.000             | <b>5901250</b> |

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



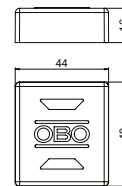
PE



### Support profile end cap

| Type           | Colour | Min. ordering quantity | Piece | Weight kg/100 pc. | Item no.       |
|----------------|--------|------------------------|-------|-------------------|----------------|
| <b>EK 45 G</b> | Grey   | 20                     |       | 0.740             | <b>5901722</b> |

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



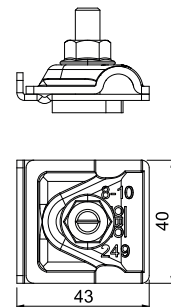
A2

### Earthing terminal for PV mounting systems

| Type                    | Fit mm                       | Lightning current carrying capacity kA | Min. ordering quantity | Piece | Weight kg/100 pc. | Item no.       |
|-------------------------|------------------------------|--|------------------------|-------|-------------------|----------------|
| <b>249 PV10 6-50V2A</b> | RD8-10 + 6-50mm <sup>2</sup> | H/100                                  | 8                      |       | 8.460             | <b>5051520</b> |

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 mm<sup>2</sup>
- For profiles with 10 mm groove
- Meets the requirements of DIN EN 62561-1



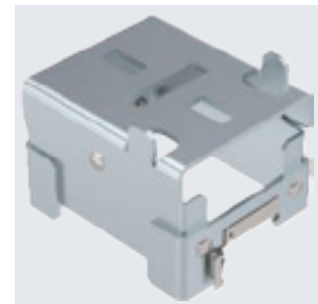
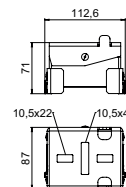
St DD



### Short support for PV module mounting, flat roof

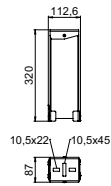
| Type          | Min. ordering quantity | Piece | Weight kg/100 pc. | Item no.       |
|---------------|------------------------|-------|-------------------|----------------|
| <b>STK DD</b> | 8                      |       | 93.000            | <b>5901650</b> |

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

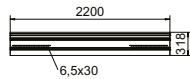


| Type      | Min. ordering quantity | Weight kg/100 pc. | Item no. |
|-----------|------------------------|-------------------|----------|
| STL 15 DD | 4                      | 210.000           | 5901655  |

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 | 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

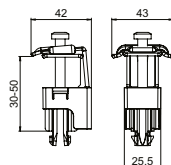


| Type         | Dimension mm | Min. ordering quantity | Weight kg/100 pc. | Item no. |
|--------------|--------------|------------------------|-------------------|----------|
| FKS M6x25 A2 | M6x25        | 100                    | 0.700             | 5901880  |

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 | 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.

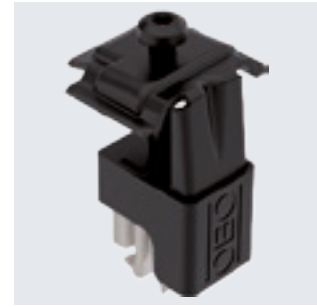
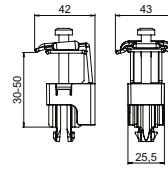
A2 K



## Universal clamp for PV module mounting

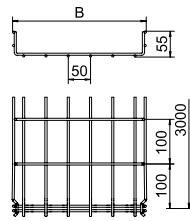
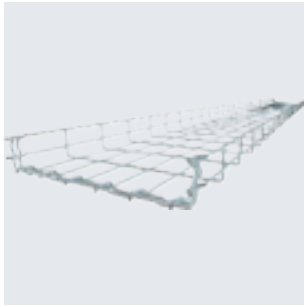
| Type            | For frame height<br>mm | Min.<br>order-<br>ing<br>quan-<br>tity<br>Piece | Weight<br>kg/100 pc. | Item no.       |
|-----------------|------------------------|---|----------------------|----------------|
| <b>KLU A2 S</b> | 30-50                  | 20  | 6.590                | <b>5901012</b> |

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



| Type             | Width<br>mm | Wire<br>Ø<br>mm | Length<br>mm | Min.<br>order-<br>ing<br>quan-<br>tity<br>m | Weight<br>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.

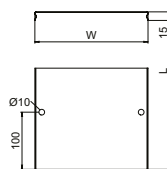
Magnetic shield insulation without cover 15 dB, with cover 25 dB.

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



| Type        | Width<br>mm | Min.<br>order-<br>ing<br>quan-<br>tity<br>m | Weight<br>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  |

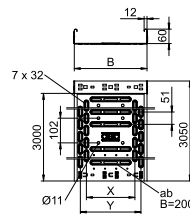
With transverse bead from 400 mm width.

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



| Type        | Width<br>mm | Metal<br>thick-<br>ness<br>mm | BS | Min.<br>order-<br>ing<br>quan-<br>tity<br>m | Weight<br>kg/100 m | Item no. |
|-------------|-------------|-------------------------------|----|---|--------------------|----------|
| RKSM 610 FT | 100         | 1.00                          | 3  | 3   | 197.410            | 6047612  |
| RKSM 615 FT | 150         | 1.00                          | 3  | 3   | 236.984            | 6047631  |
| RKSM 620 FT | 200         | 1.00                          | 3  | 3   | 251.115            | 6047639  |
| RKSM 630 FT | 300         | 1.00                          | 3  | 3   | 356.295            | 6047655  |
| RKSM 640 FT | 400         | 1.00                          | 3  | 3   | 437.180            | 6047690  |
| RKSM 650 FT | 500         | 1.00                          | 3  | 3   | 518.295            | 6047720  |
| RKSM 660 FT | 600         | 1.00                          | 3  | 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.

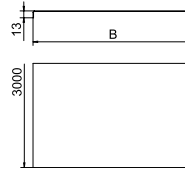


St DD



| Type               | Width mm | Metal thickness mm | Length mm | Min. ordering quantity | Weight kg/100 m | Item no.       |
|--------------------|----------|--------------------|-----------|------------------------|-----------------|----------------|
| <b>DRLU 100 DD</b> | 100      | 1.00               | 3000      | 3                      | 99.000          | <b>6052643</b> |
| <b>DRLU 150 DD</b> | 150      | 1.00               | 3000      | 3                      | 138.267         | <b>6052647</b> |
| <b>DRLU 200 DD</b> | 200      | 1.00               | 3000      | 3                      | 177.500         | <b>6052650</b> |
| <b>DRLU 300 DD</b> | 300      | 1.00               | 3000      | 3                      | 256.000         | <b>6052656</b> |
| <b>DRLU 400 DD</b> | 400      | 1.00               | 3000      | 3                      | 334.500         | <b>6052662</b> |
| <b>DRLU 500 DD</b> | 500      | 1.50               | 3000      | 3                      | 619.234         | <b>6052668</b> |
| <b>DRLU 600 DD</b> | 600      | 1.50               | 3000      | 3                      | 737.000         | <b>6052674</b> |

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.



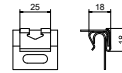
### Unperforated cover

A2 2B



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

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.



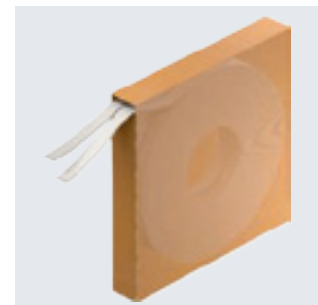
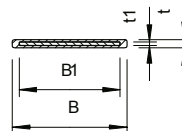
### Cover clamp

A2 K



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

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



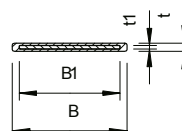
### SBR 8 tightening strap

A2 K



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

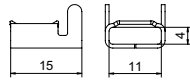
Tightening strap made of rustproof steel with plastic jacketing to fasten cables on cable support systems.



### SBR 15 tightening strap

## SBV 8 tightening strap lock

A2 2B

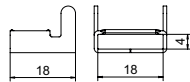
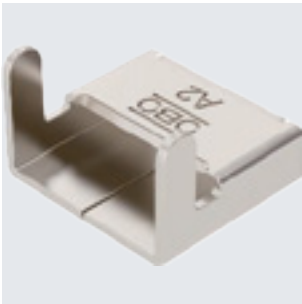


| Type            | Colour          | Min. ordering quantity Piece | Pack Piece | Weight kg/100 pc. | Item no.       |
|-----------------|-----------------|------------------------------|------------|-------------------|----------------|
| <b>SBV 8 A2</b> | stainless steel | 100                          | 100        | 0.250             | <b>6490942</b> |

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

## SBV 15 tightening strap lock

A2 2B



| Type             | Colour          | Min. ordering quantity Piece | Pack Piece | Weight kg/100 pc. | Item no.       |
|------------------|-----------------|------------------------------|------------|-------------------|----------------|
| <b>SBV 15 A2</b> | stainless steel | 100                          | 100        | 0.564             | <b>6490964</b> |

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.       |
|-------------------|-----------|----------|------------------------------|-------------------|----------------|
| <b>MBS 075 A2</b> | 750       | 12       | 25                           | 2.010             | <b>7203109</b> |
| <b>MBS 100 A2</b> | 1000      | 12       | 25                           | 2.550             | <b>7203111</b> |
| <b>MBS 120 A2</b> | 1200      | 12       | 25                           | 3.000             | <b>7203113</b> |
| <b>MBS 150 A2</b> | 1500      | 12       | 25                           | 3.670             | <b>7203115</b> |

## Metal strip clips, narrow

A2 2B



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

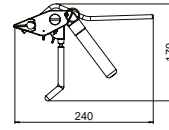
St



### Spring chuck

|             |                 |
|-------------|-----------------|
| <b>Type</b> | <b>Item no.</b> |
| 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.



St

### Pliers for metal strip clips

|             |                 |
|-------------|-----------------|
| <b>Type</b> | <b>Item no.</b> |
| MBS-Z       | 7203120         |

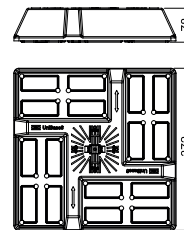
High-quality spring chuck with cutting tool for metal strip clips, type MBS.



### UniBase universal stand

| Type      | Length<br>mm | Width<br>mm | Height<br>mm | Fit<br>mm | Min.<br>order-<br>ing<br>quan-<br>tity<br>Piece | Weight<br>kg/100 pc. | Item no. |
|-----------|--------------|-------------|--------------|-----------|---|----------------------|----------|
| UniBase 6 | 372          | 372         | 78           | 5         | 16  | 81.000               | 5403391  |

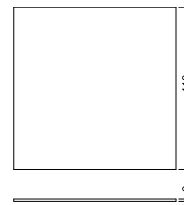
Universal stand for ballasting with standard blocks up to a dimension of 200 x 100 x 100 mm. Can be used on flat roofs, e.g. for mounting PV mounting systems or for cable routing with cable trays or with mesh cable trays in conjunction with roof cable holder 165 MBG HGRM. Blocks not contained in the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



### Building protection mat, flat roof

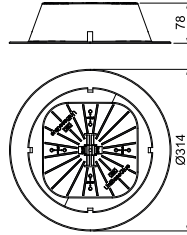
| Type            | Length<br>mm | Width<br>mm | Height<br>mm | Min.<br>order-<br>ing<br>quan-<br>tity<br>Piece | Weight<br>kg/100 pc. | Item no. |
|-----------------|--------------|-------------|--------------|---|----------------------|----------|
| UniBase BSM     | 410          | 410         | 6            | 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

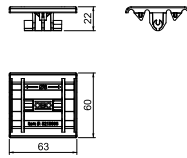


| Type         | Dim. |        |    | Fit | Min. ordering quantity | Weight kg/100 pc. | Item no. |
|--------------|------|--------|----|-----|------------------------|-------------------|----------|
|              | D    | Height | mm |     |                        |                   |          |
| 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.

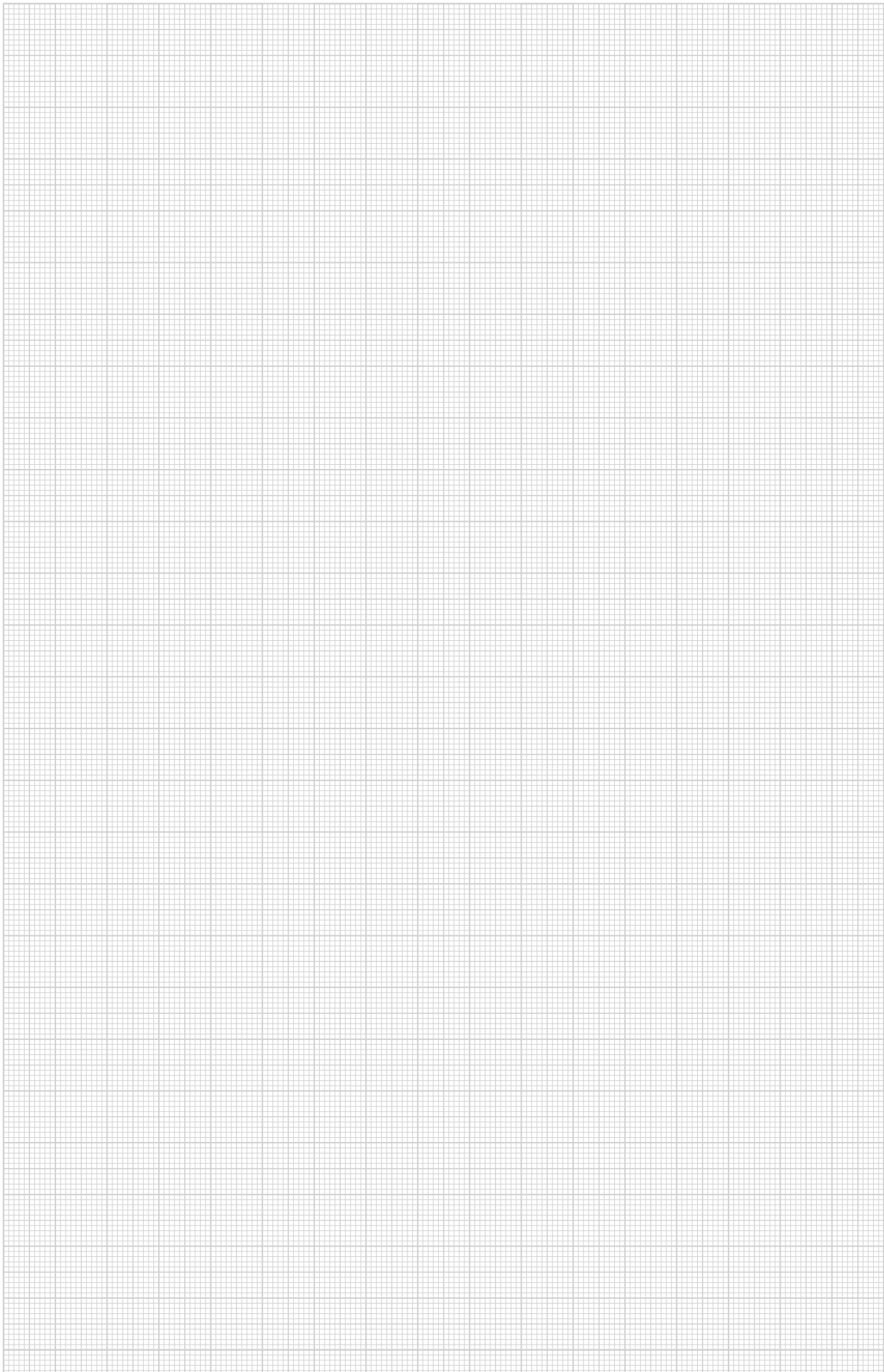
## Mesh cable tray adapter for roof conductor holder

PP



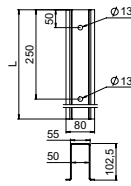
| Type         | Material | Fit | Min. ordering quantity | Weight kg/100 pc. | Item no. |
|--------------|----------|-----|------------------------|-------------------|----------|
|              |          |     |                        |                   |          |
| 165 MBG HGRM | PP       | Rd8 | 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



Ramming pile, free-standing system

St FT

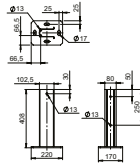


| Type       | Length mm | Min. ordering quantity Piece | Weight kg/100 pc. | Item no. |
|------------|-----------|------------------------------|-------------------|----------|
| RP 1800 FT | 1800      | 1                            | 970.000           | 5900106  |
| RP 2300 FT | 2300      | 1                            | 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

St FT

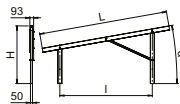


| Type      | Min. ordering quantity Piece | Weight kg/100 pc. | Item no. |
|-----------|------------------------------|-------------------|----------|
| SF 400 FT | 1                            | 431.000           | 5900900  |

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

St FT



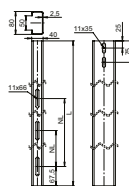
| Type      | Angle α ° | Dim. H mm | Dim. L mm | Dim. l mm | Module height mm | Min. ordering quantity Piece | Weight kg/100 pc. | Item no. |
|-----------|-----------|-----------|-----------|-----------|------------------|------------------------------|-------------------|----------|
| VT 10S FT | 10        | 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.

St FT

### 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.

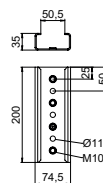
St FT

CE

### 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.



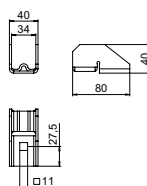
St FT

CE

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

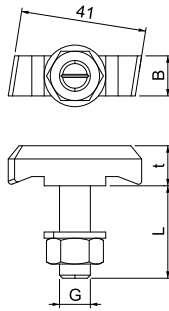
| Type  | Min. ordering quantity Piece | Weight kg/100 pc. | Item no. |
|-------|------------------------------|-------------------|----------|
| KV FT | 50                           | 19.000            | 5901255  |

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

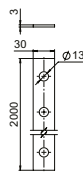


| Type             | Min. ordering quantity | Weight kg/100 pc. | Item no. |
|------------------|------------------------|-------------------|----------|
| MS50HB M12x30 A4 | 50                     | 9.000             | 1148276  |
| MS50HB M12x60 A4 | 25                     | 11.650            | 1148280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

Hook-head screw for use with MS5030 profile rail

Perforated strip for PV free-standing system

St FT

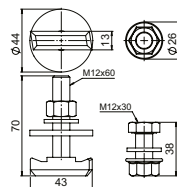


| Type  | Min. ordering quantity | Weight kg/100 pc. | Item no. |
|-------|------------------------|-------------------|----------|
| LB FT | 10                     | 144.000           | 5901950  |

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



| Type | Min. ordering quantity | 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.



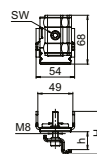
A2



## End clamp for PV module mounting, free-standing system

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

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.



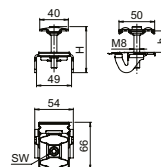
A2

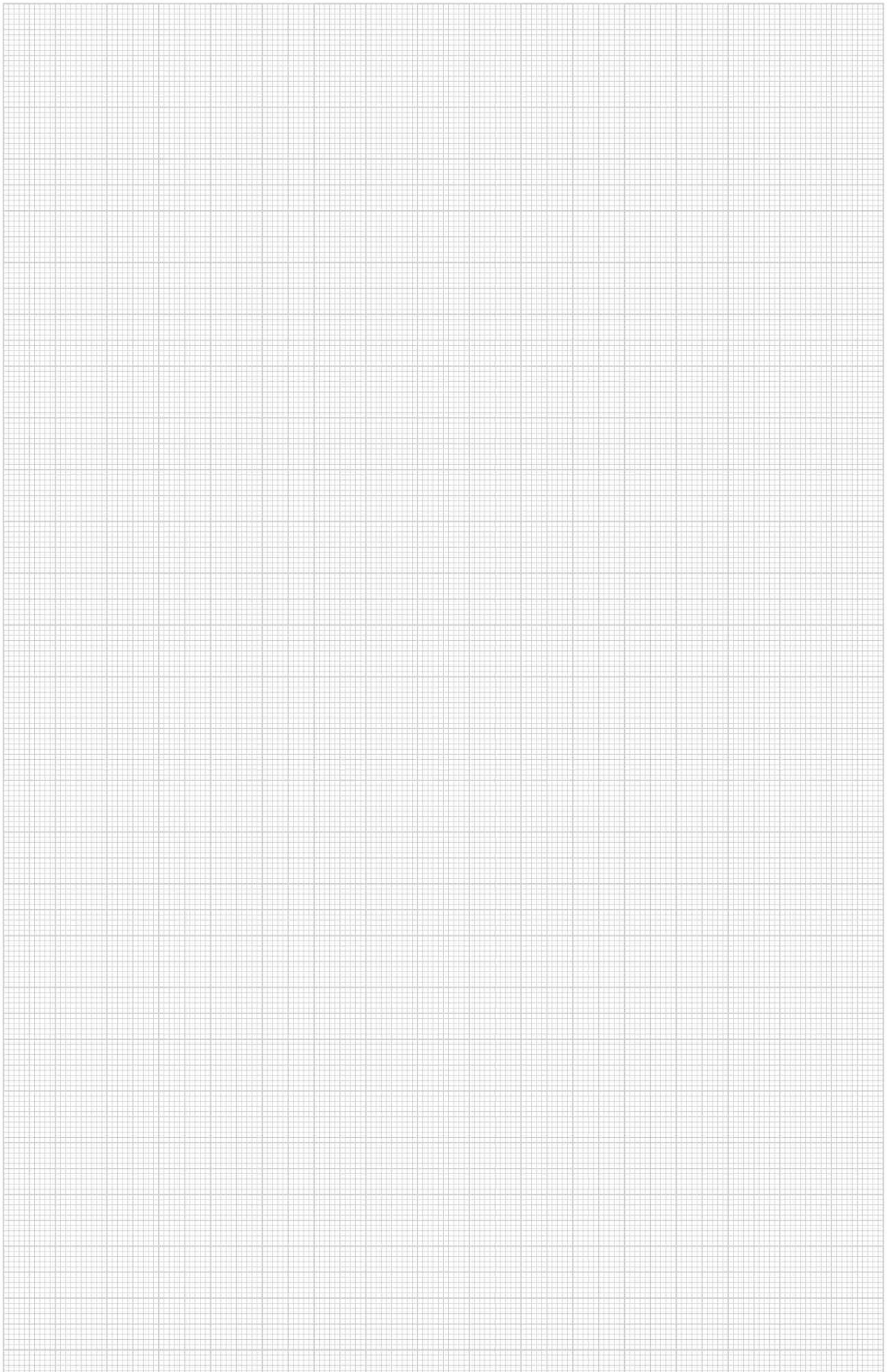


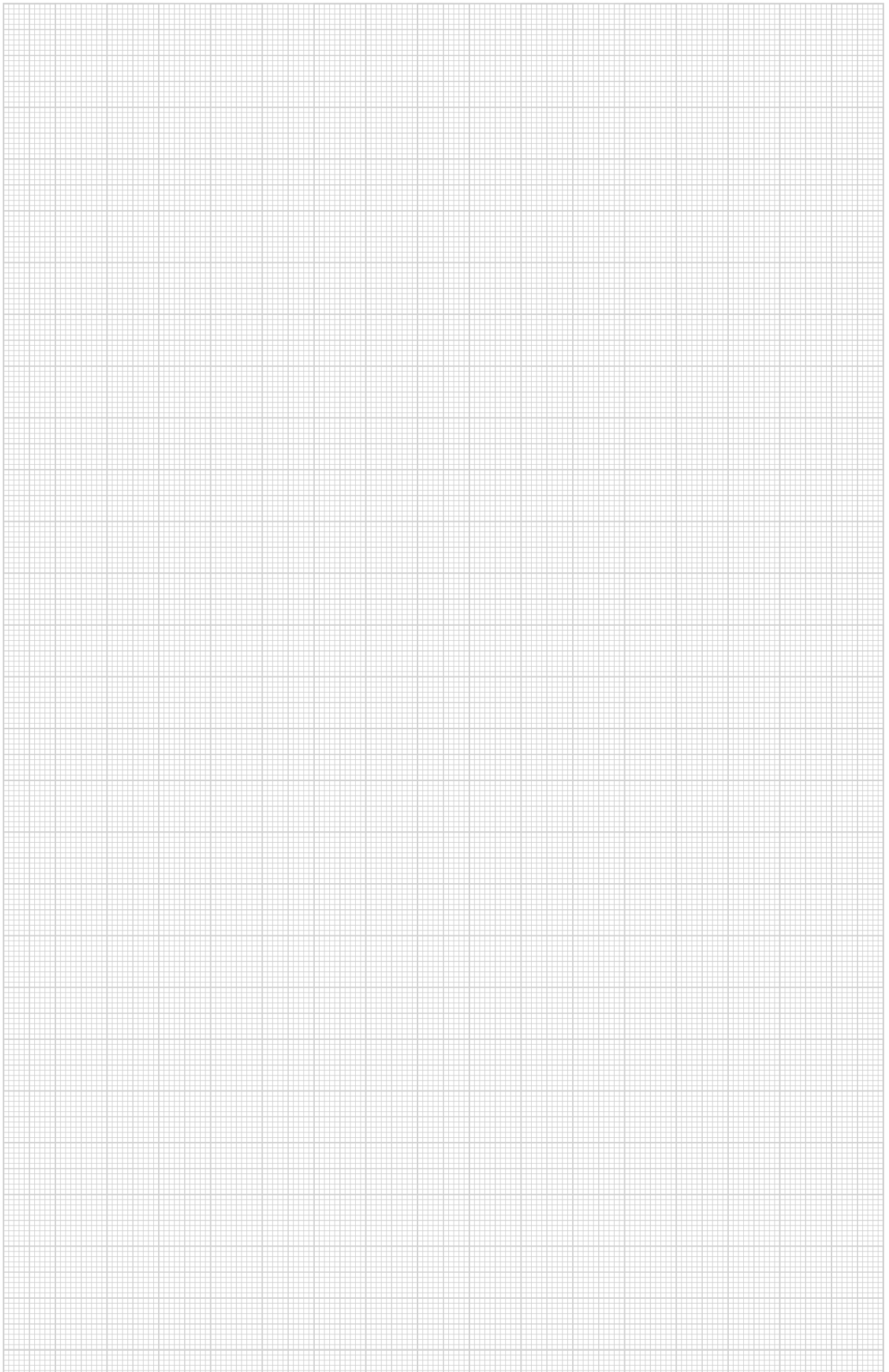
## Intermediate clamp for PV module mounting, free-standing system

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

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](https://obo.eu/photovoltaik)

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