MADE IN ITALY













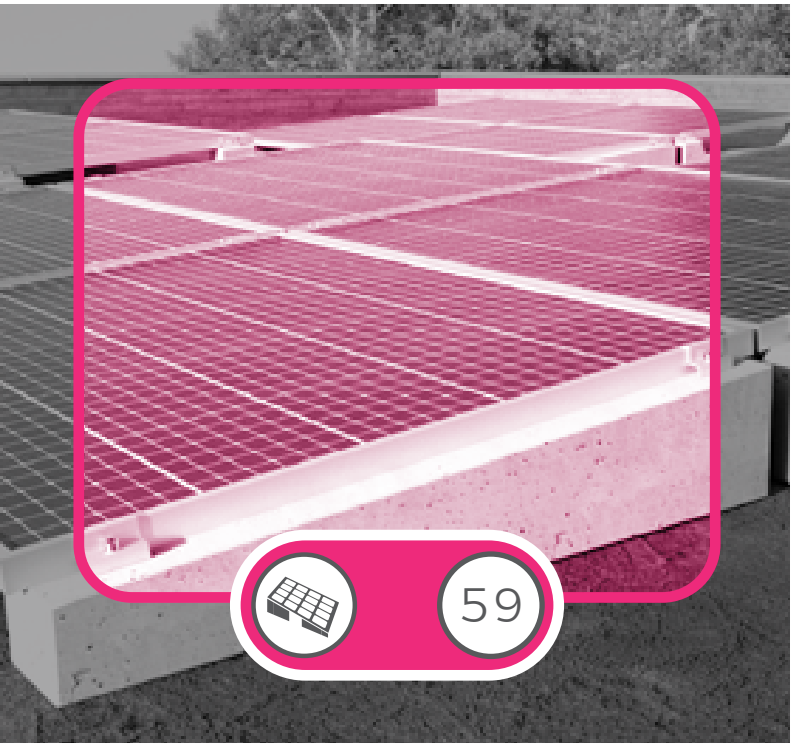
HAMMER ENERGY

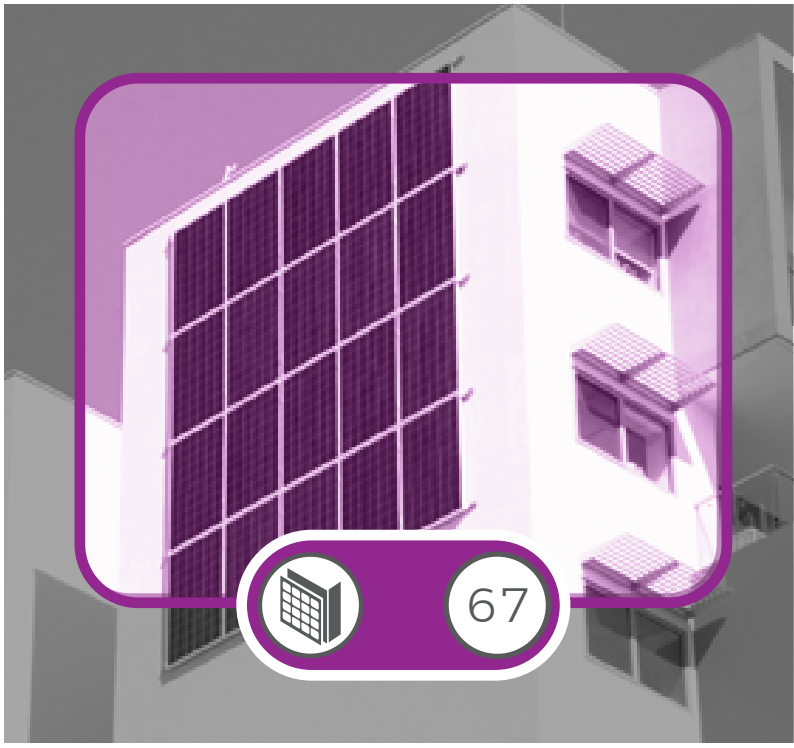
STRUCTURE SYSTEM
FOR PHOTOVOLTAIC INSTALLATIONS

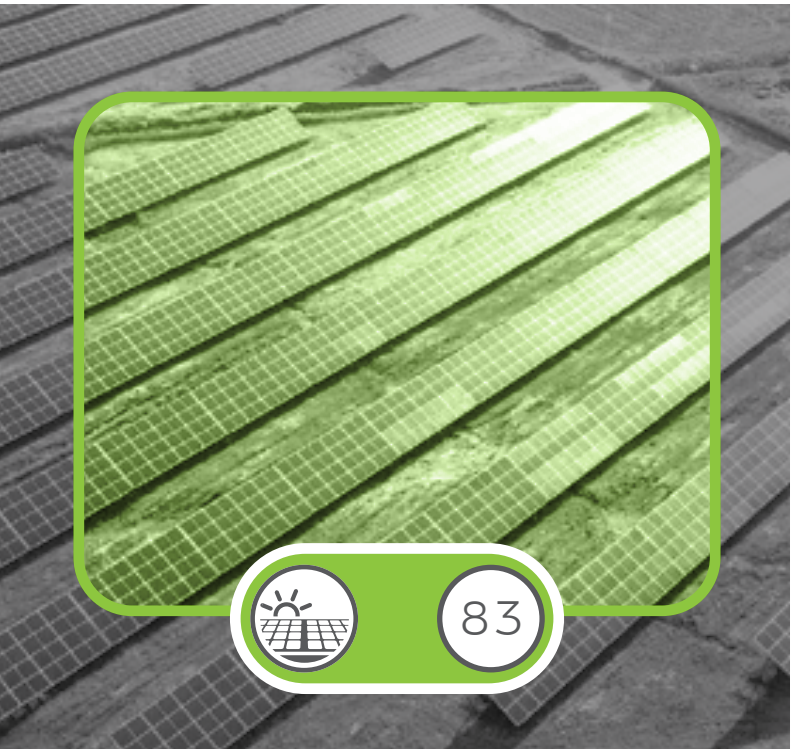
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HAMMER ENERGY

#passionforsolar

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ABOUT US

We are an Italian company operating **since 1972** in Montegrosso d'Asti (AT), Piedmont.

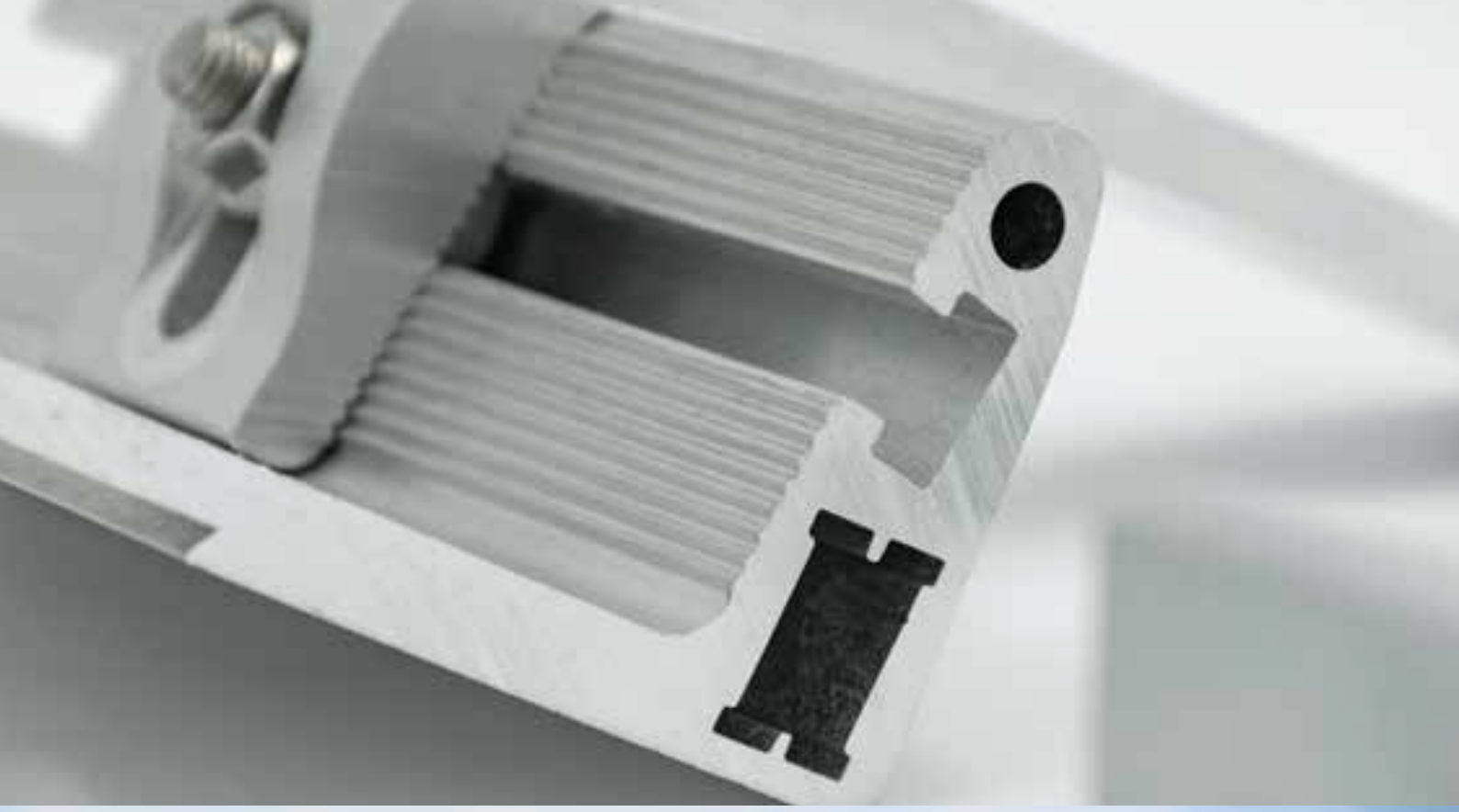
We have a **real passion for aluminium,** with which we make all our products: we have been **designing, testing and manufacturing** aluminium components for over 50 years.

We specialize in **mechanical machining of extruded aluminium** in many industrial sectors: aluminum window and door accessories and curtain walls, aeraulic systems (AHUs), electronics, refrigeration and furniture.

Since 2011 we have been present in the renewable energy sector, under the **Hammer Energy** brand: our aluminium frame system and the system components make up photovoltaic systems that provide green energy to homes and businesses throughout Europe.







QUALITY

We are constantly aimed to improve our process technology to **meet the customers' requirements** and achieve the highest quality standards.

All processing cycles are designed to ensure complete traceability of the production lot and our products meet the requested performance parameters in terms of durability and corrosion resistance.

Our Company's Quality Management System is certified UNI EN ISO 9001:2015.





IQNet

Certificate

CISQ / RINA has issued an IQNet recognized certificate that the organization:

HAMMER - S.R.L.

VIA DELLA GUARDIA, 19 14048 Montegrosso D'Asti (AT) ITALIA

has implemented and maintains a/an

Quality Management System

for the following scope:

DESIGN, DEVELOPMENT AND MANUFACTURE OF ACCESSORIES FOR ALUMINIUM WINDOWS AND DOOR FRAMES AND FOR VARIOUS INDUSTRIAL SECTORS

which fulfills the requirements of the following standard:

ISO 9001:2015

Issued on: **2024-07-18**

First Issued on: **2015-05-06**

Expires on: **2027-05-28**

All details about any legal entities, operative units and related activities included in this certificate are contained in CISQ/RINA original certificate no: **32177/15/S**

Registration Number: **IT-99102**



RINA

CERTIFICATO N. 32177/15/S

CERTIFICATE No.

SI CERTIFICA CHE IL SISTEMA DI GESTIONE PER LA QUALITÀ DI

IT IS HEREBY CERTIFIED THAT THE QUALITY MANAGEMENT SYSTEM OF

HAMMER - S.R.L.

VIA DELLA GUARDIA, 19 14048 Montegrosso D'Asti (AT) ITALIA

NELLE SEGUENTI UNITÀ OPERATIVE - *ON THE FOLLOWING OPERATIONAL UNITS*

VIA DELLA GUARDIA, 19 14048 Montegrosso D'Asti (AT) ITALIA

E' CONFORME ALLA NORMA - *IS IN COMPLIANCE WITH THE STANDARD*

ISO 9001:2015

PER I SEGUENTI CAMPI DI ATTIVITÀ / *FOR THE FOLLOWING FIELD(S) OF ACTIVITIES*

PROGETTAZIONE, SVILUPPO E PRODUZIONE DI ACCESSORI PER SERRAMENTI IN ALLUMINIO E PER SETTORI INDUSTRIALI VARI

DESIGN, DEVELOPMENT AND MANUFACTURE OF ACCESSORIES FOR ALUMINIUM WINDOWS AND DOOR FRAMES AND FOR VARIOUS INDUSTRIAL SECTORS

Prima emissione / *First Issue* 06.05.2015

Data scadenza / *Expiry Date* 28.05.2027

Data decisione di rinnovo / *Renewal decision date* 28.05.2024

Data revisione / *Revision date* 16.07.2024

Luca Bonomera

Turin Management System Certification, Head

RINA Services S.p.A.

Via Corsica 12 - 16128 Genova Italy

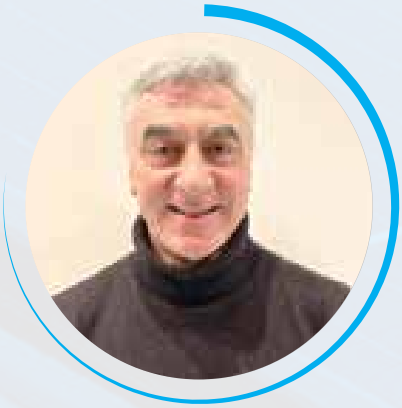
THE VOICE OF OUR CUSTOMERS



★★★★★

BODOSAT IMPIANTI

"Hammer Energy has an extensive presence both in Italy and abroad, supported by an efficient sales network capable of reaching every customer. This enables the company to guarantee timely and reliable deliveries, while ensuring consistent, high-quality service."



★★★★★

M&M CONSULTING

"Working with Hammer Energy means having a solid and reliable partner, always committed to quality. Every detail is designed to stand the test of time and make the installer's work easier, reducing unexpected issues and installation times."



PAOLIN IMPIANTI

"The service provided by Hammer Energy is always timely, professional and focused on the customer's actual needs. The structures we use in our installations stand out for their strength, manufacturing precision and ease of installation — features that truly make a difference in the field."



T&C IMPIANTI

"A significant added value is the technical and commercial support, which has always proven to be competent, responsive and focused on addressing both project-specific and operational needs, providing timely and practical assistance."

LEAVE
YOUR REVIEW TOO!

WRITE US AT:
MARKETING@HAMMER.BIZ

HAMMER ENERGY



CLAMPS



PREASSEMBLED CLAMPS FOR SEQUENTIAL MOUNTING

HE-MIM and **HE-MTM** clamps are ideal for realizing large-scale photovoltaic systems, such as ground-mounted systems. Preassembled clamp with cam, screw and spring speeds installation.



1 Insert the clamp into the slot of the structure profile



2 Rotate the clamp by 90°, holding the head of the screw



3 Lay the clamp on the already placed photovoltaic panel



4 Position the next photovoltaic panel and tighten the clamp

VIDEO TUTORIAL

See in this video an example of mounting the preassembled clamps with the profile HE-PR301



RLS CLAMPS (RAPID LOCKING SYSTEM)

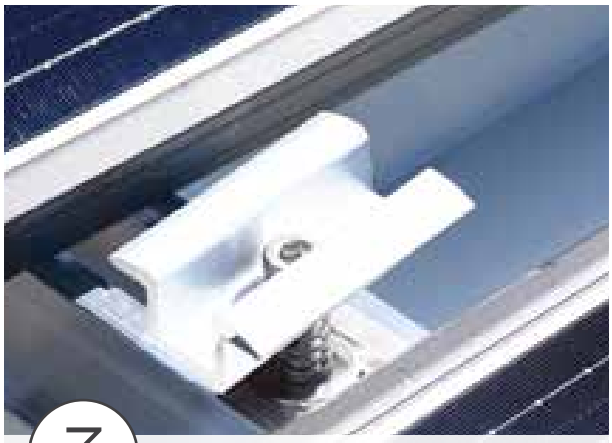
HE-MIR and **HE-MTR** clamps are ideal for mounting photovoltaic panels on steeply sloping roofs. The clamp stays easily in place before tightening thanks to the RLS system.



1 Insert the clamp into the slot of the structure profile



2 Rotate the clamp by 90°, holding the head of the screw



3 RLS clamp remains in place on structure profile



4 Position the photovoltaic panels and tighten the clamp

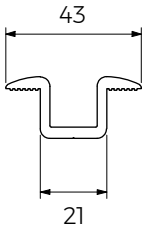
Thanks to the use of different cams, our clamps are **compatible with most commercially available profiles.**

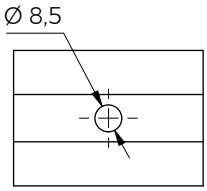
VIDEO TUTORIAL

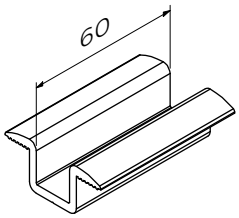
See in this video an example of mounting the RLS clamps with the profile HE-PR101

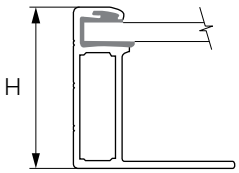
MID SIMPLE CLAMP

Mid simple aluminium clamp for photovoltaic modules











100 pcs

PRODUCT CODE	WEIGHT (gr)	H - MODULE TICKNESS (mm)	CLAMP FOOTPRINT (mm)
HE-MIS	37	All (30-50)	21

PRODUCT STRENGTHS

VERSATILE
Compatible with all popular PV panel thicknesses on the market.

LIGHTWEIGHT
Made of aluminium alloy EN AW 6060 T6 according to UNI EN 12020-2

SIMPLE
Spring, screw and cam available separately.

DURABLE
Aluminium ensures high durability.

TO BE USED FOR:

- trapezoidal sheet metal roofs, with profiles from the series HE-PR100.
- tile and pantile roofs, with profiles from the series HE-PR200
- ground-mounted photovoltaic installations, with profiles from the series HE-PR300

OPERATING INSTRUCTIONS

Determine the number of mid clamps depending on the installation configuration.
Assemble onto the Hammer Energy structure profile and onto the modules chosen for the installation, using spring (product codes HE-M...), screw (product codes HE-VI08X...) and cam (product codes HE-10088 and HE-23058) available separately.

FINISH

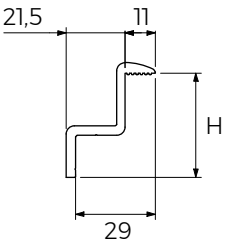
Aluminium Mill finish

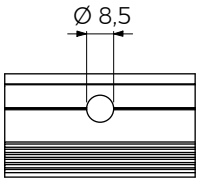
OX Black Black anodized

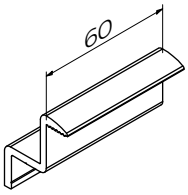


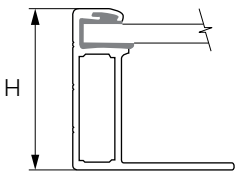
END SIMPLE CLAMP

End simple aluminium clamp for photovoltaic modules











50 pcs

PRODUCT CODE	WEIGHT (gr)	H - MODULE THICKNESS (mm)	CLAMP FOOTPRINT (mm)
HE-MTS-30	32	30	21,5
HE-MTS-32	33	32	21,5
HE-MTS-33	33	33	21,5
HE-MTS-35	35	35	21,5
HE-MTS-38	36	38	21,5
HE-MTS-40	37	40	21,5
HE-MTS-42	39	42	21,5
HE-MTS-44	40	44	21,5
HE-MTS-46	41	46	21,5
HE-MTS-50	43	50	21,5

PRODUCT STRENGTHS

VERSATILE
Compatible with all popular PV panel thicknesses on the market.

LIGHTWEIGHT
Made of aluminium alloy EN AW 6060 T6 according to UNI EN 12020-2.

SIMPLE
Spring, screw and cam available separately.

DURABLE
Aluminium ensures high durability.

TO BE USED FOR:

- trapezoidal sheet metal roofs, with profiles from the series HE-PR100
- tile and pantile roofs, with profiles from the series HE-PR200
- ground-mounted photovoltaic installations, with profiles from the series HE-PR300

OPERATING INSTRUCTIONS

Determine the number of end clamps depending on the installation configuration.
Assemble onto the Hammer Energy structure profile and onto the modules chosen for the installation, using spring (product codes HE-M...), screw (product codes HE-VI08X...) and cam (product codes HE-10088 and HE-23058), available separately.

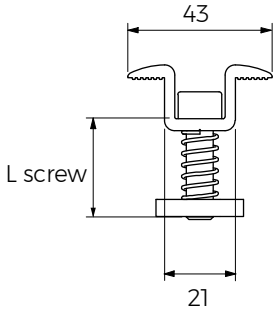
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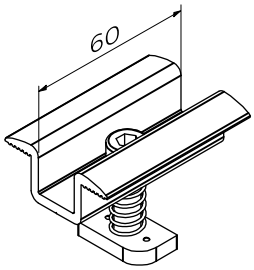
Aluminium Mill finish

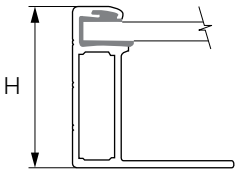
OX Black Black anodized

PREASSEMBLED MID CLAMP

Mid aluminium preassembled photovoltaic clamp for the sequential installation of photovoltaic panels









100 pcs

PRODUCT CODE	WEIGHT (gr)	H - MODULE THICKNESS (mm)	CLAMP FOOTPRINT (mm)	THREADING	L SCREW (mm)	TORQUE (Nm)	TIGHTENING SPANNER
HE-MIM-31	71	30 ÷ 32	21	M8	30	15	6
HE-MIM-35	73	33 ÷ 37	21	M8	35	15	6
HE-MIM-42	75	38 ÷ 42	21	M8	40	15	6
HE-MIM-46	77	43 ÷ 47	21	M8	45	15	6
HE-MIM-50	79	48 ÷ 50	21	M8	50	15	6

PRODUCT STRENGTHS

VERSATILE
Available in different product codes compatible with all major PV panel thicknesses on the market.

PRE-ASSEMBLED
Complete with stainless steel spring, stainless steel screw and corrosion-resistant GEOMET® steel cam. It is suitable for sequential mounting of large-scale photovoltaic installations.

LIGHTWEIGHT
Made of aluminium alloy EN AW 6060 T6 according to UNI EN 12020-2.

DURABLE
Aluminium and A2 stainless steel ensure high durability.

TO BE USED FOR:

- ideal for trapezoidal sheet flat metal roofs, with profiles from the series HE-PR100
- tile and pantile roofs, with profiles from the series HE-PR200
- ideal for ground-mounted photovoltaic installations, with profiles from the series HE-PR300

OPERATING INSTRUCTIONS

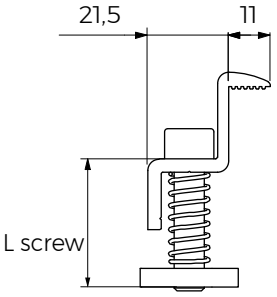
Determine the number of mid clamps according to the installation configuration.
After placing the PV panel on the profile, place the clamp by inserting the cam frontally and tighten the screw.
For assembly, we recommend tightening torque 15 Nm and tightening spanner 6.
Repeat tightening for all clamps.

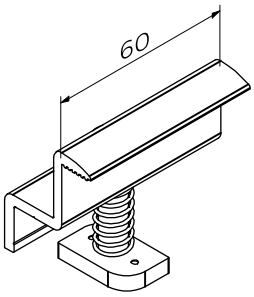
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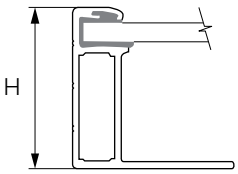
	Aluminium	Mill finish
	OX Black	Black anodized

PREASSEMBLED END CLAMP

End aluminium preassembled photovoltaic clamp for the sequential mounting of photovoltaic panels









50 pcs

PRODUCT CODE	WEIGHT (gr)	H - MODULE THICKNESS (mm)	CLAMP FOOTPRINT (mm)	THREADING	L SCREW (mm)	TORQUE (Nm)	TIGHTENING SPANNER
HE-MTM-30	49	30	21,5	M8	25	15	6
HE-MTM-32	50	32	21,5	M8	25	15	6
HE-MTM-33	51	33	21,5	M8	25	15	6
HE-MTM-35	69	35	21,5	M8	30	15	6
HE-MTM-38	73	38	21,5	M8	35	15	6
HE-MTM-40	74	40	21,5	M8	35	15	6
HE-MTM-42	75	42	21,5	M8	35	15	6
HE-MTM-44	76	44	21,5	M8	35	15	6
HE-MTM-46	79	46	21,5	M8	40	15	6
HE-MTM-50	84	50	21,5	M8	45	15	6

PRODUCT STRENGTHS

VERSATILE
Available in different product codes compatible with all major PV panel thicknesses on the market.

PRE-ASSEMBLED
Complete with stainless steel spring, stainless steel screw and corrosion-resistant GEOMET® steel cam. It is suitable for large-scale photovoltaic installations.

LEIGHTWEIGHT
Made of aluminium alloy EN AW 6060 T6 according to UNI EN 12020-2.

DURABLE
Aluminium and A2 stainless steel ensure high durability.

TO BE USED FOR:

- ideal for trapezoidal sheet flat metal roofs, with profiles from the series HE-PR100
- tile and pantile roofs, with profiles from the series HE-PR200
- ideal for ground-mounted photovoltaic installations, with profiles from the series

OPERATING INSTRUCTIONS

Determine the number of terminal clamps according to the installation configuration.
After placing the PV panel on the profile, place the clamp by inserting the cam frontally and tighten the screw.
For assembly, we recommend tightening torque 15 Nm and tightening spanner 6.
Repeat tightening for all clamps.

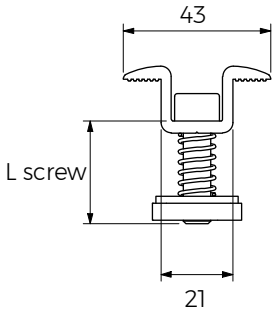
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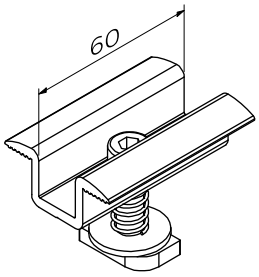
Aluminium Mill finish

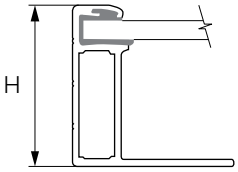
OX Black Black anodized

RLS MID CLAMP

Mid aluminium preassembled photovoltaic clamp
"Rapid Locking System" for the installation of photovoltaic panels









100 pcs

PRODUCT CODE	WEIGHT (gr)	H - MODULE THICKNESS (mm)	CLAMP FOOTPRINT (mm)	THREADING	L SCREW (mm)	TORQUE (Nm)	TIGHTENING SPANNER
HE-MIR-31	77	30 ÷ 32	21	M8	30	15	6
HE-MIR-35	79	33 ÷ 37	21	M8	35	15	6
HE-MIR-42	81	38 ÷ 42	21	M8	40	15	6
HE-MIR-46	83	43 ÷ 47	21	M8	45	15	6
HE-MIR-50	85	48 ÷ 50	21	M8	50	15	6

PRODUCT STRENGTHS

VERSATILE
Available in different product codes compatible with all major PV panel thicknesses on the market.

PRE-ASSEMBLED
Complete with stainless steel spring, stainless steel screw, corrosion-resistant GEOMET® steel cam and stainless steel wide-band washer.

QUICK
Thanks to the washer, the clamp remains in position before tightening, even on steeply sloping installations or before the panels are actually installed.

LIGHTWEIGHT
Made of aluminium alloy EN AW 6060 T6 according to UNI EN 12020-2.

DURABLE
Aluminium and stainless steel ensure high durability.

TO BE USED FOR:

- trapezoidal sheet metal roofs, with profiles from the series HE-PR100
- tile and pantile roofs with sloping pitch, with profiles from the series HE-PR200
- ground-mounted photovoltaic installations, with profiles from the series HE-PR300

OPERATING INSTRUCTIONS

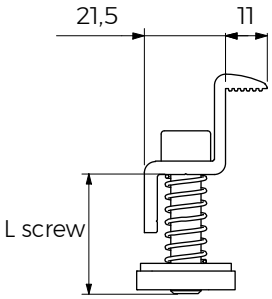
Determine the number of mid clamps according to the installation configuration.
Position the clamp at the desired place on the profile, inserting the cam frontally and turning the screw 90°. After positioning the PV panel on the profile, tighten the screw.
For assembly, we recommend tightening torque 15 Nm and tightening spanner 6.
Repeat tightening for all clamps.

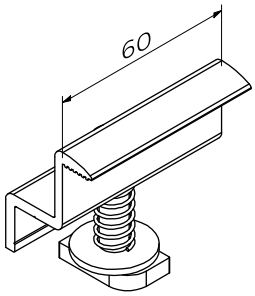
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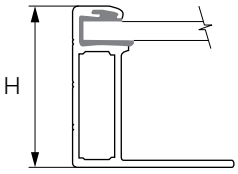
	Aluminium	Mill finish
	OX Black	Black anodized

RLS END CLAMP

End aluminium preassembled photovoltaic clamp
"Rapid Locking System" for the installation of photovoltaic panels









50 pcs

PRODUCT CODE	WEIGHT (gr)	H - MODULE THICKNESS (mm)	CLAMP FOOTPRINT (mm)	THREADING	L SCREW (mm)	TORQUE (Nm)	TIGHTENING SPANNER
HE-MTR-30	55	30	21,5	M8	25	15	6
HE-MTR-32	56	32	21,5	M8	25	15	6
HE-MTR-33	57	33	21,5	M8	25	15	6
HE-MTR-35	75	35	21,5	M8	30	15	6
HE-MTR-38	78	38	21,5	M8	35	15	6
HE-MTR-40	80	40	21,5	M8	35	15	6
HE-MTR-42	81	42	21,5	M8	35	15	6
HE-MTR-44	82	44	21,5	M8	35	15	6
HE-MTR-46	85	46	21,5	M8	40	15	6
HE-MTR-50	90	50	21,5	M8	45	15	6

PRODUCT STRENGTHS

VERSATILE
Available in different product codes compatible with all major PV panel thicknesses on the market.

PRE-ASSEMBLED
Complete with stainless steel spring, stainless steel screw, corrosion-resistant GEOMET® steel cam and stainless steel wide-band washer. Thanks to the washer, the clamp remains easily in position before tightening, even on very inclined installations.

QUICK
Thanks to the washer, the clamp remains easily in position before tightening, even on steeply sloping installations or before the panels are actually installed.

LIGHTWEIGHT
Made of aluminium alloy EN AW 6060 T6 according to UNI EN 12020-2.

DURABLE
Aluminium and stainless steel ensure high durability.

TO BE USED FOR:

- trapezoidal sheet metal roofs, with profiles from the series HE-PR100
- tile and pantile roofs with sloping pitch, with profiles from the series HE-PR200
- ground-mounted photovoltaic installations, with profiles of the series HE-PR300

OPERATING INSTRUCTIONS

Determine the number of terminal clamps according to the installation configuration.
Position the clamp at the desired place on the profile, inserting the cam frontally and turning the screw 90°. After positioning the PV panel on the profile, tighten the screw.
For assembly, we recommend tightening torque 15 Nm and tightening spanner 6.
Repeat tightening for all clamps.

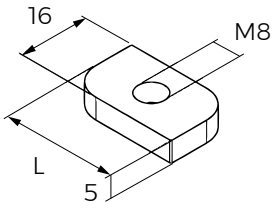
FINISH

Aluminium Mill finish

OX Black Black anodized

CAM FOR CLAMPS

Cam for Hammer Energy photovoltaic clamps





200 pcs

PRODUCT CODE	L (mm)
HE-10088	26
HE-23058	34

PRODUCT STRENGTHS

PRACTICAL
Available in two product codes, for use as a spare part or component for all Hammer Energy aluminium clamps.

RESISTANT
Steel with Geomet® treatment ensures maximum durability.

TO BE USED FOR:

- **photovoltaic installations on tile/pantile roofs**, as a component for HE-MIS e HE-MTS clamps or as a spare part for HE-MIM, HE-MTM, HE-MIR, HE-MTR clamps.
- **ground-mounted photovoltaic installations**, as a component for HE-MIS e HE-MTS clamps or as a spare part for HE-MIM, HE-MTM, HE-MIR, HE-MTR clamps.

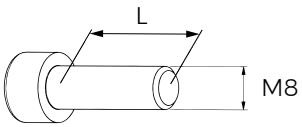
OPERATING INSTRUCTIONS

For HE-MIS e HE-MTS clamps: screw the cam to the metric screw HE-VI08X...after inserting the screw into the clamp.
For HE-MTM, HE-MIM, HE-MTR, HE-MIR clamps: the cam is pre-assembled. In the case of using it as a spare part, follow the previous instruction.



COMPONENTS AND SPARE PARTS FOR SIMPLE CLAMPS

Stainless steel screw for Hammer Energy solar clamps





200 pcs

SPARE PARTS FOR CLAMP CODE	SCREW CODE	PANEL THICKNESS (mm)
HE-MTS-30/31/32/33	**HE-VI08X25**	30/31/32/33
HE-MIS	**HE-VI08X30**	30 ÷ 32
HE-MTS-35		35
HE-MIS	**HE-VI08X35**	33 ÷ 37
HE-MTS-38/40/42/44		38/40/42/44
HE-MIS	**HE-VI08X40**	38 ÷ 42
HE-MTS-46		46
HE-MIS	**HE-VI08X45**	43 ÷ 47
HE-MTS-50		50
HE-MIS	**HE-VI08X50**	48 ÷ 50

PRODUCT STRENGTHS

PRACTICAL
Available in different product codes, for use as a component or as a spare part for HE-MIS and HE-MTS simple clamps.

DURABLE
Stainless steel ensures maximum durability.

TO BE USED FOR:

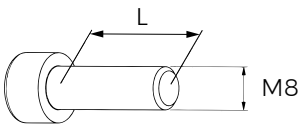
spare parts for HE-MIS and HE-MTS clamps.

OPERATING INSTRUCTIONS

Insert the screw into the clamp and then tighten it onto cam HE-10088 or HE-23058.

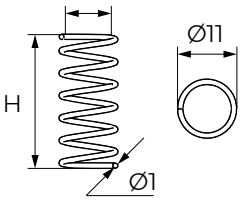
COMPONENTS AND SPARE PARTS FOR RLS PREASSEMBLED CLAMPS

Stainless steel screw and spring for Hammer Energy solar clamps



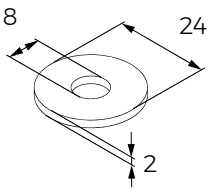


200 pcs





200 pcs





200 pcs

SPARE PART FOR CLAMP CODE	WASHER CODE	SCREW CODE	SPRING CODE
HE-MTM-30/31/32/33	-	HE-VI08X25	HE-M03
HE-MTR-30/31/32/33	HE-RO08X24		
HE-MIM-31	-	HE-VI08X30	
HE-MIR-31	HE-RO08X24		
HE-MTM-35	-		
HE-MTR-35	HE-RO08X24		
HE-MIM-35	-	HE-VI08X35	HE-M02
HE-MIR-35	HE-RO08X24		
HE-MTM-38/40/42/44	-		
HE-MTR-38/40/42/44	HE-RO08X24		
HE-MIM-42	-	HE-VI08X40	
HE-MIR-42	HE-RO08X24		
HE-MTM-46	-		
HE-MTR-46	HE-RO08X24		
HE-MIM-46	-	HE-VI08X45	
HE-MIR-46	HE-RO08X24		
HE-MTM-50	-		
HE-MTR-50	HE-RO08X24		
HE-MIM-50	-	HE-VI08X50	
HE-MIR-50	HE-RO08X24		

PRODUCT STRENGTHS

PRACTICAL
Holds the pre-assembled clamp in the raised position, speeding up the installation of PV panels on the structure profiles.

DURABLE
Stainless steel ensures maximum durability.

TO BE USED FOR:

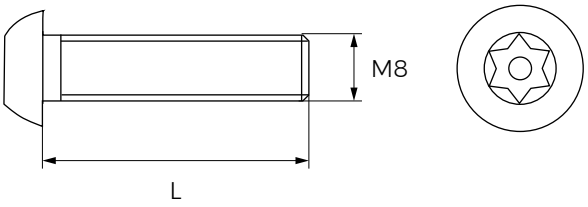
Spare parts for HE-MIM, HE-MIR, HE-MTM, HE-MTR clamps.

OPERATING INSTRUCTIONS

As spare parts for HE-MIM, HE-MIR, HE-MTM, HE-MTR clamps: insert the screw in the clamp, than add the other spare parts (spring and washer) and finally screw it onto cam HE-10088 or HE-23058.

TAMPER-RESISTANT SCREWS

Flat pan head screws with hexalobular recess (TX) and security pin. (Tamper-resistant screws)





NEW PRODUCT

200 pcs

SPARE PART FOR CLAMP CODE	SCREW CODE	MODULE THICKNESS (mm)
HE-MTS-30/31/32/33	**HE-VI08X25AM**	30/31/32/33
HE-MIS	**HE-VI08X30AM**	30 ÷ 32
HE-MTS-35		35
HE-MIS	**HE-VI08X40AM**	33 ÷ 37
HE-MTS-38/40/42/44		38/40/42/44
HE-MIS		38 ÷ 42
HE-MTS-46		46
HE-MIS	**HE-VI08X50AM**	43 ÷ 47
HE-MTS-50		50
HE-MIS		48 ÷ 50

PRODUCT STRENGTHS

ENHANCED SECURITY
Reduces unauthorized disassembly, protecting valuable components and deterring vandalism.

DURABLE
Stainless steel ensures maximum durability.

TO BE USED FOR:

Spare parts for HE-MIS and HE-MTS clamps.

OPERATING INSTRUCTIONS

Insert the screw into the clamp and then tighten it onto cam HE-10088 or HE-23058.

HAMMER ENERGY



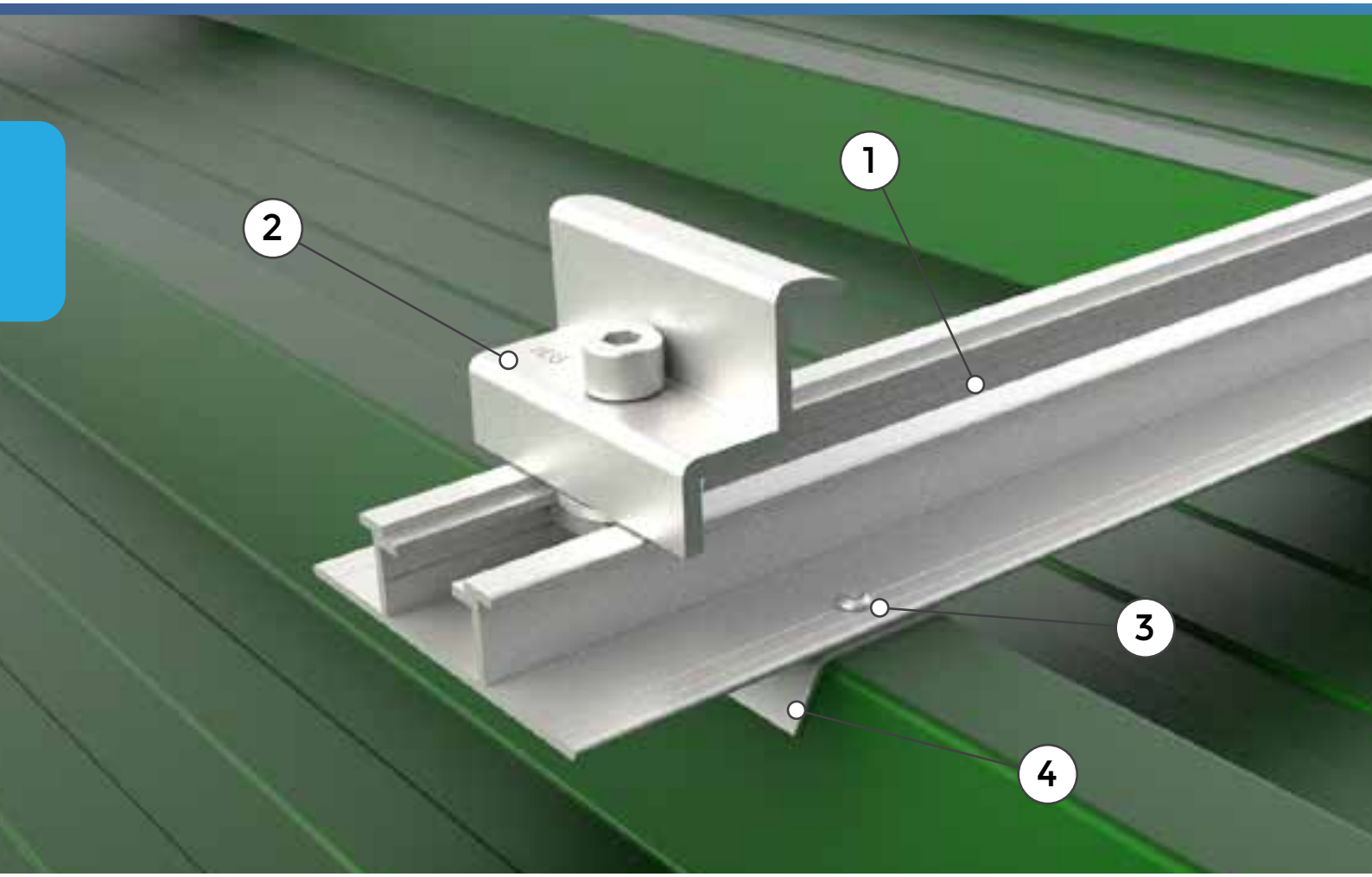


TRAPEZOIDAL ROOFING SHEET METAL / ONDULIN



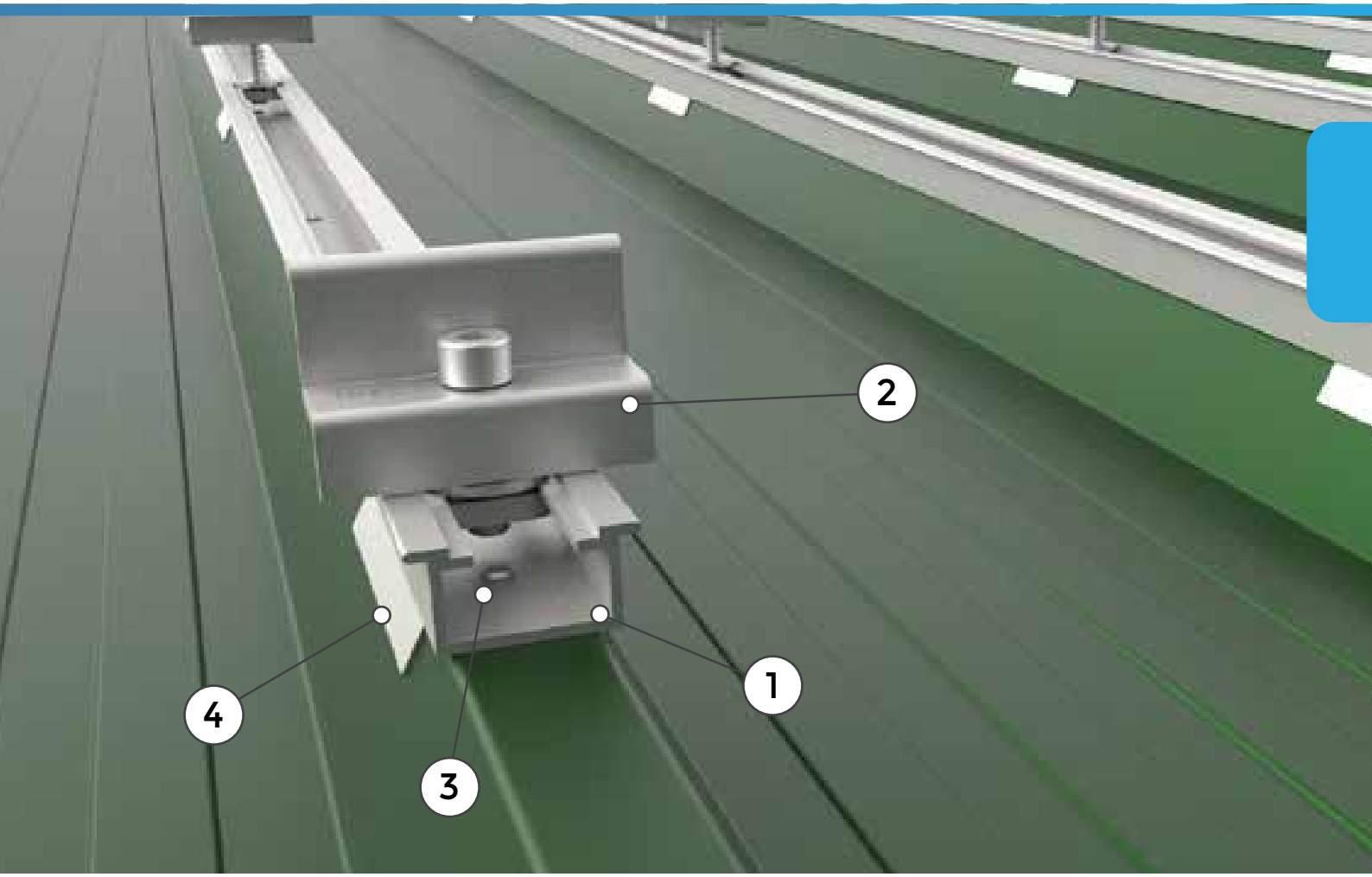
THE SYSTEM

VIDEO TUTORIAL



EXAMPLE OF HORIZONTAL STRUCTURE ON TRAPEZOIDAL SHEET METAL ROOF

1. **HE-PR101**
   Mounting rail for horizontal installation of photovoltaic panels on trapezoidal sheet metal roofs
2. **HE-MTR-35**
   End aluminium preassembled photovoltaic clamp, “Rapid Locking System”
3. **HE-RIV52191 / HE-VI48X25EPDM**
   Aluminium blind rivet with EPDM gasket - Stainless steel self-drilling screw with EPDM gasket
4. **HE-ALBUT-50**
   One-sided butyl sealing tape for photovoltaic installations

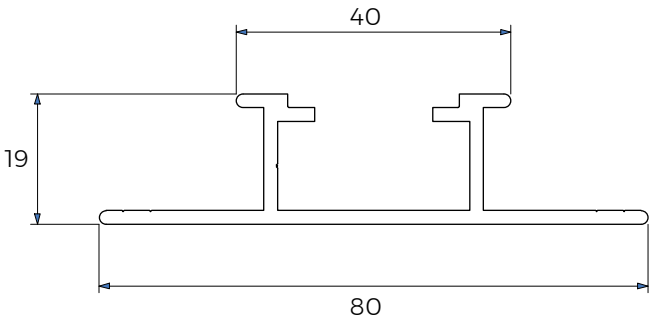


EXAMPLE OF VERTICAL STRUCTURE ON TRAPEZOIDAL SHEET METAL ROOF

1. **HE-PR102**
   Mounting rail for vertical installation of photovoltaic panels on trapezoidal sheet metal roofs
2. **HE-MTR-35**
   End aluminium preassembled photovoltaic clamp, “Rapid Locking System”
3. **HE-VI48x25EPDM**
   Stainless steel self-drilling screw with EPDM gasket
4. **HE-ALBUT-50**
   One-sided butyl sealing tape for photovoltaic installations

HORIZONTAL STRUCTURAL PROFILE HE-PR101

Photovoltaic aluminium mounting rail for horizontal installation of photovoltaic panels on trapezoidal sheet metal roofs





PRODUCT CODE	WEIGHT (Kg/m)	LENGTH (mm)	AREA (cm^2)	I_X (cm^4)	I_Y (cm^4)	W_X (cm^3)	W_Y (cm^3)
HE-PR101-65	0,731	6500	2,698	1,226	10,792	1,818991	5,396
HE-PR101-32	0,731	3250	2,698	1,226	10,792	1,818991	5,396

PRODUCT STRENGTHS

VERSATILE
Usable for both large and small PV installations due to optimized bar lengths.

LIGHTWEIGHT
Profile in EN AW 6060 T6 aluminium alloy according to UNI EN 12020-2. The 3250 mm bars optimized length limits scraps and facilitate handling on the construction site.

CONVENIENT
Can be fixed with butyl sealing tape and blind aluminium rivets.

CUSTOMIZABLE
Bar pieces available in 300 mm length or in different length (upon request). Pre-drilled profile available upon request

RELATED PRODUCTS:

- **HE-RIV52191** - Aluminium rivet 5,2 x 19,1 mm with EPDM gasket
- **HE-VI48x25EPDM**- Stainless steel self-drilling screw with EPDM gasket
- **HE-ALBUT-50** - One-sided butyl sealing tape with reinforced aluminium foil, 50 x 1 mm x 10 m roll
- **HE-MIS/HE-MTS** - Simple aluminium PV clamp
- **HE-MIM/HE-MTM** - Preassembled aluminium clamp for sequential mounting of PV modules
- **HE-MIR/HE-MTR** - Preassembled RLS aluminium clamp (Rapid Locking System)

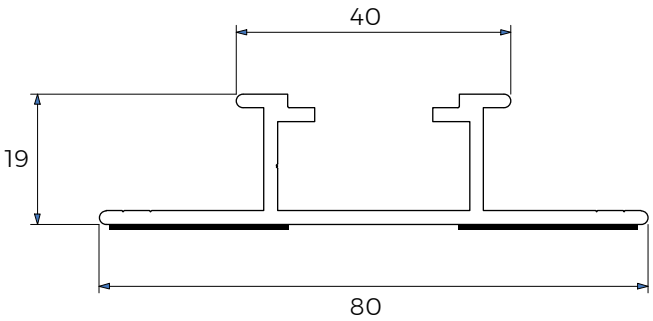
OPERATING INSTRUCTIONS

For profiles in bars, define rivets spacing according to the snow and wind loads in the installation area, as specified by the structural engineer.
For rivet mounting, apply sealing tape and then predrill the profile and sheet metal with a diameter between 5.3 and 5.5 mm.
Apply the clamps to the upper profile groove.



HORIZONTAL STRUCTURAL PROFILE HE-PR101

Photovoltaic aluminium mounting rail for horizontal installation of photovoltaic panels on trapezoidal sheet metal roofs





PRODUCT CODE	WEIGHT (Kg/m)	LENGTH (mm)	AREA (cm^2)	Ix (cm^4)	Iy (cm^4)	Wx (cm^3)	Wy (cm^3)
HE-PR101-03	0,731	300	2,698	1,226	10,792	1,818991	5,396
HE-PR101-03EPDM	0,731	300	2,698	1,226	10,792	1,818991	5,396
HE-PR101-04	0,731	400	2,698	1,226	10,792	1,818991	5,396
HE-PR101-04EPDM	0,731	400	2,698	1,226	10,792	1,818991	5,396

PRODUCT STRENGTHS

VERSATILE
Usable for both large and small PV installations due to optimized bar lengths.

LIGHTWEIGHT
Profile in EN AW 6060 T6 aluminium alloy according to UNI EN 12020-2. The 3250 mm bars optimized length limits scraps and facilitate handling on the construction site.

CONVENIENT
Can be fixed with butyl sealing tape and blind aluminium rivets.

READY TO USE
Closed-cell expanded EPDM rubber applied to the cut-to-length section.

RELATED PRODUCTS:

- **HE-RIV52191** - Aluminium rivet 5,2 x 19,1 mm with EPDM gasket
- **HE-VI48x25EPDM**- Stainless steel self-drilling screw with EPDM gasket
- **HE-ALBUT-50** - One-sided butyl sealing tape with reinforced aluminium foil, 50 x 1 mm x 10 m roll
- **HE-MIS/HE-MTS** - Simple aluminium PV clamp
- **HE-MIM/HE-MTM** - Preassembled aluminium clamp for sequential mounting of PV modules
- **HE-MIR/HE-MTR** - Preassembled RLS aluminium clamp (Rapid Locking System)

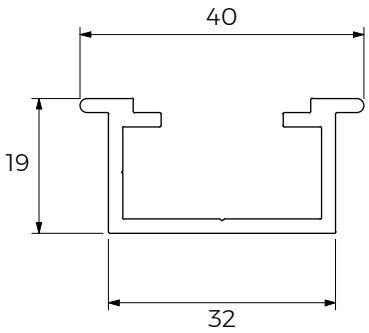
OPERATING INSTRUCTIONS

For fastening with rivets, apply the adhesive tape and then pre-drill the profile and the sheet metal with a diameter of 5.3 to 5.5 mm. Fasten the clamps to the upper channel of the profile.



VERTICAL STRUCTURAL PROFILE HE-PR102

Photovoltaic aluminium mounting rail for vertical installation of photovoltaic panels on trapezoidal sheet metal roofs





PRODUCT CODE	WEIGHT (Kg/m)	LENGTH (mm)	AREA (cm^2)	I_X (cm^4)	I_Y (cm^4)	W_X (cm^3)	W_Y (cm^3)
HE-PR102-65	0,473	6500	2,247	0,866	2,952	1,23	2,271
HE-PR102-32	0,473	3250	2,247	0,866	2,952	1,23	2,271

PRODUCT STRENGTHS

VERSATILE
Usable for both large and small PV installations due to optimized bar lengths.

LIGHTWEIGHT
Profile in EN AW 6060 T6 aluminium alloy according to UNI EN 12020-2. The 3250 mm bars optimized length limits scraps and facilitate handling on the construction site.

CONVENIENT
Can be fixed with butyl sealing tape and blind aluminium rivets.

CUSTOMIZABLE
Bar pieces available upon request. Pre-drilled profile available upon request

RELATED PRODUCTS:

- **HE-VI48x25EPDM**- Stainless steel self-drilling screw with EPDM gasket
- **HE-ALBUT-50** - One-sided butyl sealing tape with reinforced aluminium foil, 50 x 1 mm x 10 m roll
- **HE-MIS/HE-MTS** - Simple aluminium PV clamp
- **HE-MIM/HE-MTM** - Preassembled aluminium clamp for sequential mounting of PV modules
- **HE-MIR/HE-MTR** - Preassembled RLS aluminium clamp (Rapid Locking System)

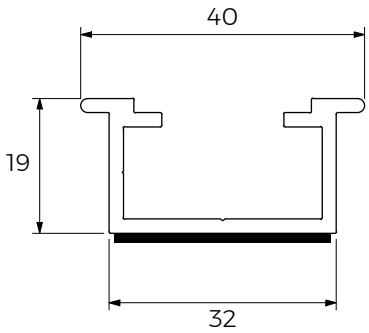
OPERATING INSTRUCTIONS

For profiles in bars, define rivets spacing according to the snow and wind loads in the installation area, as specified by the structural engineer.
For rivet mounting, apply sealing tape and then predrill the profile and sheet metal with a diameter between 5.3 and 5.5 mm.
Apply the clamps to the upper profile groove.



VERTICAL STRUCTURAL PROFILE HE-PR102

Photovoltaic aluminium mounting rail for vertical installation of photovoltaic panels on trapezoidal sheet metal roofs





PRODUCT CODE	WEIGHT (Kg/m)	LENGTH (mm)	AREA (cm^2)	Ix (cm^4)	Iy (cm^4)	Wx (cm^3)	Wy (cm^3)
HE-PR102-01EPDM	0,473	125	2,247	0,866	2,952	1,23	2,271
HE-PR102-01	0,473	125	2,247	0,866	2,952	1,23	2,271

PRODUCT STRENGTHS

VERSATILE
Usable for both large and small PV installations due to optimized bar lengths.

LIGHTWEIGHT
Profile in EN AW 6060 T6 aluminium alloy according to UNI EN 12020-2. The 3250 mm bars optimized length limits scraps and facilitate handling on the construction site.

CONVENIENT
Can be fixed with butyl sealing tape and blind aluminium rivets.

READY TO USE
Closed-cell expanded EPDM rubber applied to the cut-to-length section.

RELATED PRODUCTS:

- **HE-VI48x25EPDM**- Stainless steel self-drilling screw with EPDM gasket
- **HE-ALBUT-50** - One-sided butyl sealing tape with reinforced aluminium foil, 50 x 1 mm x 10 m roll
- **HE-MIS/HE-MTS** - Simple aluminium PV clamp
- **HE-MIM/HE-MTM** - Preassembled aluminium clamp for sequential mounting of PV modules
- **HE-MIR/HE-MTR** - Preassembled RLS aluminium clamp (Rapid Locking System)

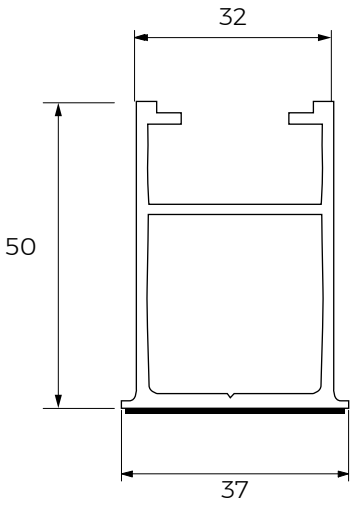
OPERATING INSTRUCTIONS

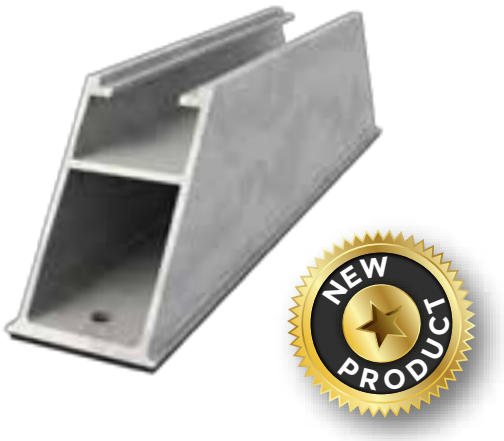
For fastening with rivets, apply the adhesive tape and then pre-drill the profile and the sheet metal with a diameter of 5.3 to 5.5 mm. Fasten the clamps to the upper channel of the profile.



VERTICAL STRUCTURAL PROFILE HE-PR103

Photovoltaic aluminium mounting rail for vertical installation of photovoltaic panels on trapezoidal sheet metal roofs





PRODUCT CODE	WEIGHT (Kg/m)	LENGTH (mm)	AREA (cm^2)	Ix (cm^4)	Iy (cm^4)	Wx (cm^3)	Wy (cm^3)
HE-PR103-02EPDM	0,899	195	3,319	9,522	5,542	3,460	2,995
HE-PR103-02	0,899	195	3,319	9,522	5,542	3,460	2,995

PRODUCT STRENGTHS

INCREASED VENTILATION
Increased airflow beneath the photovoltaic panel thanks to the increased profile height.

OPTIMIZER INSTALLATION
The increased profile height allows the optimizer to be installed in the space beneath the panel.

READY TO USE
Closed-cell expanded EPDM rubber applied to the cut-to-length section.

CONVENIENT
Thanks to the double 45° angled ends, the cut-to-length section can be installed easily.

RELATED PRODUCTS

- **HE-RIV52191** - Aluminium rivet 5,2 x 19,1 mm with EPDM gasket
- **HE-VI48x25EPDM**- Stainless steel self-drilling screw with EPDM gasket
- **HE-ALBUT-50** - One-sided butyl sealing tape with reinforced aluminium foil, 50 x 1 mm x 10 m roll
- **HE-MIS/HE-MTS** - Simple aluminium PV clamp
- **HE-MIM/HE-MTM** - Preassembled aluminium clamp for sequential mounting of PV modules
- **HE-MIR/HE-MTR** - Preassembled RLS aluminium clamp (Rapid Locking System)

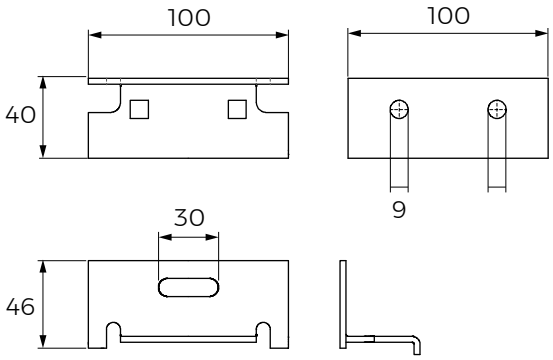
OPERATING INSTRUCTIONS

For fastening with rivets, apply the adhesive tape and then pre-drill the profile and the sheet metal with a diameter of 5.3 to 5.5 mm. Fasten the clamps to the upper channel of the profile.



STANDING SEAM ROOF CLAMP

Stainless steel standing seam roof clamp for photovoltaic systems





PRODUCT CODE
HE-STG

PRODUCT STRENGTHS

RESISTANT
High snow and wind load capacity thanks to the use of 3 mm stainless steel.

NO HOLES
No holes required in the profiled sheet metal, thanks to fastening directly onto the standing seam.

FLEXIBLE INSTALLATION
Allows modules to be installed in both horizontal and vertical orientations.

TO BE USED FOR:

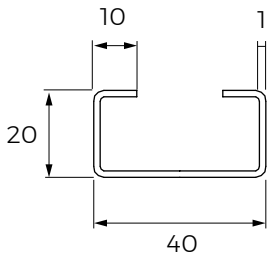
Profiled sheet metal roofs, in combination with **HE-PR201 / HE-PR202** structural profiles and the HE-STI-KIT fastening kit.

OPERATING INSTRUCTIONS

Secure the clamp to the standing seam. Secure the **HE-PR201 / HE-PR202** structural profile to the upper part of the clamp using the **HE-STI-KIT** fastening kit.

WIND BRACING FOR EXTREME CONDITIONS

Zinc-magnesium coated steel structural profile





OPERATING INSTRUCTIONS

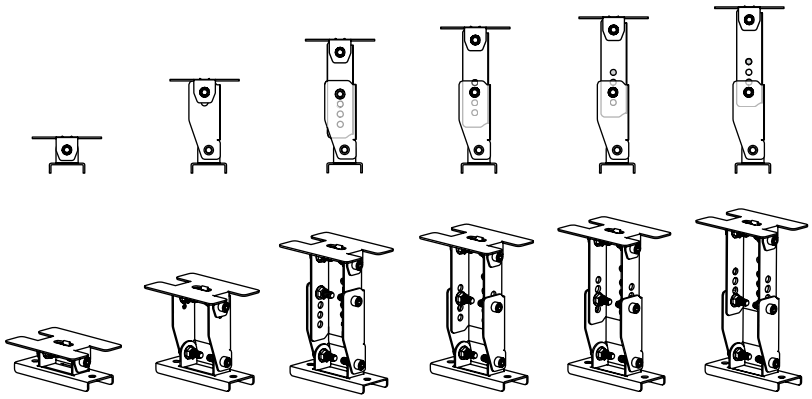
For use on sites with extreme conditions, connected to the **HE-CUP** kit.

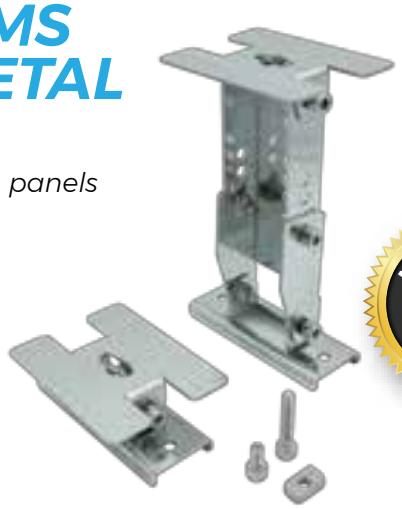
PRODUCT CODE	LENGTH (mm)
HE-PA101-15	1500
HE-PA101-20	2000
HE-PA101-30	3000



UNIVERSAL KIT FOR PHOTOVOLTAIC SYSTEMS ON CORRUGATED SHEET METAL RIDGE CAPS

Adjustable anchoring system for the installation of photovoltaic panels on corrugated sheet metal ridge cap roofs





PRODUCT CODE
HE-CUP

PRODUCT STRENGTHS

FLEXIBLE INSTALLATION
Modules in vertical or horizontal orientation, with adjustable tilt.

UNIVERSAL COMPATIBILITY
Suitable for all photovoltaic modules.

PRECISE ADJUSTMENT
5 positions to follow the curvature of the ridge cap.

QUICK INSTALLATION
Compatible with HE-PR100 series profiles.

RESISTANT
Ideal for curved corrugated sheet metal roofs, with an optional wind bracing solution for extreme conditions.



TO BE USED WITH:

- **HE-RIV52191** - Aluminium rivet 5,2 x 19,1 mm with EPDM gasket
- **HE-PR101** – Horizontal structural profile with pre-applied EPDM or HE-ALBUT-50 single-sided butyl sealing tape with reinforced aluminum foil.
- **HE-MIS/HE-MTS** - Simple aluminium PV clamp

OPERATING INSTRUCTIONS

- **Drill** a Ø 5.5 mm hole through the HE-PR101 structural profile and the underlying corrugated sheet metal.
- **Insert** the rivet and secure it using a rivet gun.
- **Secure** the HE-CUP kit to the HE-PR101 structural profile using the screws and cams supplied with the kit.
- **Adjust** the kit to the required tilt angle by positioning it along the structural profile rail according to the panel dimensions.





HAMMER ENERGY

Y-BEAM STRUCTURAL SYSTEM

Structural system for Y-beams for fastening photovoltaic panels perpendicular to the ridge cap

NEW PRODUCT

HIGH STRENGTH STRUCTURES

EASY FASTENING

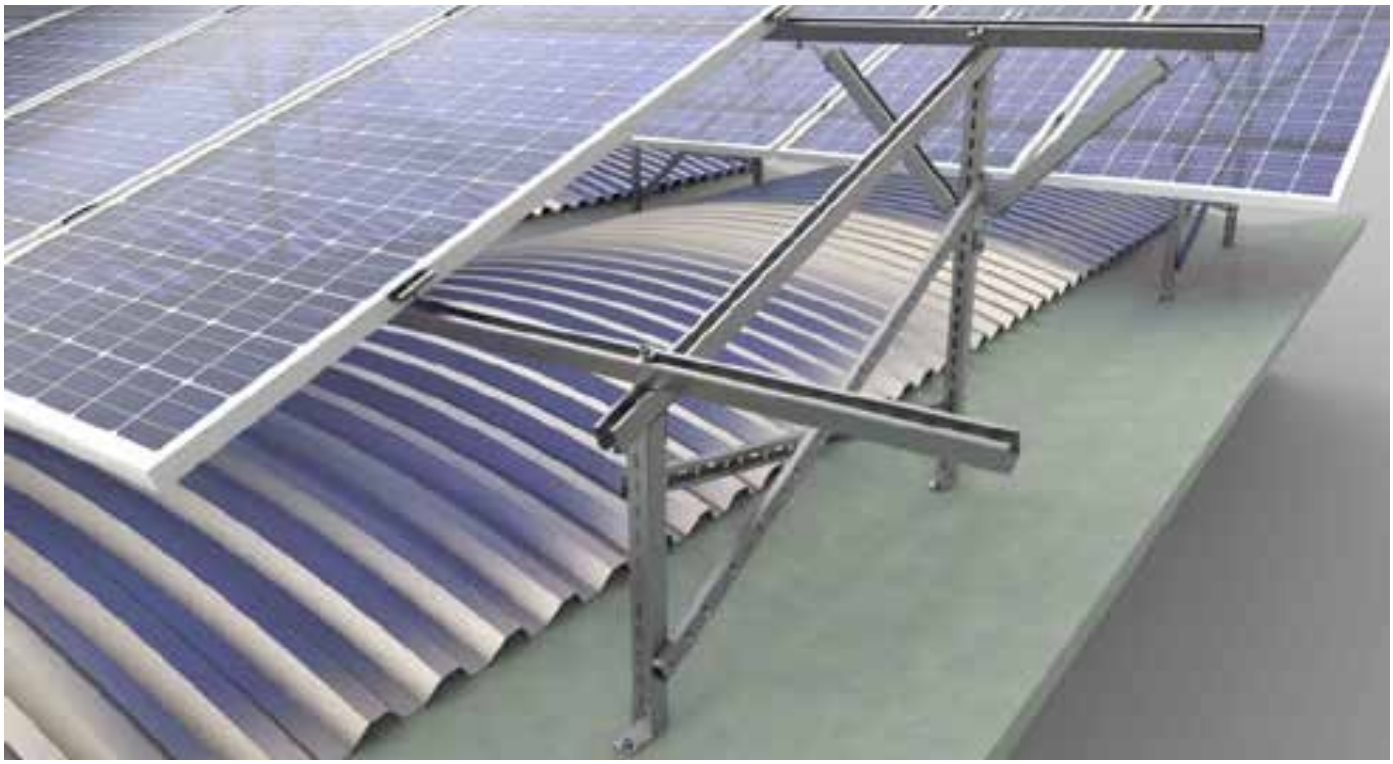
CUSTOM DESIGN

ENGINEERING CHECK





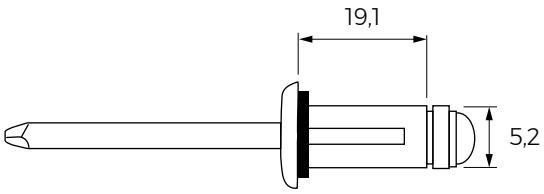






ALUMINIUM BLIND RIVET

Aluminium blind rivet for photovoltaic systems, with EPDM gasket





250 pcs

PRODUCT CODE	LENGTH (mm)	HOLE DIAMETER (mm)	RIVET DIAMETER (mm)	SUPPORT THICKNESS (mm)	COMPRESSION LOAD (N)	TENSILE LOAD (N)
HE-RIV52191	19,1	5,3 - 5,5	5,2	0,5 - 3,0	1850	2700

PRODUCT STRENGTHS

RESISTS IN TIME
It will not rust or oxidize because it is made entirely of aluminium.

RESISTS TO EXTRACTION
It has excellent extraction resistance values even when applied to thin metal sheets.

RESISTS TO WATER
EPDM gasket makes the rivet more resistant to water and weathering.

IMPROVES STRUCTURAL STRENGTH
The grooves on the inner nail of the blind rivet close in on themselves, providing greater structural strength than flower rivets.

TO BE USED FOR:

Trapezoidal metal sheet roofs, in combination with HE-PR101/HE-PR102 profile structure and the HE-ALBUT-50 single-sided sealing tape.

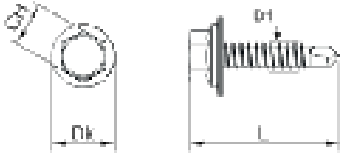
OPERATING INSTRUCTIONS

Drill holes in structure profile HE-PR101/HE-PR102 and the trapezoidal sheet metal underneath with ø 5.5 mm hole.
Insert the rivet and use the riveting machine to fasten it.



STAINLESS STEEL SELF-DRILLING SCREW

Stainless steel A2 self-drilling screw with vulcanized ø 14 washer





500 pcs

NEW PRODUCT

PRODUCT CODE	TOTAL LENGTH (mm)	HEAD DIAMETER (mm)	HEX KEY	THREAD DIAMETER (mm)	WASHER OUTER DIAMETER (mm)
HE-VI48X25EPDM	25	10,5	8	4,8	14

PRODUCT STRENGTHS

INSTALLATION PRECISION
The reduced drill point allows for more accurate and stable positioning of corrugated sheets, ensuring a clean installation.

GREATER MECHANICAL STRENGTH
The screw's larger diameter provides high shear strength, increasing the overall strength of the fastening.

WATER RESISTANCE
The Ø14 vulcanized washer provides enhanced resistance to water and weathering.

TO BE USED FOR:

Trapezoidal metal sheet roofs, in combination with HE-PR101/HE-PR102 profile structure and the HE-ALBUT-50 single-sided sealing tape.

OPERATING INSTRUCTIONS

Drive the self-drilling screw through the **HE-PR101 / HE-PR103** structural profile and the corrugated sheet metal.



BUTYL SEALING TAPE

One-sided butyl sealing tape with reinforced aluminium foil for photovoltaic installations





12 rolls

PRODUCT CODE	
HE-ALBUT-50	
FILM TYPE / COLOUR	Aluminium – PET / Aluminium
COMPOUND TYPE / COLOUR	Adhesive butyl rubber / Grey
WIDTH (mm)	50
THICKNESS (mm)	1
ROLL LENGTH (m)	10
TENSILE PROPERTIES (mm)	Long. 185 N/50 - Tras 200 N/50
ELONGATION AT BREAK	Long. 10% - Tras 20%
SOLIDITY	100%
180° PEEL ADHESION (N/cm)	22
PROBE TACK (N)	7,2
VERTICAL SLIDING (mm)	0
TEMPERATURE RANGE OF APPLICATION (°C)	0 / + 40
OPERATING TEMPERATURE RANGE (°C)	-40 / +100
FIRE CLASSIFICATION	E (EN 13501-1)
WATER VAPOUR DIFFUSION RESISTANCE FACTOR (μ)	2.720.000 (UNI EN 1931)

PRODUCT STRENGTHS

RESISTANT
The aluminium foil reinforces the tape and gives it excellent mechanical properties in terms of tensile strength and elongation.

PROTECTIVE
Water and airtight, with an aluminium film protecting the surface from aggressive agents, UV rays and corrosion.

EASY TO USE
The butyl rubber layer is cold adhesive and is ideal for application on metal surfaces such as trapezoidal metal sheet.

TO BE USED FOR:

photovoltaic installations on trapezoidal metal sheet roof, in combination with HE-PR101/HE-PR102 profile and HE-RIV52191 rivets.

OPERATING INSTRUCTIONS

Apply on dry, clean and dirt-free trapezoidal metal sheet. For application at temperatures between 0 °C and 5 °C ensure that there is no condensation or frost on the surface. In the case of porous substrates, it is advisable to stabilise the surface.

Unroll to the desired length, place the tape in position and press it down to prevent the formation of air bubbles. In the case of a joint between two tapes, overlapping of at least 5 cm is recommended.
Press with a roller or cloth pad.
Apply the HE-PR101/HE-PR102 profile over the tape and fasten it with the HE-RIV52191 rivets.

For proper storage, we recommend keeping the product in its original, unopened packaging and storing it in a dry, well-ventilated place at a temperature between +5 °C and + 40 °C.

We recommend using within 12 months



EPDM SEALING TAPE

Single-sided sealing tape made of closed-cell expanded EPDM with reinforced adhesive



NEW PRODUCT

PRODUCT CODE			
HE-EPDM-30			
ROLL LENGTH (m)			20
SPECIFICATION	ASTM D 1056-00		2A2
	AFNOR 99-211		2C 08
	FMVSS 302		passes ≥ 12 mm
DENSITY			120 +/- 30 Kg/m³
COMPRESSION STRENGTH		50% / 22h / 20°C	40 kPa @ 25% - 105 kPa @ 50%
PERMANENT DEFORMATION	ASTM D 1056-00	Maximum weight variation	33%
WATER ABSORPTION	ASTM D 1056-00		1,2 %
CONTINUOUS OPERATING TEMPERATURE			-40 / +80° C
INTERMITTENT OPERATING TEMPERATURE			+ 100° C
RESISTANCE	UV		Excellent
	OILS		Low
	ACIDS		Good

PRODUCT STRENGTHS

QUICK INSTALLATION
The EPDM tape can be bonded to structural profiles using its reinforced adhesive backing, reducing installation time on site.

PROTECTIVE
Water and airtight, with an aluminium film protecting the surface from aggressive agents, UV rays and corrosion.

EASY TO USE
The EPDM rubber layer features a reinforced adhesive backing, making it ideal for application on metal surfaces such as corrugated sheet metal.

TO BE USED FOR:

Photovoltaic systems installed on corrugated sheet metal roofs, in combination with HE-PR100 series profiles and the corresponding anchoring accessories.



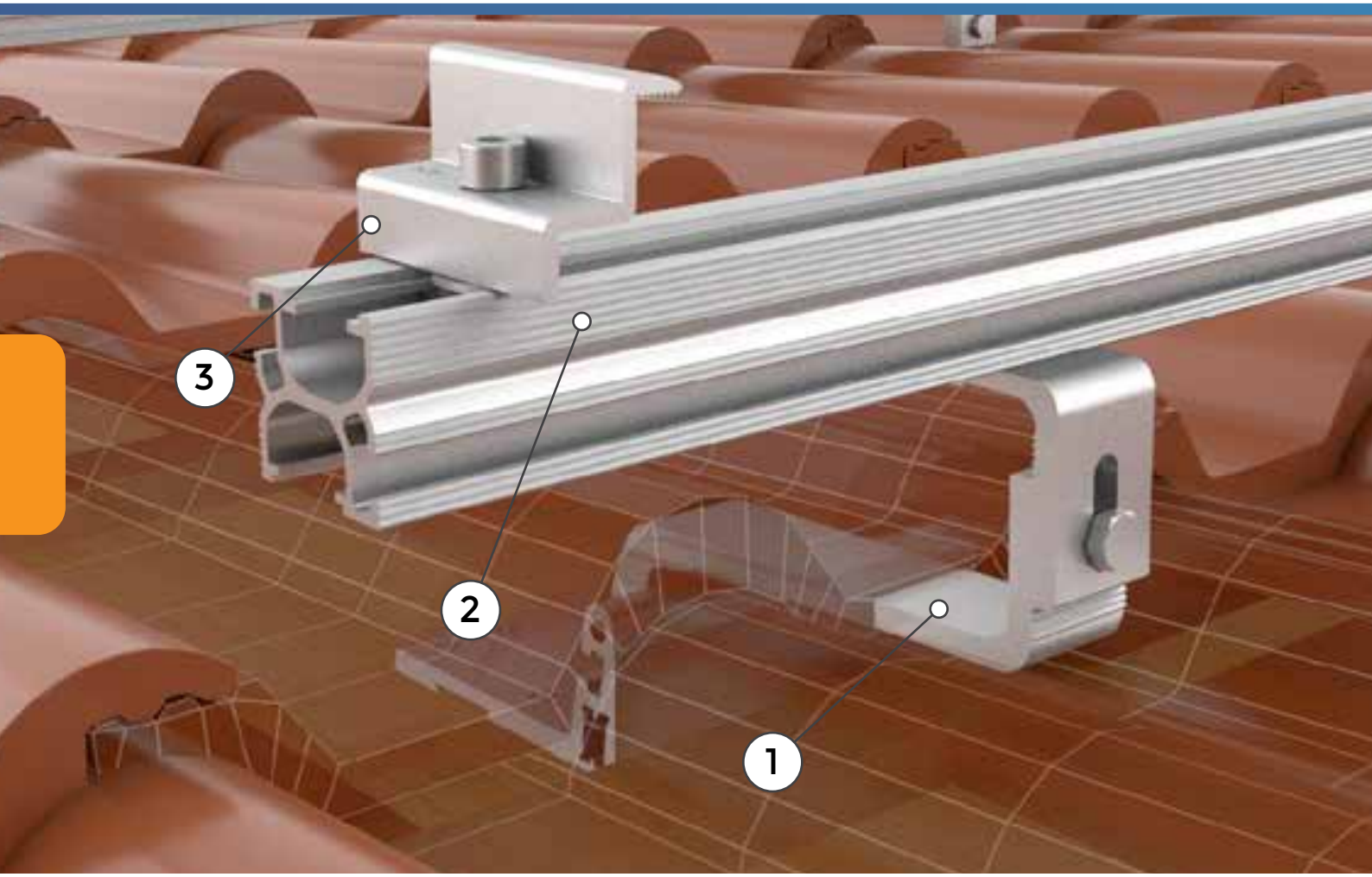


TILE / PANTILE ROOFING



THE SYSTEM

VIDEO TUTORIAL

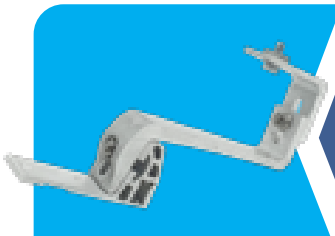


EXAMPLE OF A TILE ROOF MOUNTING SYSTEM WITH HOOK BRACKET

1. **HE-STA-01**
   Adjustable three-way aluminium hook bracket

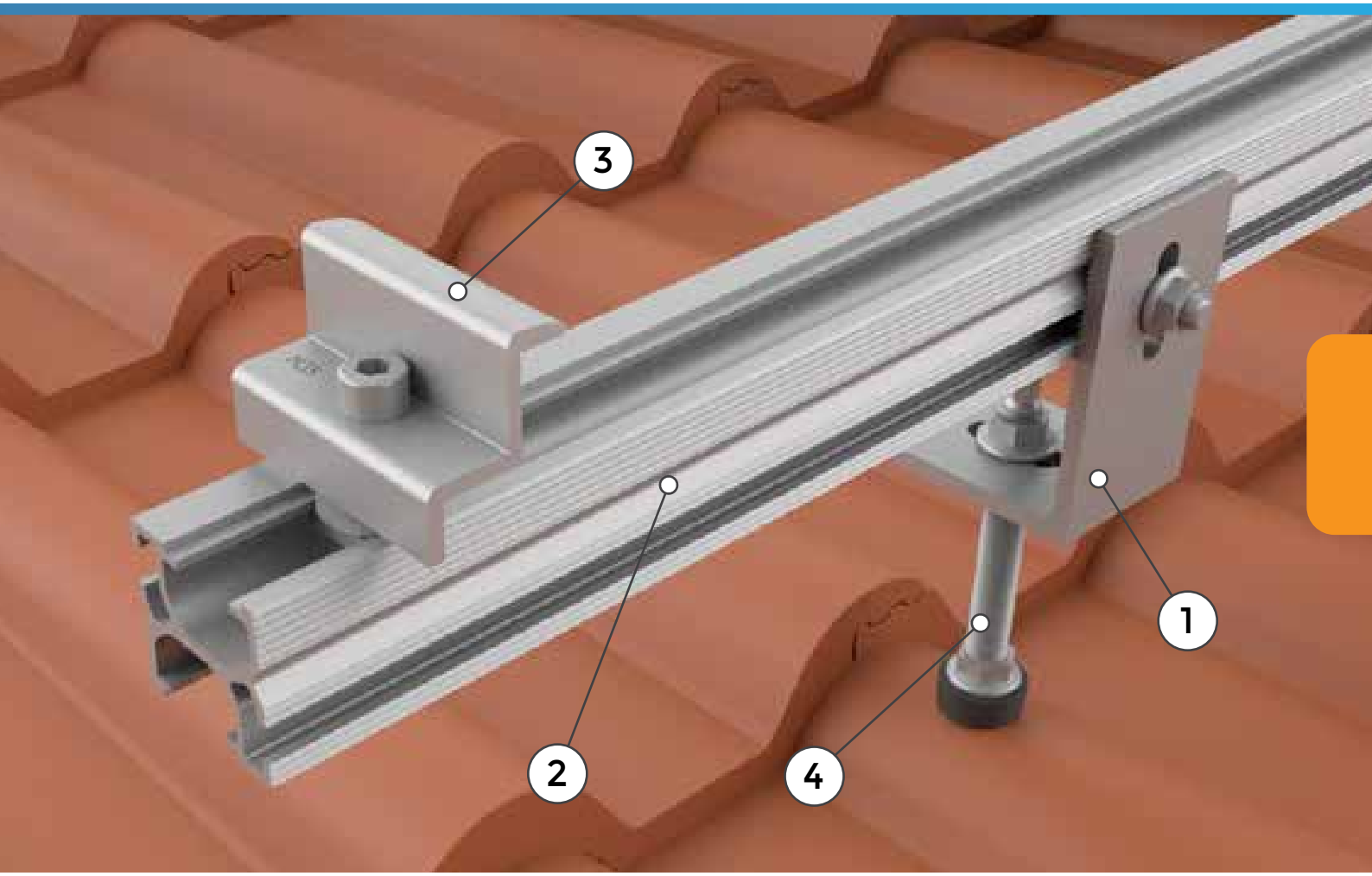
2. **HE-PR201**
   Structural profile for mounting photovoltaic modules on tile or pantile roof coverings.

3. **HE-MTR-35**
   Pre-assembled aluminium end clamp with RLS (Rapid Locking System).



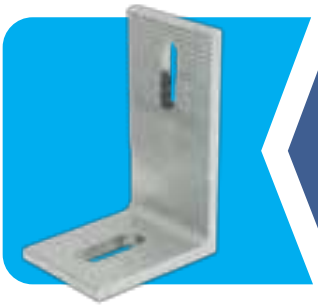
HE-STA: THE INVISIBLE STRENGTH OF YOUR PHOTOVOLTAIC SYSTEM

Imagine your roof transformed into a source of clean energy.
With HE-STA, the aluminium hook bracket designed to withstand the test of time, every photovoltaic panel has a secure and reliable support point.
Lightweight, strong, adjustable: HE-STA is the solution that simplifies installation while ensuring outstanding performance.
Hammer Energy – Italian innovation for the future of energy.



EXAMPLE OF A TILE ROOF MOUNTING SYSTEM WITH “L” BRACKET

1. **HE-STL-01**
   Aluminium L-bracket for photovoltaic systems on tile or pantile roof coverings
2. **HE-PR201**
   Structural profile for mounting photovoltaic modules on tile or pantile roof coverings
3. **HE-MTR-35**
   Pre-assembled aluminium end clamp with RLS (Rapid Locking System)
4. **HE-VF10X**
   Double-threaded screw for photovoltaic systems



HE-STL: SMART STABILITY, UNCOMPROMISING ENERGY

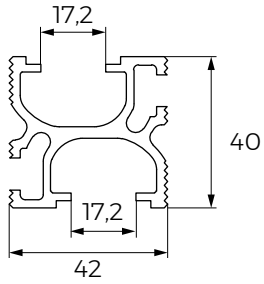
HE-STL is designed to ensure maximum stability: the profile is mechanically secured to the internal textured surface, distributing the load evenly.

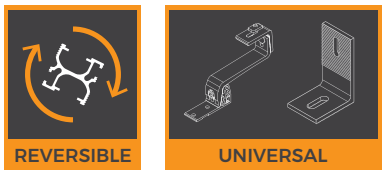


STRUCTURAL PROFILE HE-PR201

Aluminium photovoltaic mounting profile for installing photovoltaic modules on tile or pantile roof coverings







PRODUCT CODE	WEIGHT (Kg/m)	LENGTH (mm)	AREA (cm^2)	Ix (cm^4)	Iy (cm^4)	Wx (cm^3)	Wy (cm^3)
HE-PR201-65	1,185	6500	4,372	5,893	8,982	5,075797	6,267969
HE-PR201-32	1,185	3250	4,372	5,893	8,982	5,075797	6,267969

PRODUCT STRENGTHS

UNIVERSAL
Suitable for both large-scale and small-scale installations, thanks to the optimized bar length and designed for use with both L-brackets and hook brackets.
One single profile for every solution.

REVERSIBLE
Designed to improve installation efficiency, the profile features symmetrical grooves for attachment to brackets and clamps.

LIGHTWEIGHT
Profile made of EN AW 6060 T6 aluminium alloy in accordance with EN 12020-2, lightweight and easy to handle. The 3250 mm bars are optimized in length to minimize waste and facilitate handling on site.

DURABLE
Optimized moments of inertia and section modulus provide high resistance to heavy snow and wind loads.

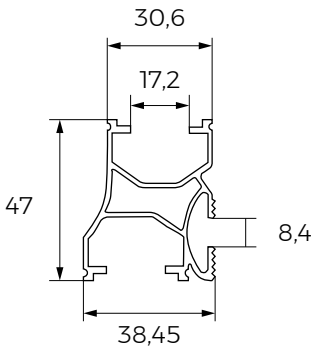
FOR USE WITH:

- **HE-STI** - Stainless steel hook bracket, In combination with the HE-STI-KIT fastening kit
- **HE-STL-01** - Aluminium L-bracket for fastening screw, with **HE-STL-KIT01**
- **HE-VF10X200, HE-VF10X250, HE-VF10X30** - Double-threaded screw
- **HE-STA-01** e **HE-STA-02** - Adjustable aluminium hook brackets
- **HE-GPR-200** - Aluminium joint, 12 × 5 × 180 mm, with 4 × Ø 4.5 mm holes
- **HE-MIS/HE-MTS** - Standard clamps
- **HE-MIM/HE-MTM** - Pre-assembled clamps for sequential installation
- **HE-MIR/HE-MTR** - Pre-assembled RLS clamps (Rapid Locking System)

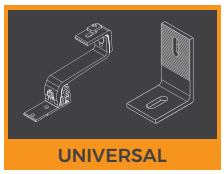


STRUCTURAL PROFILE HE-PR202

Lightweight aluminium photovoltaic mounting profile for installing photovoltaic modules on tile or pantile roof coverings






UNIVERSAL

PRODUCT CODE	WEIGHT (Kg/m)	LENGTH (mm)	AREA (cm^2)	Ix (cm^4)	Iy (cm^4)	Wx (cm^3)	Wy (cm^3)
HE-PR202-65	0,793	6500	2,928	5,790	4,842	2,500	1,838
HE-PR202-32	0,793	3250	2,928	5,790	4,842	2,500	1,838

PRODUCT STRENGTHS

UNIVERSAL
Suitable for both large-scale and small-scale installations, thanks to the optimized bar length and designed for use with both L-brackets and hook brackets.
One single profile for every solution.

RESISTANT TO TENSILE AND SHEAR LOADS
Thanks to the use of a round-head bolt.

ULTRA-LIGHTWEIGHT
Profile made of EN AW 6063 T6 aluminium alloy in accordance with EN 12020-2, easy to handle.

DURABLE
Optimized moments of inertia and section modulus provide high resistance to heavy snow and wind loads.

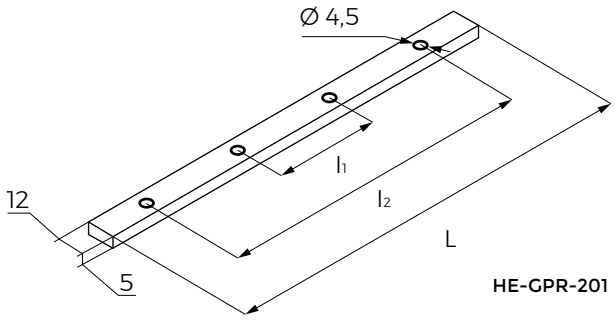
FOR USE WITH:

- **HE-STI** - Stainless steel hook bracket, In combination with the HE-STI-KIT fastening kit
- **HE-STL-01** - Aluminium L-bracket for fastening screw, with **HE-STL-KIT01**
- **HE-VF10X200, HE-VF10X250, HE-VF10X30** - Double-threaded screw
- **HE-STA-01** e **HE-STA-02** - Adjustable aluminium hook brackets
- **HE-GPR-200** - Aluminium joint, 12 × 5 × 180 mm, with 4 × Ø 4.5 mm holes
- **HE-MIS/HE-MTS** - Standard clamps
- **HE-MIM/HE-MTM** - Pre-assembled clamps for sequential installation
- **HE-MIR/HE-MTR** - Pre-assembled RLS clamps (Rapid Locking System)



STRUCTURAL PROFILE SPLICE HE-PR200 SERIES

Aluminium splice for HE-PR200 series photovoltaic mounting profiles



HE-GPR-201



HE-GPR-202

PRODUCT CODE	l1 (mm)	l2 (mm)	L (mm)	SPLICE FOR MOUNTING PROFILES
HE-GPR-201	45	135	180	HE-PR201
HE-GPR-202				HE-PR202

PRODUCT STRENGTHS

LIGHTWEIGHT
Made of EN AW 6060 T6 aluminium in accordance with UNI EN 12020-2.

SIMPLE
The profiles can be joined using self-drilling screws through the pre-drilled holes.

RESISTANT
By joining the structural profiles, larger and more robust photovoltaic mounting systems can be created for tile or pantile roof coverings.

TO BE USED FOR:

Tile or pantile roofs, for joining HE-PR200 series structural profiles.

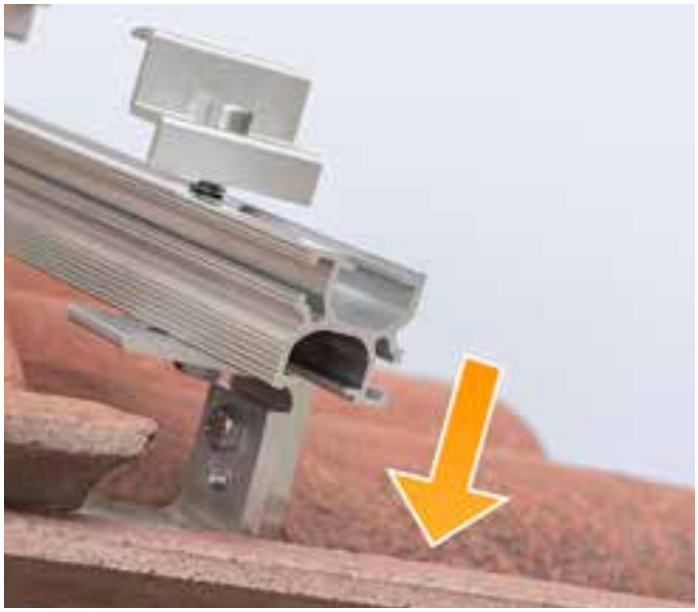
OPERATING INSTRUCTIONS

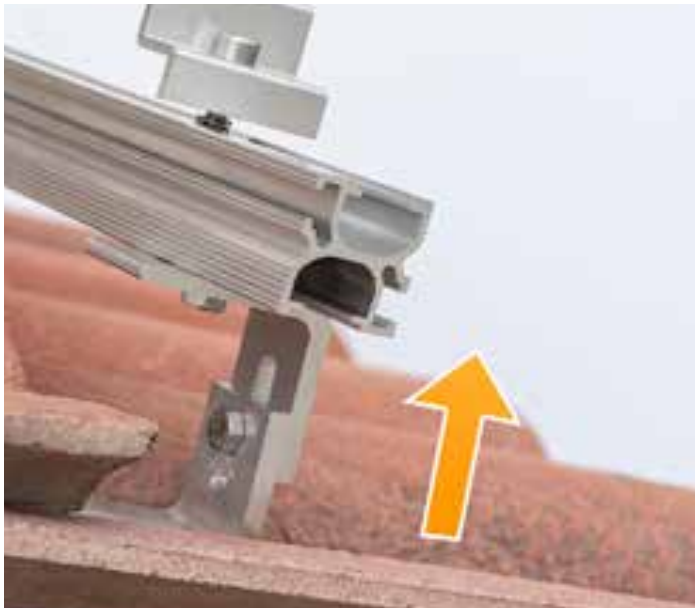
Secure the HE-GPR-200 splice to the HE-PR200 series structural profile using self-drilling screws (not included in the package).



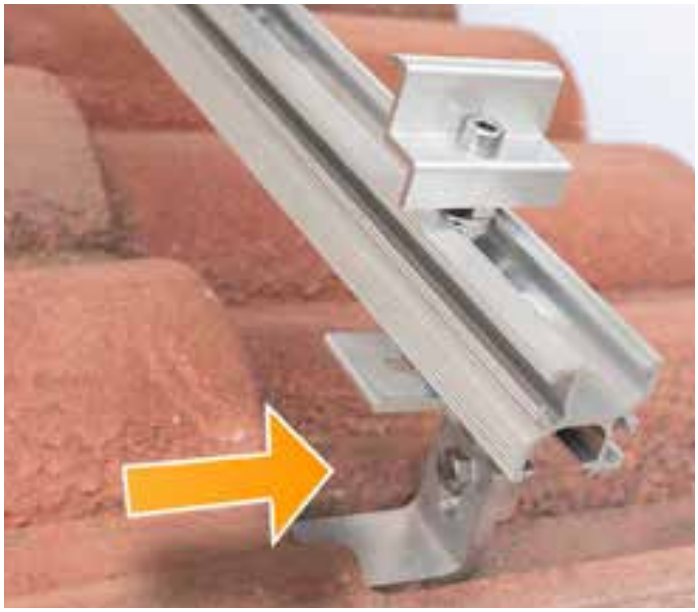
ALUMINIUM HOOK BRACKETS: ADJUSTMENT OPTIONS

The Hammer Energy **HE-STA-01** and **HE-STA-02** hook brackets offer multiple adjustment options to adapt to any roof with a timber structure and tiles or pantiles.





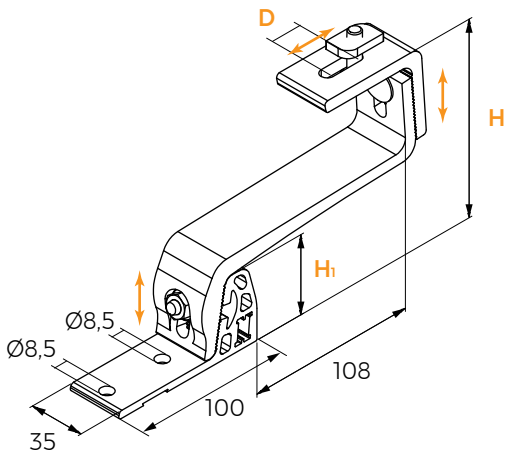






ALUMINIUM HOOK BRACKET

Aluminium hook bracket for photovoltaic systems on roofs with tiles or pantiles, with three adjustment points





PRODUCT CODE	WEIGHT (gr)	D HORIZONTAL ADJUSTMENT (mm)	H1 CLEARANCE HEIGHT ABOVE LOWER TILE (mm)	H TOTAL PROFILE SUPPORT HEIGHT (mm)	TIGHTENING WRENCH	TORQUE (Nm)
HE-STA-01	445	20	51 ÷ 67	125 ÷ 161	13	10

PRODUCT STRENGTHS

LIGHTWEIGHT
Made of aluminium in accordance with UNI EN 12020-2.

RESISTANT
The aluminium construction and A2 stainless steel hardware ensure excellent long-term durability; excellent load-bearing performance is maintained even with the arm fully extended.

PRE-ASSEMBLED
The bracket is ready for use thanks to its pre-assembled components.

RAPID
The structural profile can be fixed quickly, securely and with easy adjustment.

VERSATILE
The serrations on the base and hook provide a wide adjustment range, allowing the bracket to easily accommodate tiles or pantiles of any size.

TO BE USED FOR:

Tile or pantile roofs, in combination with HE-PR200 series structural profiles.
The material for fixing the bracket to the profile is included in the package.

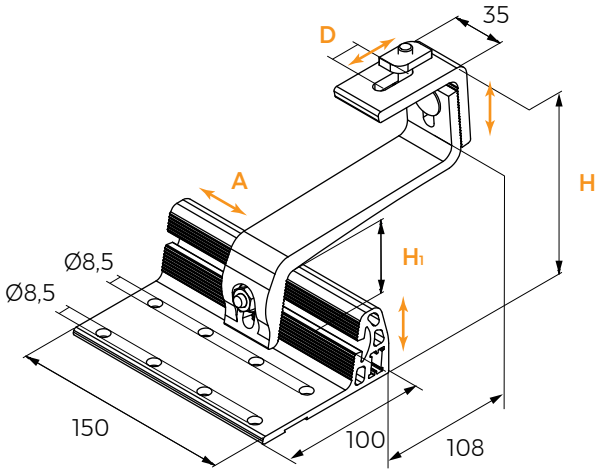
OPERATING INSTRUCTIONS

Secure the bracket to the rafters using suitable wood screws (not included) or suitable pan-head screws.
Adjust the bracket to achieve the desired distance between the tile/pantile and the photovoltaic panel.
Secure the HE-PR200 series structural profile to the upper part of the bracket using the components included in the package.



ALUMINIUM HOOK BRACKET

Aluminium hook bracket for photovoltaic systems on roofs with tiles or pantiles, with four adjustment points





10 pcs

PRODUCT	WEIGHT (gr)	A HOOK HORIZONTAL ADJUSTMENT (mm)	D HORIZONTAL ADJUSTMENT (mm)	H1 CLEARANCE HEIGHT ABOVE LOWER TILE (mm)	H TOTAL PROFILE SUPPORT HEIGHT (mm)	TIGHTENING WRENCH	TORQUE (Nm)
HE-STA-02	778	115	20	51 ÷ 67	125 ÷ 161	13	10

PRODUCT STRENGTHS

LIGHTWEIGHT
Made of aluminium in accordance with UNI EN 12020-2.

RESISTANT
The aluminium construction and A2 stainless steel hardware ensure excellent long-term durability; excellent load-bearing performance is maintained even with the arm fully extended.

PRE-ASSEMBLED
The bracket is ready for use thanks to its pre-assembled components.

RAPID
The structural profile can be fixed quickly, securely and with easy adjustment.

VERSATILE
The serrations on the base and hook provide a wide adjustment range, allowing the bracket to easily accommodate tiles or pantiles of any size.

TO BE USED FOR:

Tile or pantile roofs, in combination with HE-PR200 series structural profiles.
The material for fixing the bracket to the profile is included in the package.

OPERATING INSTRUCTIONS

Secure the bracket to the rafters using suitable wood screws (not included) or suitable pan-head screws.
Adjust the bracket to achieve the desired distance between the tile/pantile and the photovoltaic panel.
Secure the HE-PR200 series structural profile to the upper part of the bracket using the components included in the package.

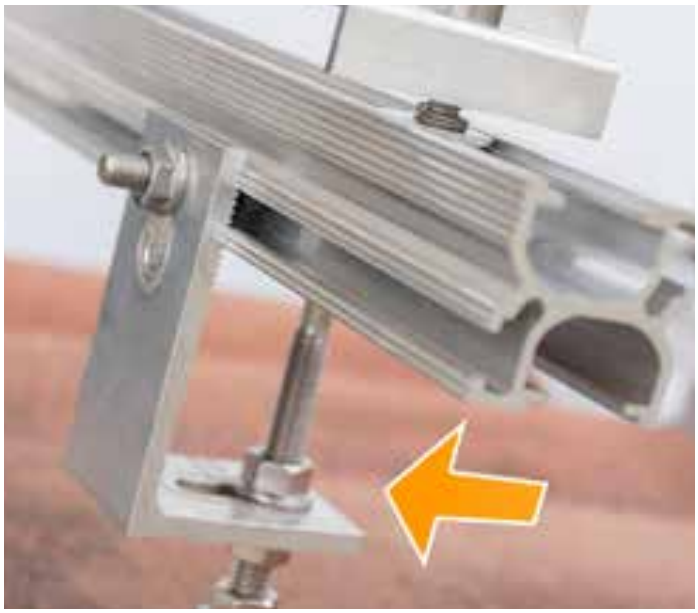


ALUMINIUM L-BRACKETS: ADJUSTMENT OPTIONS

The **HE-STL-01** L-brackets enable quick and easy installation, with adjustment options at every stage of the installation process for photovoltaic systems on tile or pantile roof coverings.





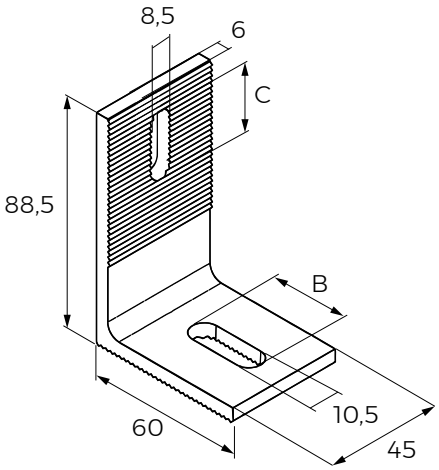






ALUMINIUM L-BRACKET

Aluminium L-bracket for photovoltaic systems on roofs with tiles or pantiles roof





100 pcs

PRODUCT CODE	WEIGHT (gr)	B VERTICAL ADJUSTMENT (mm)	C HORIZONTAL ADJUSTMENT (mm)	TIGHTENING WRENCH	TORQUE (Nm)
HE-STL-01	110	18	20	13	10

PRODUCT STRENGTHS

LIGHTWEIGHT
Made of EN AW 6060 T6 aluminium in accordance with UNI EN 12020-2

RESISTANT
The aluminium construction and A2 stainless steel hardware ensure excellent long-term durability;

RAPID
The structural profile can be quickly, securely and precisely adjusted and fixed, thanks to the supplied screw and nut and the serrations, which provide precise mechanical engagement with the profile groove.

ENHANCED STRUCTURAL STRENGTH
The internal serrations of the bracket ensure optimal mechanical engagement with the structural profile, providing uniform load distribution and increased overall strength.

TO BE USED FOR:

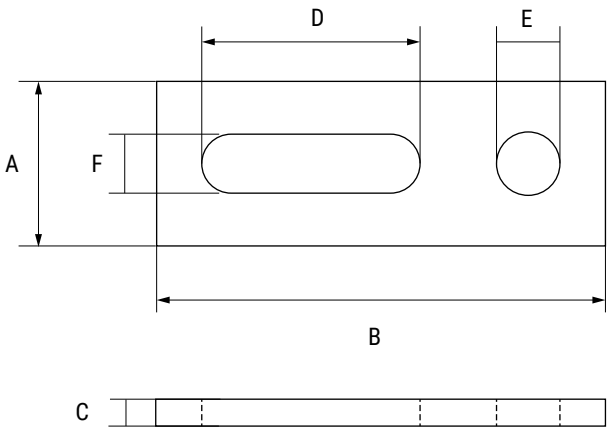
Tile or pantile roofs, in combination with HE-PR200 series structural profiles and HE-VF10X... double-threaded screws.

OPERATING INSTRUCTIONS

Drill a Ø 10–12 mm hole in the tile or pantile roof.
Insert the HE-VF10X... double-threaded screw into the hole until it reaches the height of the EPDM gasket.
Position the short side of the L-bracket onto the double-threaded screw.
Tighten the locking nut onto the double-threaded screw.
Repeat the procedure for all brackets in the system.
Position the structural profile in line with the slot on the long side of the bracket, adjusting its height using the serrations on the bracket and the supplied fastening hardware.

FLAT STAINLESS STEEL BRACKET

Flat stainless steel bracket for photovoltaic systems.





NEW PRODUCT

25 pcs

PRODUCT CODE	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
HE-STI-P10	30	82	5	29,5	11	11
HE-STI-P12	30	82	5	29,5	13	11

PRODUCT STRENGTHS

READY TO USE
The system can be assembled using a single component.

RESISTANT
The bracket is made of AISI 304/A2 stainless steel.

REVERSIBLE
Can be used in either installation orientation.

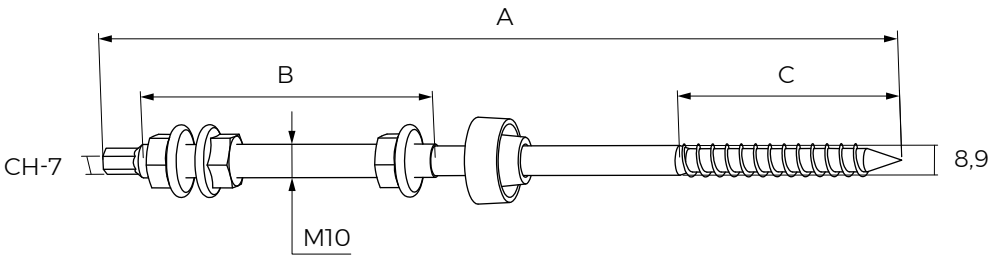


DOUBLE-THREADED SCREW

Double-threaded screw for photovoltaic systems,
supplied with 3 DIN 6923 nuts and an EPDM sealing washer



25 pcs



PRODUCT CODE	A (MM)	B (MM)	C (MM)	THREAD TYPE
HE-VF10X200	200	110	70	M10
HE-VF10X250	250	130	80	M10
HE-VF10X300	300	140	100	M10

PRODUCT STRENGTHS

PRE-ASSEMBLED
Maximum ease of use, thanks to the nuts and the pre-assembled gasket.

VERSATILE
Suitable for photovoltaic installations on roofs with corrugated panels, trapezoidal sheet metal, tiles or pantiles roof.

RESISTANT
Featuring a screw body made of A2 stainless steel.

TO BE USED FOR:

- **Roofs with corrugated panels** and wooden or trapezoidal sheet metal roofing with a wooden substructure, used in combination with the HE-PR201 mounting profile and HE-STL-01 L-bracket.
- **Roofs with tiles or pantiles** and a wooden roof structure, used in combination with the HE-PR201 mounting profile and HE-STL-01 L-bracket.

OPERATING INSTRUCTIONS

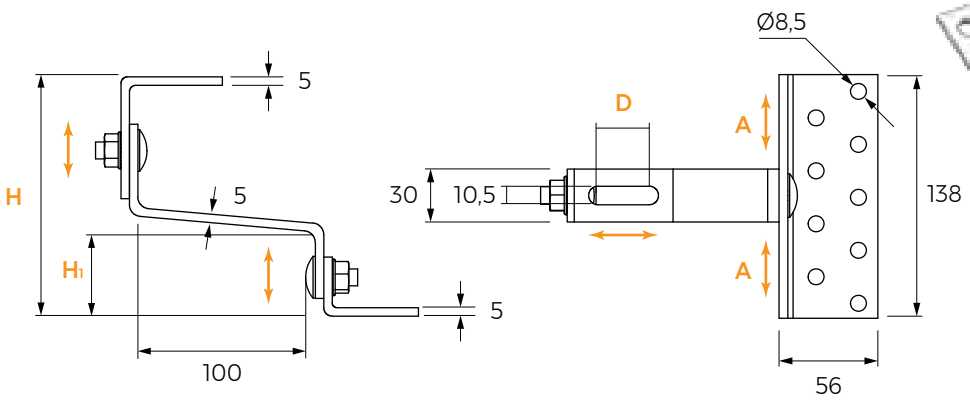
Drill the cup, tile or sheet metal and beam in wood underneath by drilling a hole of ø from 10 to 12 mm; insert the double-threaded screw into the hole up to at the height of the EPDM gasket.
Position the short side of the L-bracket onto the double-threaded screw.
Tighten the locking nut onto the double-threaded screw.

Repeat the procedure for all brackets in the installation.



STAINLESS STEEL HOOK BRACKET

Stainless steel hook bracket for photovoltaic systems, featuring four adjustment positions





20 pcs

PRODUCT CODE	WEIGHT (gr)	A HOOK HORIZONTAL ADJUSTMENT (mm)	D HORIZONTAL ADJUSTMENT (mm)	H_1 CLEARANCE HEIGHT ABOVE LOWER TILE (mm)	H TOTAL PROFILE SUPPORT HEIGHT (mm)	TIGHTENING WRENCH	TORQUE (Nm)
HE-STI	776	-50 / 0 / +50	29	38 ÷ 50	114 ÷ 156	13	10

PRODUCT STRENGTHS

ADJUSTABLE
Adjustable in three directions, thanks to the three square holes on the base and the slots on the hook.

READY TO USE
Can be used for photovoltaic system installation without any preparation, as all components are pre-assembled.

RESISTANT
High snow and wind load resistance.

TO BE USED FOR:

Tile or pantile roofs with a roof pitch of 20° or more, used in combination with the HE-PR200 series mounting profile and the HE-STI-KIT profile fastening kit.

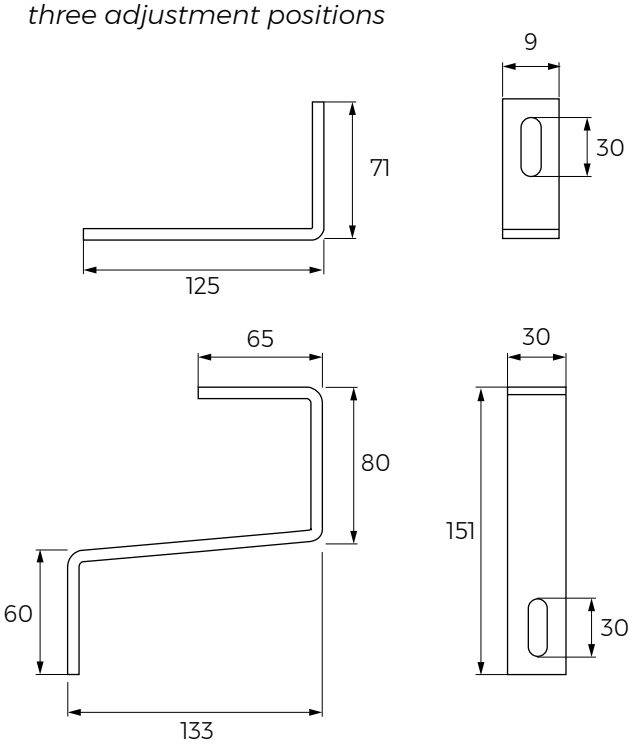
OPERATING INSTRUCTIONS

Secure the bracket to the roof beams using suitable wood screws (not included) or suitable pan-head screws.
Adjust the bracket to achieve the desired clearance between the tile/pantile and the photovoltaic panel.
Secure the HE-PR200 series mounting profile to the upper part of the bracket using the HE-STI-KIT fastening kit.



STAINLESS STEEL HOOK BRACKET KIT

Stainless steel hook bracket for photovoltaic systems, featuring three adjustment positions





20 pcs

PRODUCT CODE
HE-STI-02

PRODUCT STRENGTHS

ADJUSTABLE
Adjustable in two directions, thanks to the slots on the base and hook.

HIGH CLEARANCE
Height-adjustable up to over 15 cm.

RESISTANT
High snow and wind load resistance.

TO BE USED FOR:

Tile or pantile roofs with a roof pitch of 20° or more, used in combination with the **HE-PR201 / HE-PR202** mounting profiles and the HE-STI-KIT profile fastening kit.

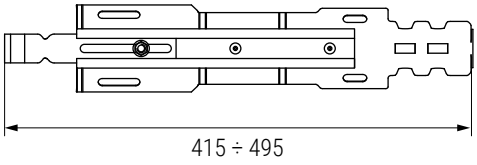
OPERATING INSTRUCTIONS

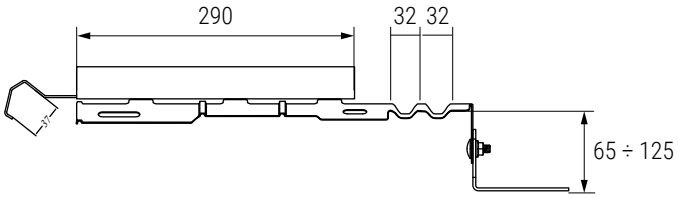
Secure the bracket to the roof beams using suitable wood screws (not included) or suitable pan-head screws.
Adjust the bracket to achieve the desired clearance between the tile/pantile and the photovoltaic panel.
Secure the **HE-PR201 / HE-PR202** mounting profile to the upper part of the bracket using the HE-STI-KIT fastening kit.

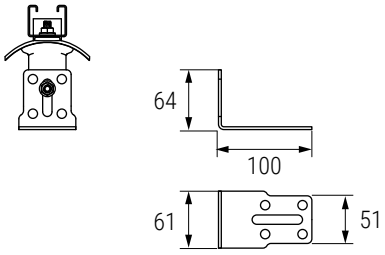


TILE HOOK BRACKET KIT

Stainless steel hook bracket for photovoltaic systems.

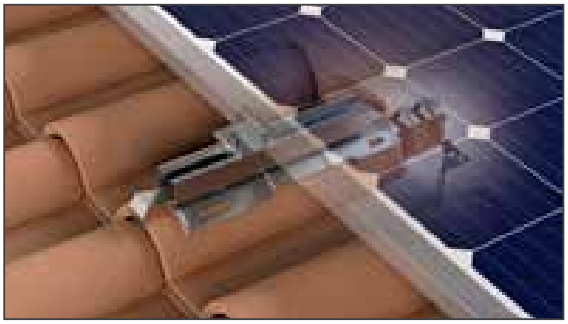












PRODUCT CODE
HE-STT

PRODUCT STRENGTHS

ADJUSTABLE
Adjustable in two directions, thanks to the slots on the bracket hooks.

WITHOUT HOLES
No need to drill the roof tiles, helping to prevent water infiltration.

TO BE USED FOR:

Tile or pantile roofs with a roof pitch of 20° or more, used in combination with the HE-MIM-23058 and HE-MTM-23058 clamps.

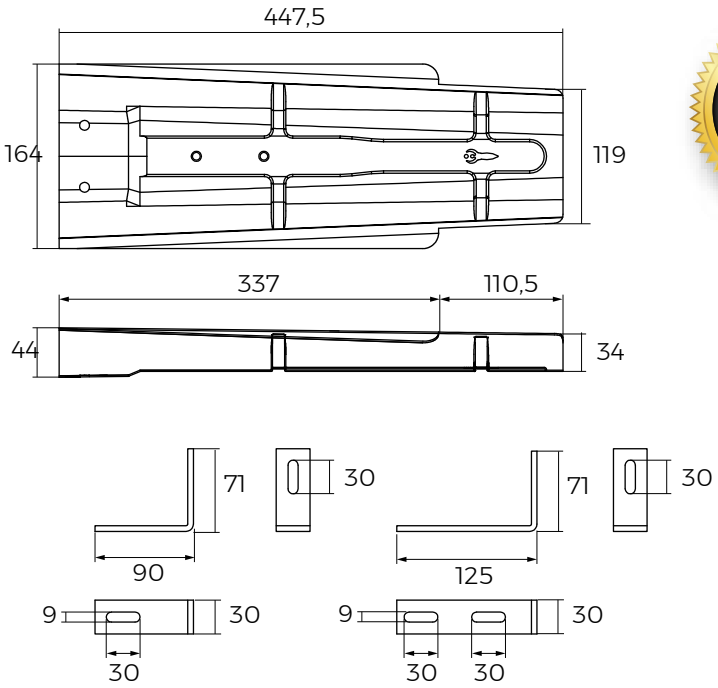
OPERATING INSTRUCTIONS

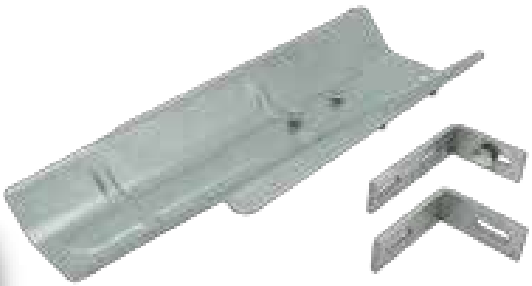
Assemble and secure the bracket to the roof structure using suitable screws (not included).



TILE HOOK BRACKET KIT

Stainless steel hook bracket for photovoltaic systems.







PRODUCT CODE
HE-STC

PRODUCT STRENGTHS

ADJUSTABLE
Adjustable in three directions, thanks to the slots on the bracket hooks.

WITHOUT HOLES
No need to drill the roof tiles, helping to prevent water infiltration.

GLUEABLE
To be used in combination with HE-GLU glue for applications on cement.

TO BE USED FOR:

Tile or pantile roofs with a roof pitch of 20° or more, used in combination with the **HE-PR201 / HE-PR202** mounting profiles and the HE-STI-KIT profile fastening kit.

OPERATING INSTRUCTIONS

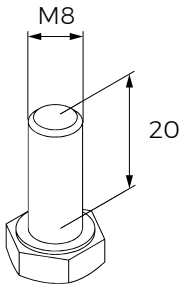
Assemble and secure the bracket using suitable anchors and/or HE-GLU certified two-component adhesive for tensile load resistance.

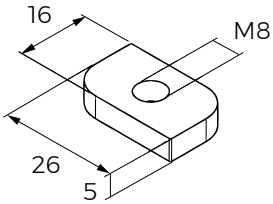


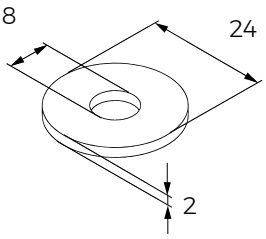


FASTENING KIT

Fastening kit for mounting accessories on HE-PR201 and HE-PR202 profiles









20 kit

PRODUCT CODE	TIGHTENING SPANNER	TORQUE
HE-STI KIT	13	10

PRODUCT STRENGTHS

SIMPLE
A single product code includes all the components required to secure the bracket to the mounting profile.

RESISTANT
Stainless steel and the Geomet® coating on the cam provide excellent resistance to corrosion and weathering.

TO BE USED FOR:

The connection between the HE-STI bracket and the HE-PR201 mounting profile for photovoltaic systems on tile/pantile roofs.

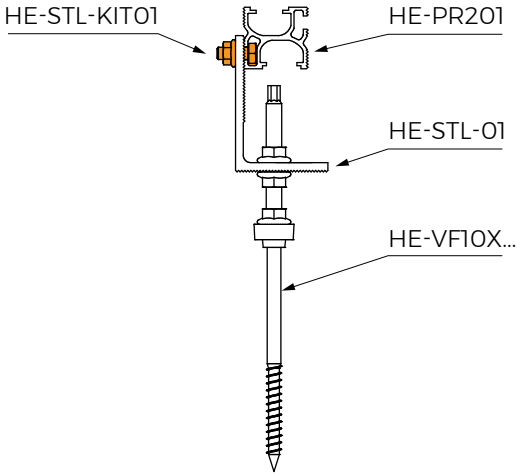
OPERATING INSTRUCTIONS

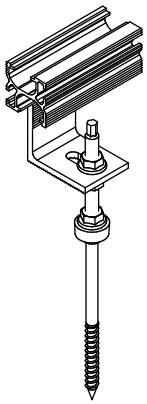
Place the washer onto the screw. Insert the screw into the upper slot of the bracket.
Screw on the cam.
Engage the cam into the channel of the HE-PR200 series mounting profile.



HE-STL-KIT01

Fastening kit for securing the L-bracket to the HE-PR201 profile



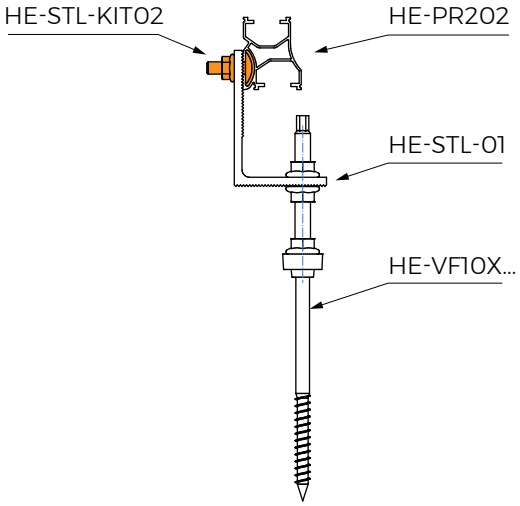


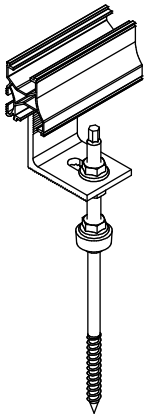


PRODUCT CODE	TIGHTENING SPANNER	TORQUE
HE-STL-KIT01	13	10

HE-STL-KIT02

Fastening kit for securing the L-bracket to the HE-PR202 profile







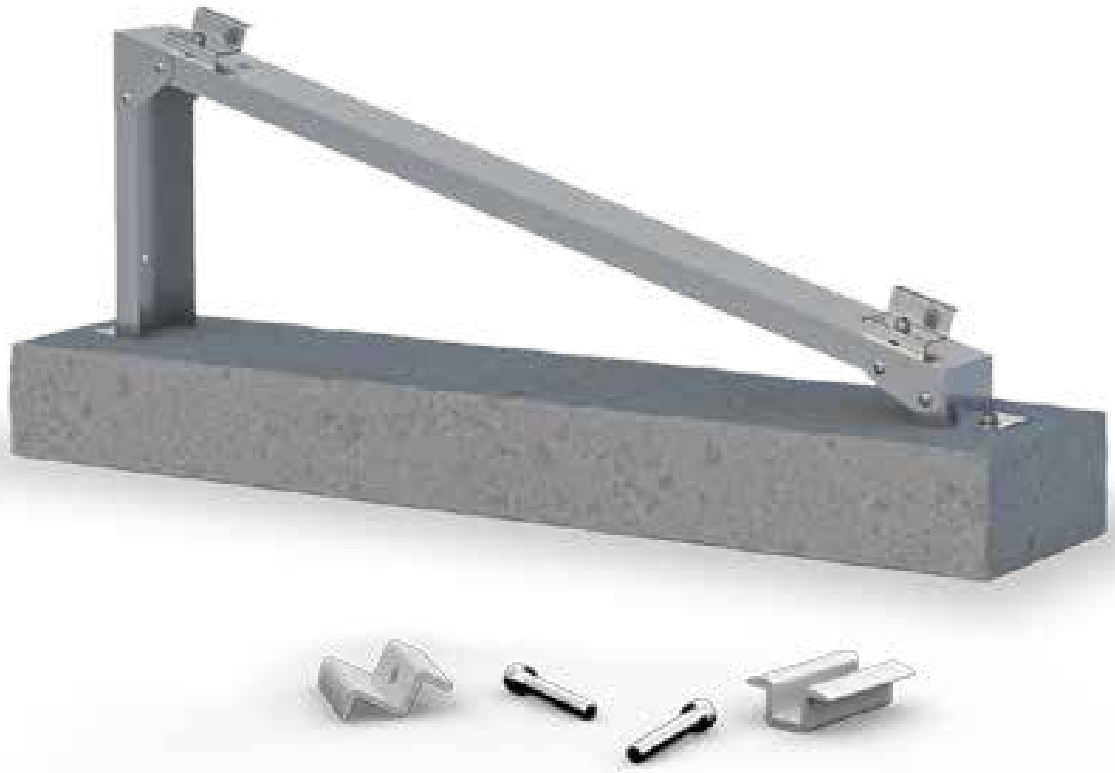
PRODUCT CODE	TIGHTENING SPANNER	TORQUE
HE-STL-KIT02	13	10

HAMMER ENERGY



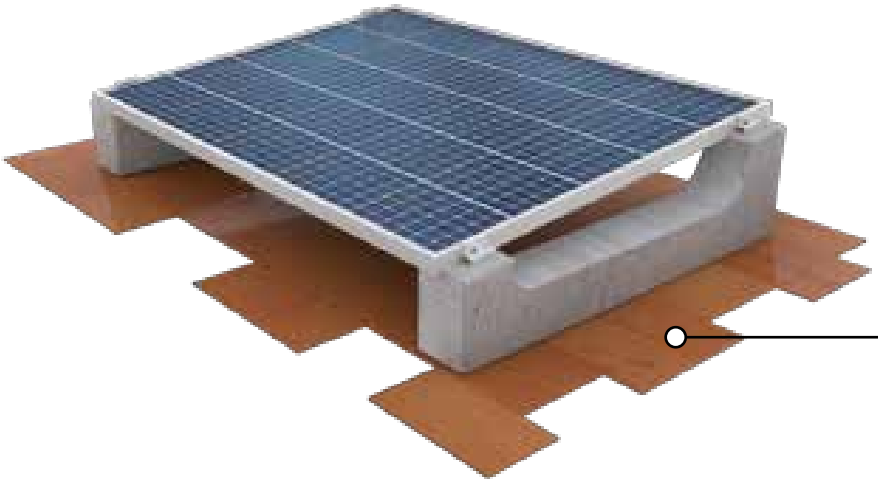


FLAT ROOF



THE SYSTEM

BALLAST INTALLATION EXAMPLES



ON PAVED ROOFS



ON ROOFS WITH BITUMINOUS MEMBRANE



ON GRAVEL-COVERED ROOFS



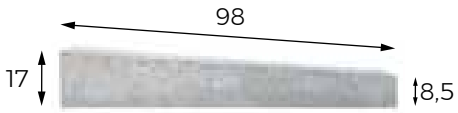
ON GRASS-COVERED ROOFS



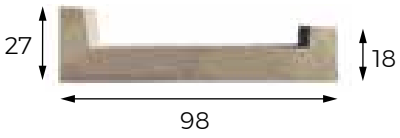
GROUND-MOUNTED

5° BALLASTS

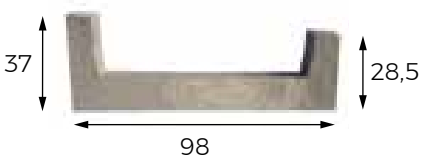
For solar panel installations with up to 6 consecutive rows and a dual East-West orientation
Made of vibrated concrete with M8 threaded steel inserts



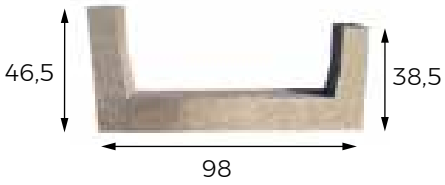
PRODUCT CODE	WEIGHT (Kg)	WIDTH (cm)	ANCHOR PULL-OUT RESISTANCE (kN)	COMPRESSIVE STRENGTH (MPa)
HE-ZA0508	40	13	20,8 / 29,7	44,2



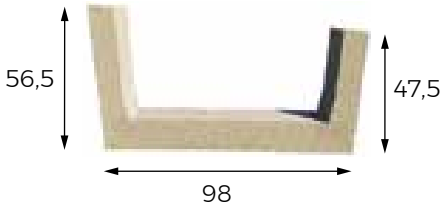
PRODUCT CODE	WEIGHT (Kg)	WIDTH (cm)	ANCHOR PULL-OUT RESISTANCE (kN)	COMPRESSIVE STRENGTH (MPa)
HE-ZA0518	42	13	20,8 / 29,7	44,2



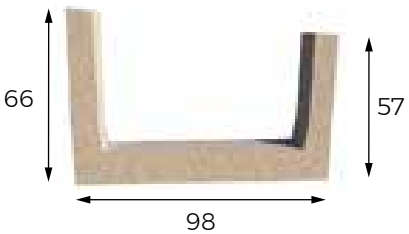
PRODUCT CODE	WEIGHT (Kg)	WIDTH (cm)	ANCHOR PULL-OUT RESISTANCE (kN)	COMPRESSIVE STRENGTH (MPa)
HE-ZA0528	47	13	20,8 / 29,7	44,2



PRODUCT CODE	WEIGHT (Kg)	WIDTH (cm)	ANCHOR PULL-OUT RESISTANCE (kN)	COMPRESSIVE STRENGTH (MPa)
HE-ZA0538	52	13	20,8 / 29,7	44,2



PRODUCT CODE	WEIGHT (Kg)	WIDTH (cm)	ANCHOR PULL-OUT RESISTANCE (kN)	COMPRESSIVE STRENGTH (MPa)
HE-ZA0548	60	13	20,8 / 29,7	44,2



PRODUCT CODE	WEIGHT (Kg)	WIDTH (cm)	ANCHOR PULL-OUT RESISTANCE (kN)	COMPRESSIVE STRENGTH (MPa)
HE-ZA0557	64	13	20,8 / 29,7	44,2



7° BALLAST

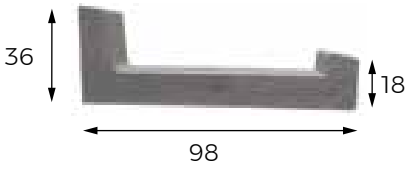
For single-row photovoltaic installations with a dual East-West orientation
Made of vibrated concrete with M8 threaded steel inserts



PRODUCT CODE	WEIGHT (Kg)	WIDTH (cm)	ANCHOR PULL-OUT RESISTANCE (kN)	COMPRESSIVE STRENGTH (MPa)
HE-ZA0709	27	12	20,8 / 29,7	44,2

10° BALLAST

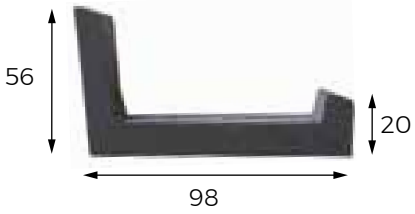
For single-row photovoltaic installations with a dual East-West orientation
Made of vibrated concrete with M8 threaded steel inserts



PRODUCT CODE	WEIGHT (Kg)	WIDTH (cm)	ANCHOR PULL-OUT RESISTANCE (kN)	COMPRESSIVE STRENGTH (MPa)
HE-ZA1018	43	13	20,8 / 29,7	44,2

20° BALLAST

For single-row photovoltaic installations with a dual East-West orientation
Made of vibrated concrete with M8 threaded steel inserts



PRODUCT CODE	WEIGHT (Kg)	WIDTH (cm)	ANCHOR PULL-OUT RESISTANCE (kN)	COMPRESSIVE STRENGTH (MPa)
HE-ZA2020	50	13	20,8 / 29,7	44,2

PRODUCT STRENGTHS

VERSATILE
Easy and quick to install on all types of flat roofs.

DURABLE
Vibrated concrete and M8 steel threaded inserts provide excellent resistance to wear and weathering.

TO BE USED FOR:

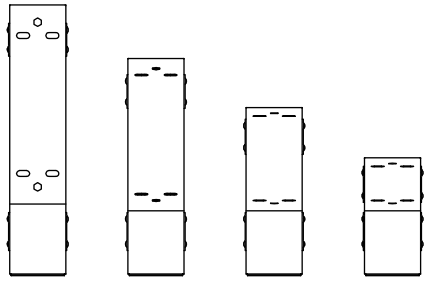
Single-row installations with a dual East-West orientation

FOR USE WITH:

- **HE-MIS / HE-MTS** Standard mid and end clamps
- **HE-VI08X..** Stainless steel clamp screws
- **HE-GU150** EPDM sheath for ballast

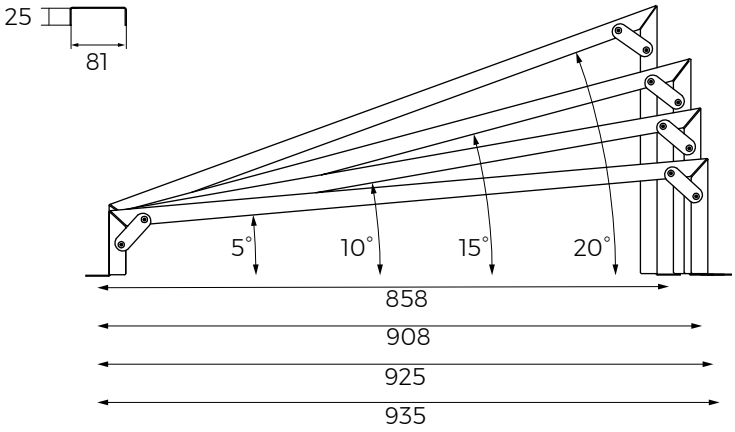
QUICK-ASSEMBLY TRIANGLE KIT

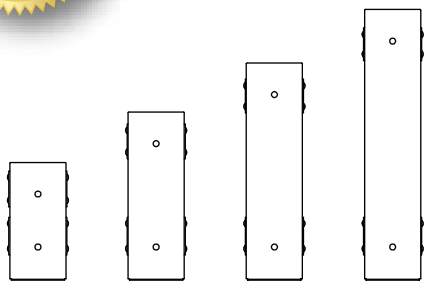
Quick-assembly triangle kit made of galvanized sheet steel











PRODUCT STRENGTHS

QUICK INSTALLATION
Only a few seconds are required to secure the kit to the ballast, reducing installation time by half compared to traditional systems.

UNIVERSAL COMPATIBILITY
Suitable for most photovoltaic modules, regardless of brand or size.

COMPLETE KIT
Includes clamps, eliminating the need for additional purchases and hidden costs.

OPTIMIZED TILT ANGLE
Designed to maximize energy production throughout the year.

WITHOUT HOLES
The use of dedicated ballast blocks avoids compromising the roof waterproofing. If the roof's load-bearing capacity is insufficient to support the ballast load, the triangles can be mechanically secured to the roof using suitable anchors.

AISI 430 STAINLESS STEEL
Provides superior corrosion resistance compared to aluminium, commonly used in traditional solutions, ensuring consistent performance over the years.

Hammer Energy, through its in-house technical team, can provide, **upon request, a structural calculation report** specifying the type and weight of ballast required based on the geographical location of the installation.





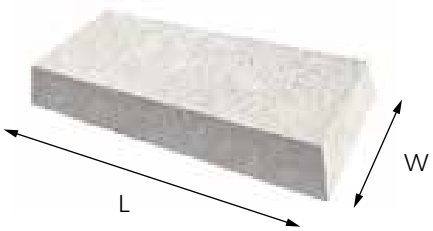


PRODUCT CODE	TILT ANGLE
HE-TRI-5-H30-I	5°
HE-TRI-5-H35-I	
HE-TRI-5-H40-I	
HE-TRI-5-H30-T	
HE-TRI-5-H35-T	
HE-TRI-5-H40-T	
HE-TRI-10-H30-I	10°
HE-TRI-10-H35-I	
HE-TRI-10-H40-I	
HE-TRI-10-H30-T	
HE-TRI-10-H35-T	
HE-TRI-10-H40-T	
HE-TRI-15-H30-I	15°
HE-TRI-15-H35-I	
HE-TRI-15-H40-I	
HE-TRI-15-H30-T	
HE-TRI-15-H35-T	
HE-TRI-15-H40-T	

PRODUCT CODE	TILT ANGLE
HE-TRI-20-H30-I	20°
HE-TRI-20-H35-I	
HE-TRI-20-H40-I	
HE-TRI-20-H30-T	
HE-TRI-20-H35-T	
HE-TRI-20-H40-T	
HE-TRI-25-H30-I	25°
HE-TRI-25-H35-I	
HE-TRI-25-H40-I	
HE-TRI-25-H30-T	
HE-TRI-25-H35-T	
HE-TRI-25-H40-T	

FLAT BALLAST BLOCKS

Made of vibrated concrete





PRODUCT CODE	L	W	H	KG
HE-ZA0033	150	250	330	28
HE-ZA0007	1000	200	70	32
HE-ZA0008	1000	250	80	45
HE-ZA0010	1000	200	100	47







PHOTOVOLTAIC FAÇADE



THE SYSTEM

VIDEO TUTORIAL

THE KEY ADVANTAGES OF THE SYSTEM



UNIVERSAL COMPATIBILITY
Suitable for most photovoltaic modules, regardless of brand or size.



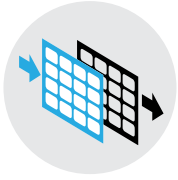
QUICK INSTALLATION
Thanks to the sequential mounting system, the structure can be assembled quickly and easily.



ADAPTABLE TO VARYING GEOMETRIES
Thanks to an internal slot that allows up to 6 cm of perpendicular adjustment to the wall, combined with a range of brackets from 6 to 28 cm in length, the system can adapt to the different geometries of a wall.



OPTIMAL LOAD DISTRIBUTION
The lower brackets ensure that the weight of the upper panels is not transferred to the modules below, preserving the structural integrity of the façade.



QUICK PANEL REPLACING
Thanks to the support brackets, individual panels can be removed and replaced without dismantling the entire column, reducing maintenance time and costs.



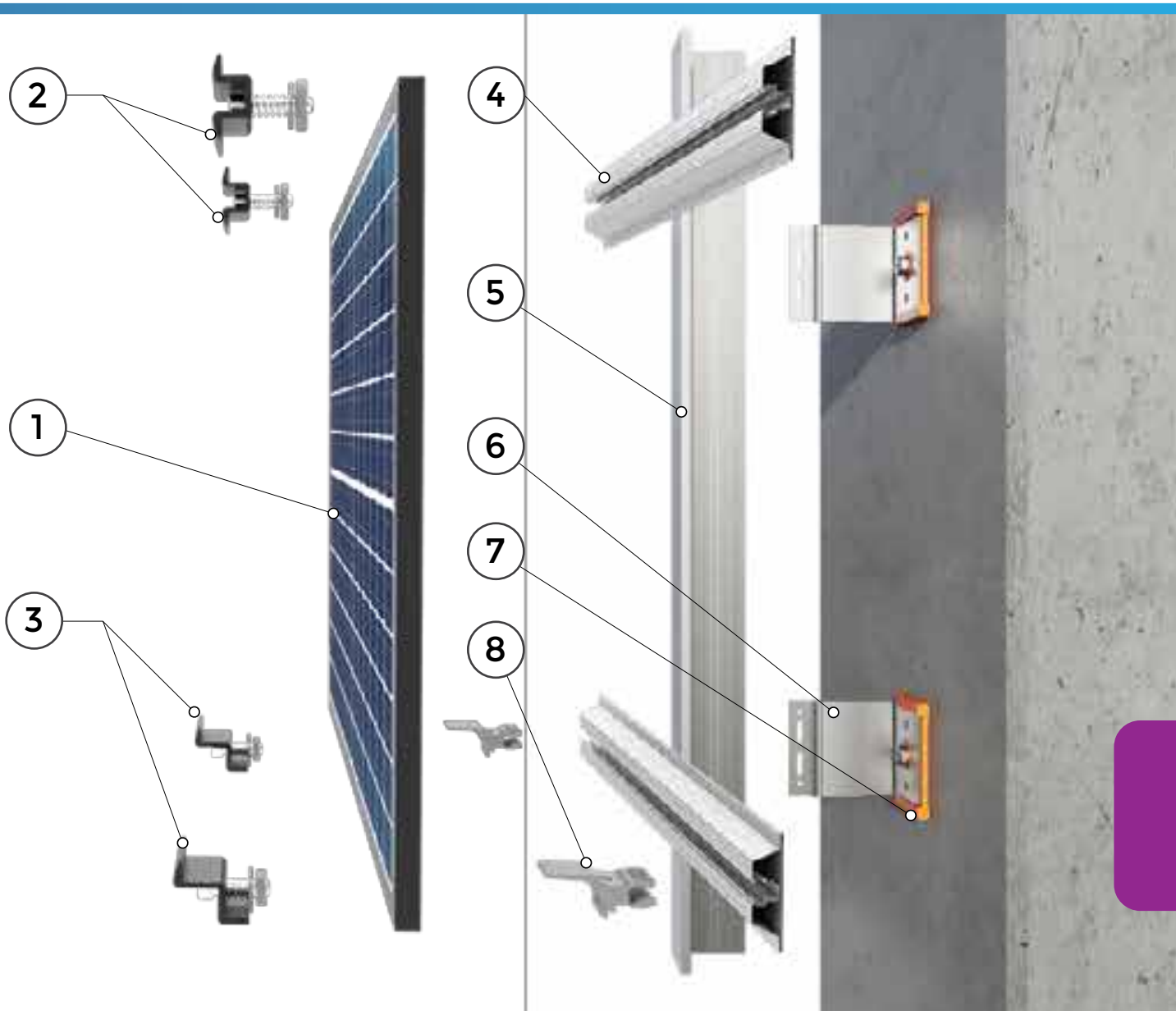
WIDE RANGE OF BRACKETS
Available in aluminium and stainless steel, the brackets allow the panels to be positioned up to 280 mm away from the wall.
Holes and slots provide maximum flexibility for fixed and sliding connection points, while the slots enable quick profile installation with a snap-fit mechanism.

EMERGING TECHNOLOGY

Façade-integrated photovoltaics are an emerging technology that incorporates photovoltaic panels into the **vertical surfaces** of residential and industrial **buildings.**

This technology offers **several advantages:** for example, i**t maximizes the space** available for photovoltaic panels on a building, particularly in urban areas; in addition, façade-integrated panels allow architects to create **innovative and visually appealing designs** and can help reduce the amount of heat entering the building.

At the same time, in urban areas, they can help **reduce the heat reflected** by building façades, which contributes to the so-called urban heat island effect.



1 **Photovoltaic panel**

2 **HE-MIR-35 OXNERO**
Mid clamps (color black)

3 **HE-MTR-35 OXNERO**
End clamps (color black)

4 **HE-PR401**
Aluminium cross profile

5 **HF-PRL**
Aluminium riser profiles

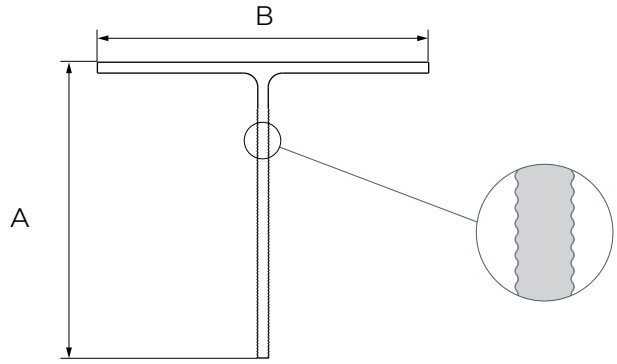
6 **HF-LBA**
Basic aluminium bracket

7 **HE-TS01**
Thermal break

8 **HE-FVM-01**
Support bracket

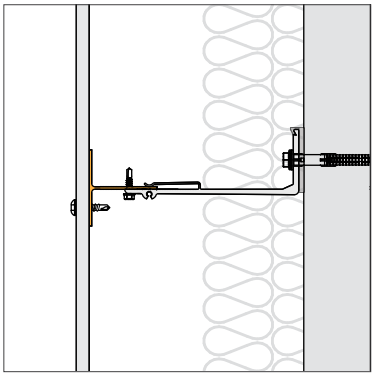
VERTICAL MOUNTING PROFILE HF-PRT

T-section aluminium vertical mounting profile





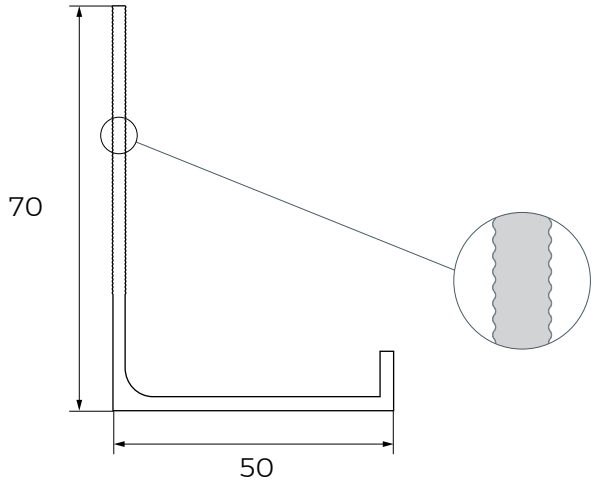




PRODUCT CODE	A	B	L
HF-PRT01	62,5 mm	70 mm	6500 mm
HF-PRT02	60 mm	120 mm	6000 mm

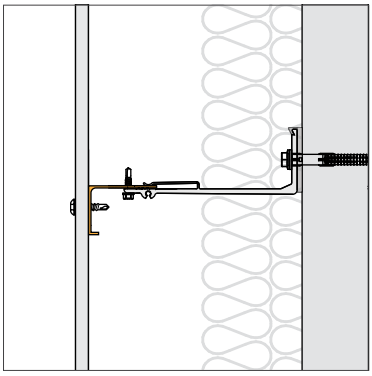
VERTICAL MOUNTING PROFILE HF-PRL

L-shaped aluminium vertical mounting profile







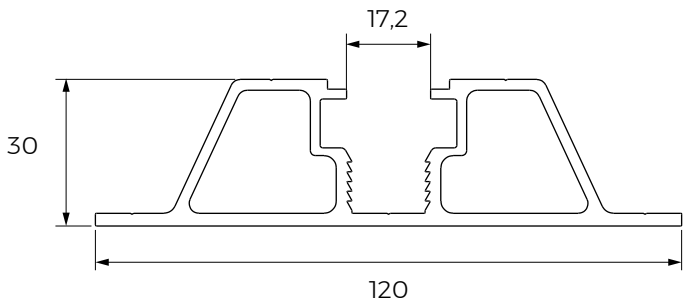


PRODUCT CODE	L
HF-PRL01	6000 mm



HORIZONTAL MOUNTING PROFILE HE-PR401

Aluminium photovoltaic mounting profile for installing panels on ventilated photovoltaic façades.





PRODUCT CODE	WEIGHT (Kg/m)	LENGTH (mm)	AREA (cm^2)	I_X (cm^4)	I_Y (cm^4)	W_X (cm^3)	W_Y (cm^3)
HE-PR401-65	1,869	6500	6,895	7,996	62,479	4,143	10,413
HE-PR401-65OX	1,869	6500	6,895	7,996	62,479	4,143	10,413

PRODUCT STRENGTHS

VERSATILE
Suitable for both large-scale and small-scale installations, thanks to the optimized bar length.

LIGHTWEIGHT
Profile made of EN AW 6060 T6 aluminium alloy in accordance with UNI EN 12020-2. Bars can be supplied cut to length upon request.

BLACK ANODIZED FINISH
The -OX version is available with a black anodized finish, providing an enhanced aesthetic appearance for photovoltaic façades.

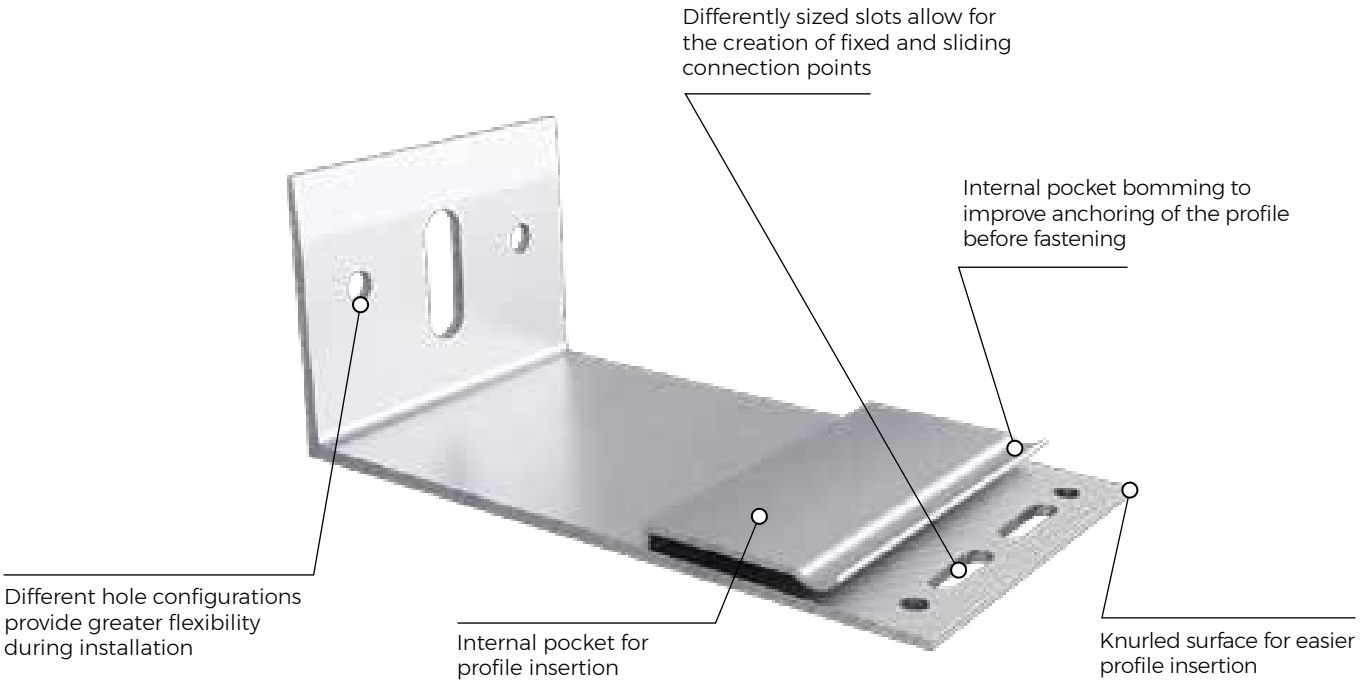
FOR USE WITH:

- **HE-MIR/HE-MTR** - Pre-assembled RLS clamps (Rapid Locking System)
- **HE-FVM** - Aluminium photovoltaic panel support bracket
- **HE-PRT** - T-section aluminium vertical mounting profile
- **HE-PRL** - L-section aluminium vertical mounting profile

FINISH

	Aluminium	Mill finish
	OX Black	Black anodized

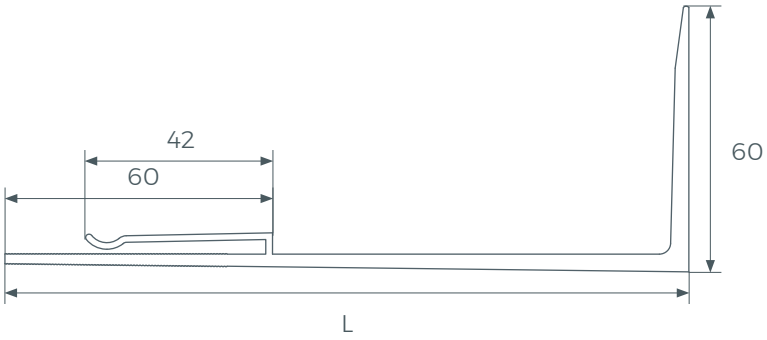
BASIC ALUMINIUM BRACKETS





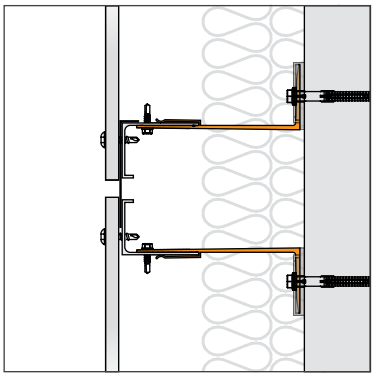


BASIC ALUMINIUM BRACKET HF-LBA





PRODUCT CODE	L	
HF-LBA-90	90 mm	100 pz
HF-LBA-120	120 mm	100 pz
HF-LBA-150	150 mm	50 pz
HF-LBA-180	180 mm	50 pz

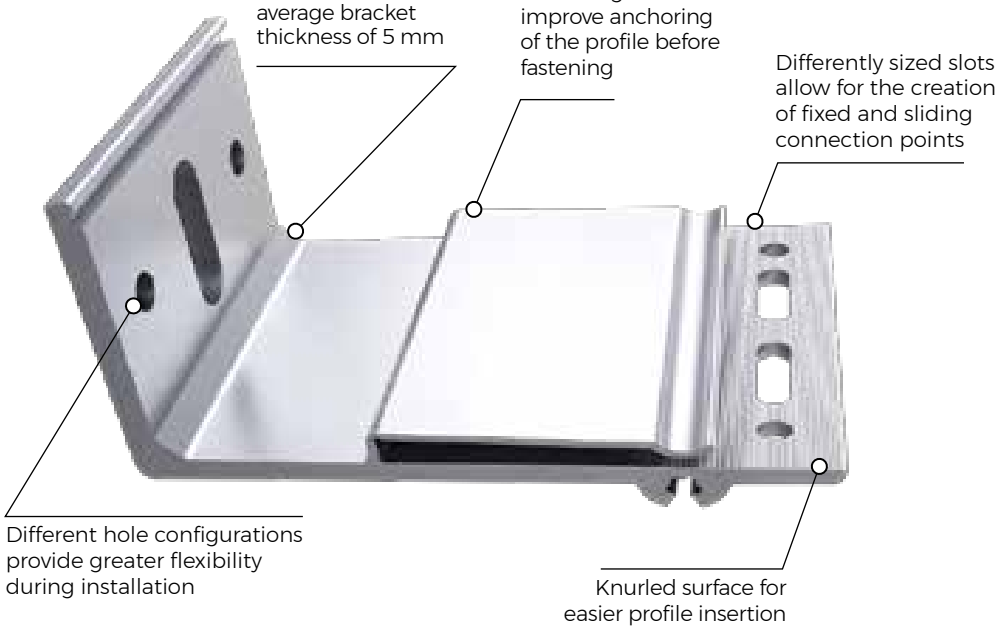


THERMAL BREAK INCLUDED



The **HF-TS01** is a key component for significantly reducing thermal bridging between the exterior and interior of a building.

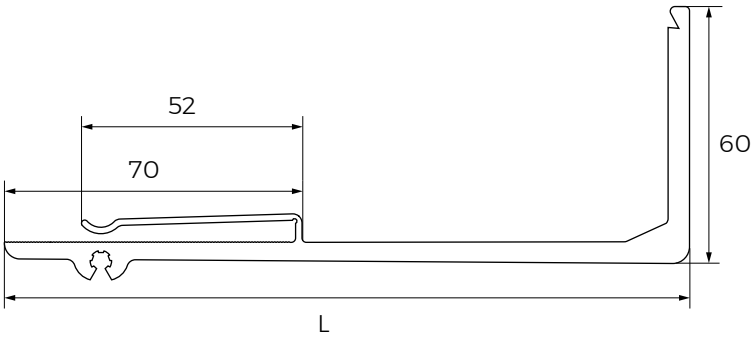
STRONG ALUMINIUM BRACKETS





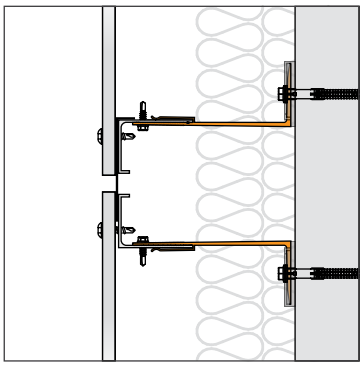


STRONG ALUMINIUM BRACKET HF-LSA





PRODUCT CODE	L	📦	NOTES
HF-LSA-60	60 mm	100 pz	
HF-LSA-110	110 mm	100 pz	
HF-LSA-160	160 mm	50 pz	
HF-LSA-210	210 mm	50 pz	
HF-LSA-220	220 mm	10 pz	Upon request
HF-LSA-240	240 mm	25 pz	

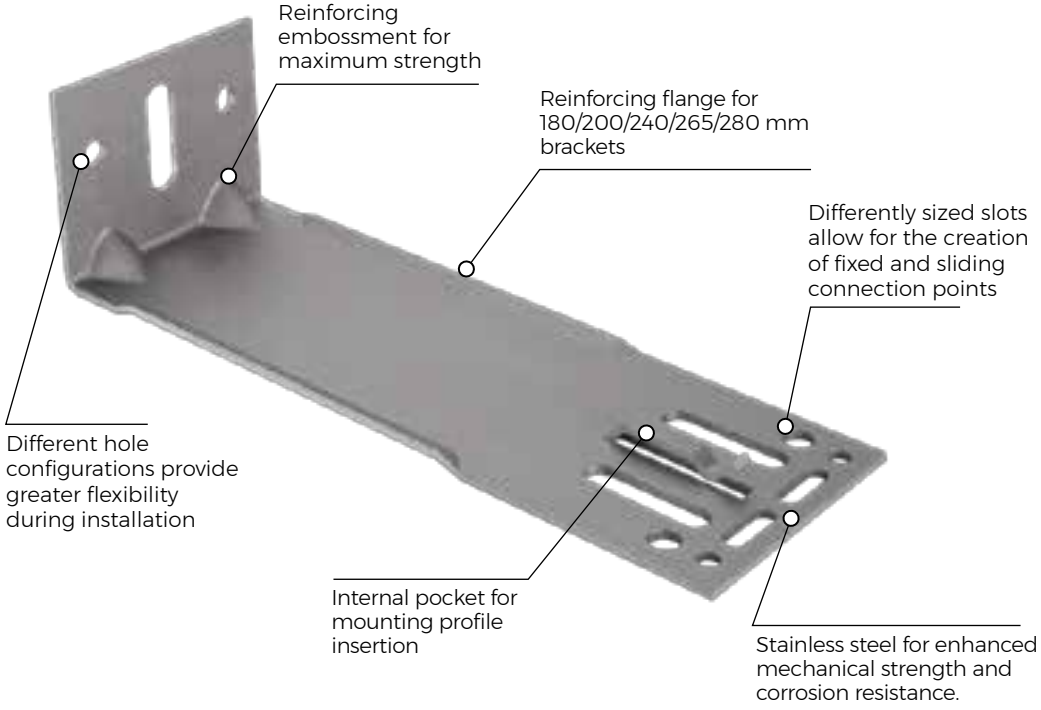


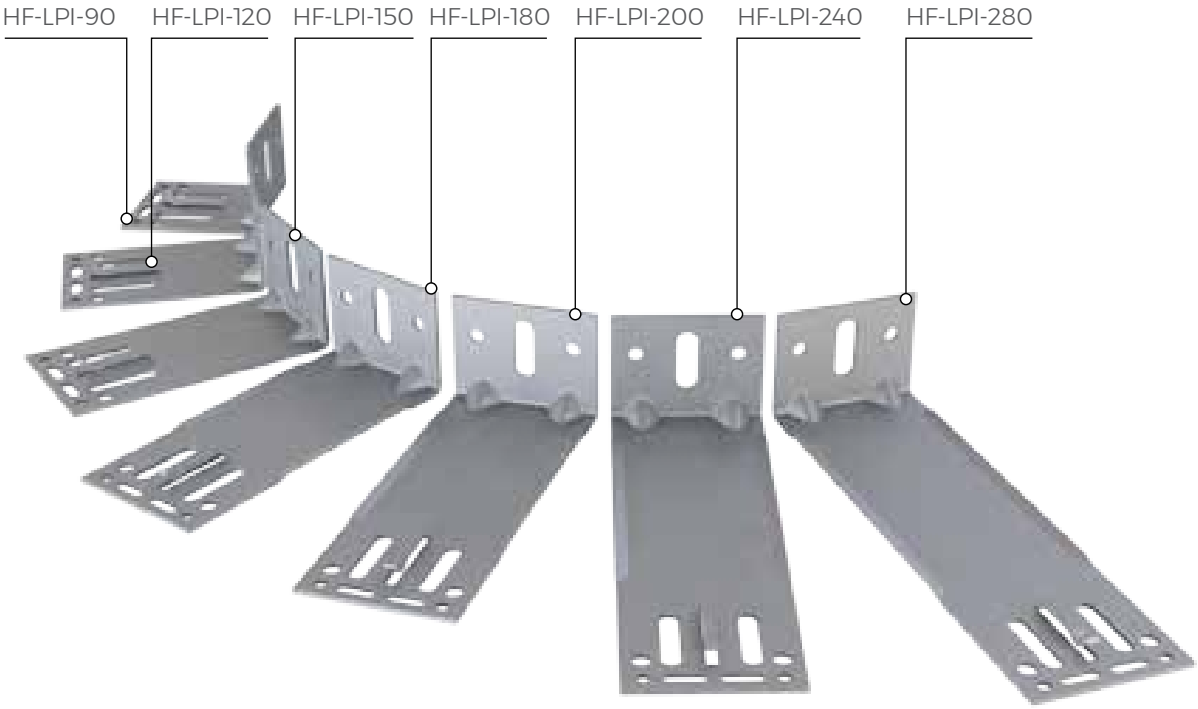
THERMAL BREAK INCLUDED



The **HF-TS02** is a key component for significantly reducing thermal bridging between the exterior and interior of a building.

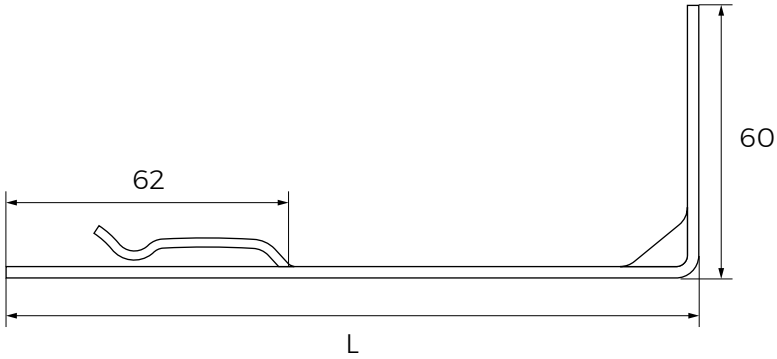
PREMIUM STAINLESS STEEL BRACKETS

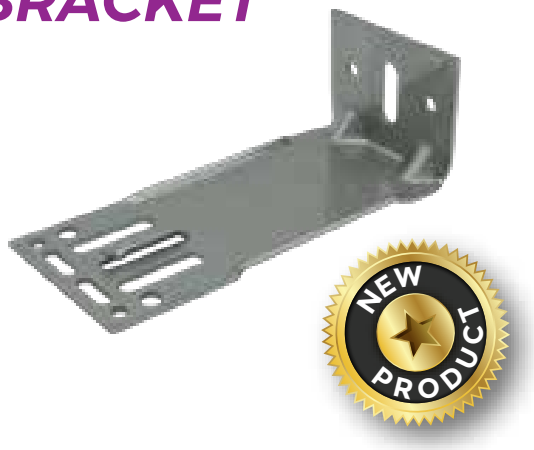






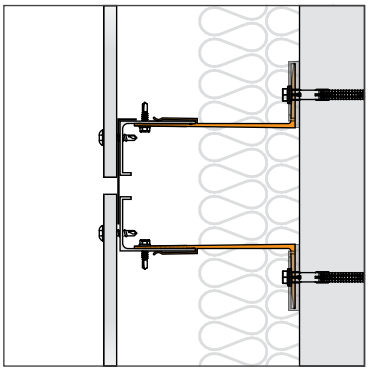
PREMIUM STAINLESS STEEL BRACKET HF-LPI





PRODUCT CODE	L		NOTES
HF-LPI-90	90 mm	100 pcs	
HF-LPI-120	120 mm	100 pcs	
HF-LPI-150	150 mm	100 pcs	
HF-LPI-180	180 mm	100 pcs	
HF-LPI-200	200 mm	100 pcs	
HF-LPI-240	240 mm	50 pcs	
HF-LPI-265	265 mm	25 pcs	
HF-LPI-280	280 mm	25 pcs	

Customizable to size



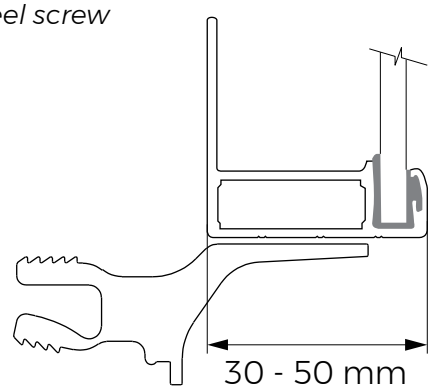
THERMAL BREAK INCLUDED



The **HF-TS01** is a key component for significantly reducing thermal bridging between the exterior and interior of a building

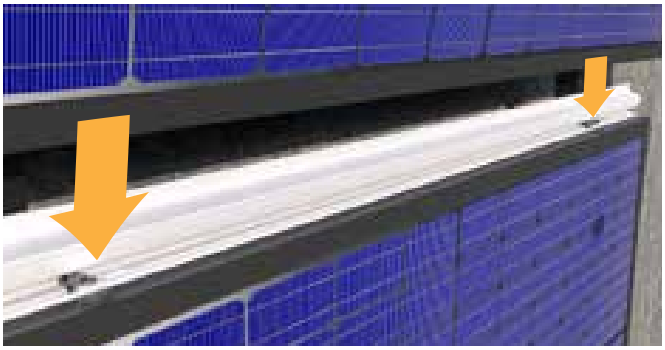
PHOTOVOLTAIC PANEL SUPPORT BRACKET

Aluminium solar panel support bracket with M8×20 A2 stainless steel screw





NEW PRODUCT





PRODUCT CODE	LENGTH (mm)	THREADING (mm)	TIGHTENING SPANNER	TORQUE (Nm)
HE-FVM-01	30	M8	6	15
HE-FVM-01OX	30	M8	6	15

PRODUCT STRENGTHS

RESISTS IN TIME
It does not rust or oxidize, thanks to its aluminium construction and the A2 stainless steel hardware supplied.

ENHANCED STRUCTURAL STRENGTH
The lower support brackets ensure that the weight of the upper panels is not transferred to the modules below, helping to preserve the structural integrity of the façade.

BLACK ANODIZED FINISH
The -OX version is available with a black anodized finish, providing an enhanced aesthetic appearance for photovoltaic façades.

TO BE USED FOR:

Photovoltaic façade, used in combination with the HE-PR400 profile series.

OPERATING INSTRUCTIONS

Insert the HE-FVM support bracket into the groove of the HE-PR400 profile series, then fully tighten the M8×20 screw to mechanically secure the bracket to the profile.

FINISH

	Aluminium	Mill finish
	OX Black	Black anodized



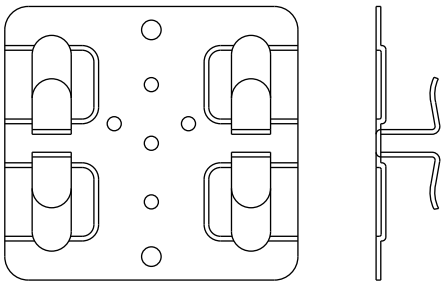
CLIPS

Customizable clips
for fastening designer photovoltaic panels

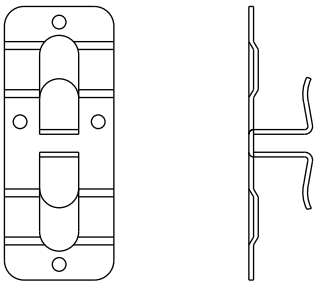




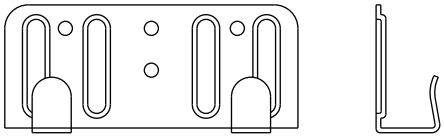
HF-CLV04



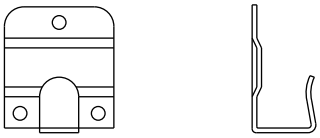
HF-CLV02V

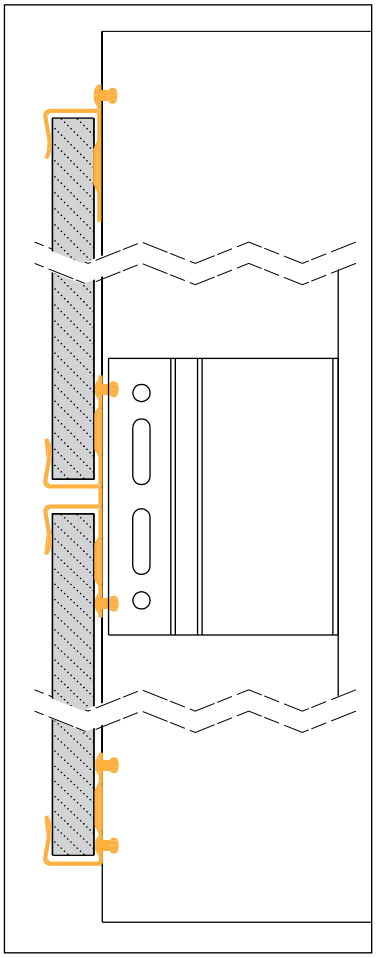


HF-CLV02H



HF-CLV01





PRODUCT CODE	DESCRIPTION	MATERIAL
HF-CLV04	Mid-clamp for 4 panels	Stainless steel
HF-CLV02V	Mid-clamp for 2 panels	
HF-CLV02H	End-clamp for 2 panels	
HF-CLV01	End-clamp for 1 panel	

FINISH

RAL 9005 Black

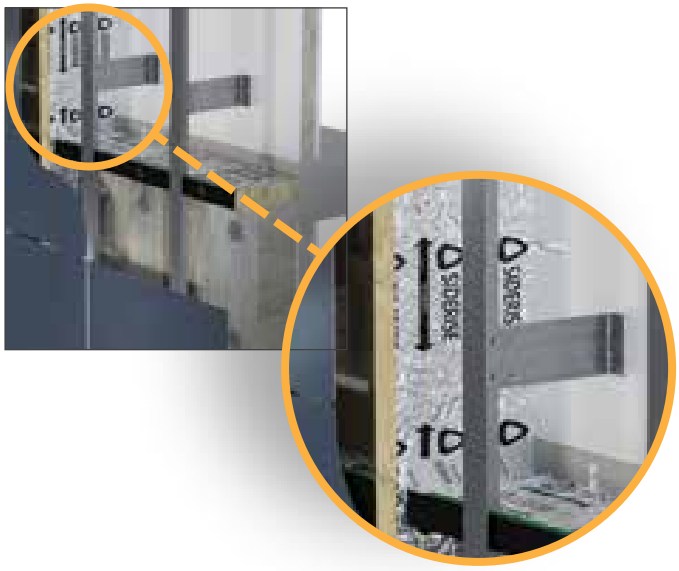
Other RAL On request

FIRESTOP SYSTEMS

Lamellar rock wool firestop systems are designed to limit the spread of fire in all types of buildings.

Each solution is developed to **enhance building safety standards,** helping to contain fire while providing **acoustic insulation and thermal efficiency.**

NEW PRODUCT



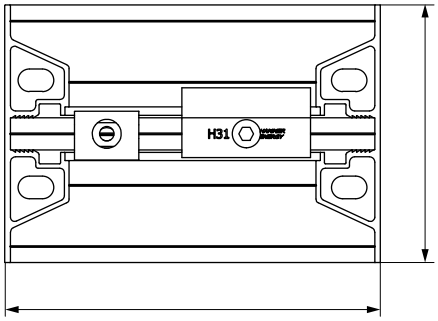


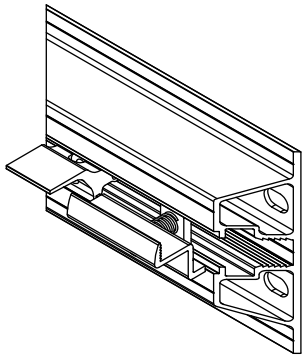


HORIZONTAL STRUCTURAL PROFILE HE-PR401-02

Aluminium photovoltaic structural profile for mounting panels on photovoltaic façades







PRODUCT CODE	WEIGHT (Kg/m)	LENGTH (mm)	AREA (cm^2)	I_X (cm^4)	I_Y (cm^4)	W_X (cm^3)	W_Y (cm^3)
HE-PR401-02	1,869	175	6,895	7,996	62,479	4,143	10,413
HE-PR401-02OX	1,869	175	6,895	7,996	62,479	4,143	10,413

PRODUCT STRENGTHS

VERSATILE
Suitable for both large-scale and small-scale installations, thanks to the optimized bar length.

LIGHTWEIGHT
Profile made of EN AW 6060 T6 aluminium alloy in accordance with UNI EN 12020-2.

BLACK ANODIZED FINISH
The -OX version is available with a black anodized finish, providing an enhanced aesthetic appearance for photovoltaic façades.

FOR USE WITH:

- **HE-MIR/HE-MTR** - Pre-assembled RLS clamps (Rapid Locking System)
- **HE-FVM** - Aluminium solar panel support bracket

FINISH

	Aluminium	Mill finish
	OX Black	Anodized black





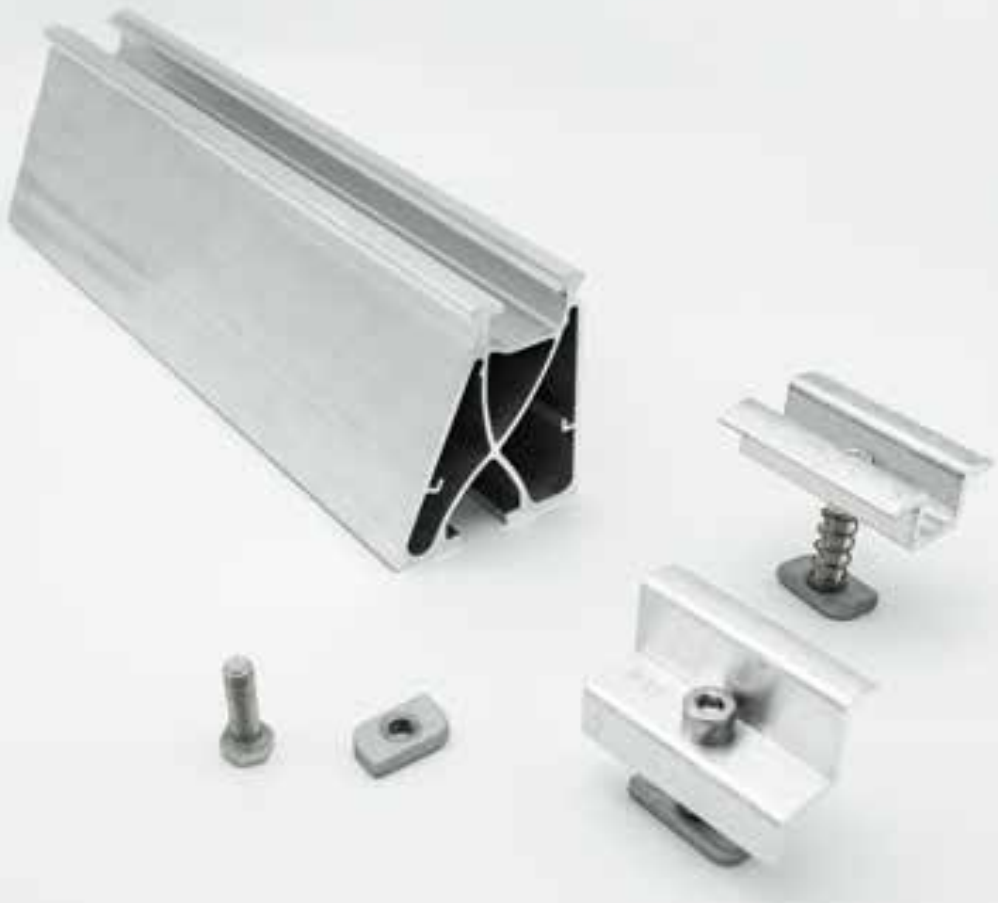








GROUND-MOUNTED PHOTOVOLTAIC INSTALLATIONS

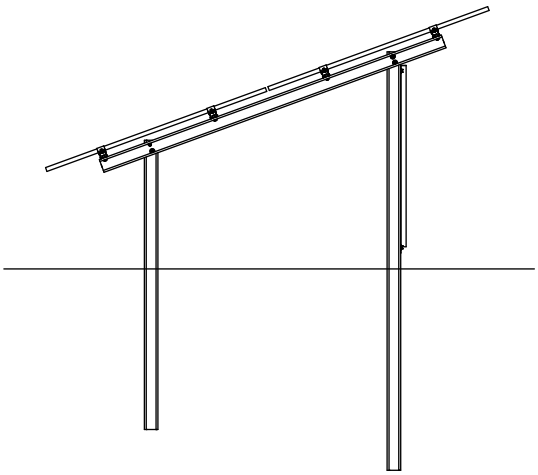


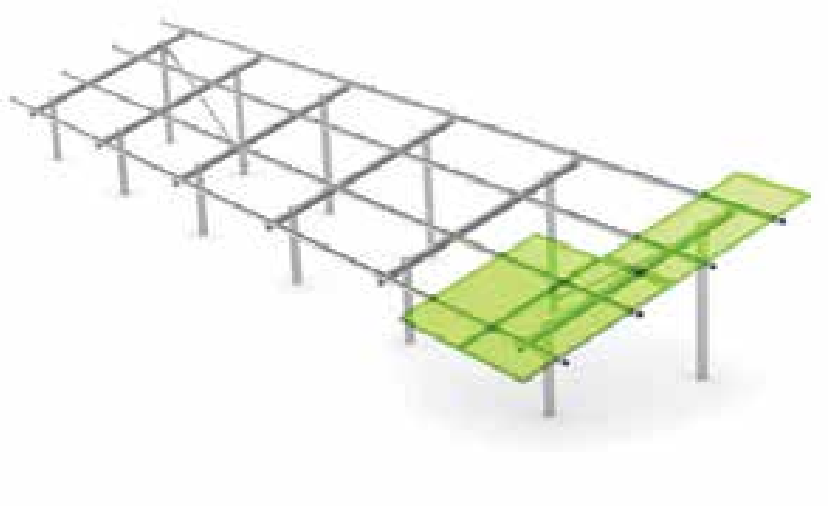
THE SYSTEM

VIDEO TUTORIAL

TWO-POLE SYSTEM

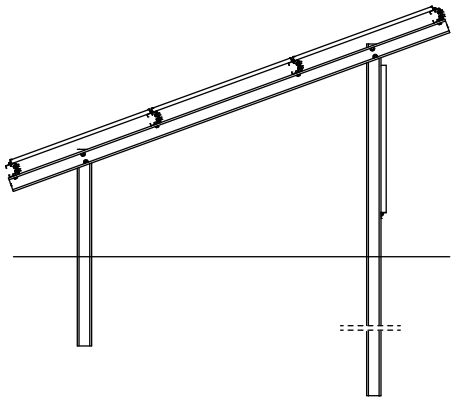
Two-pole structure – 2 modules vertically mounted

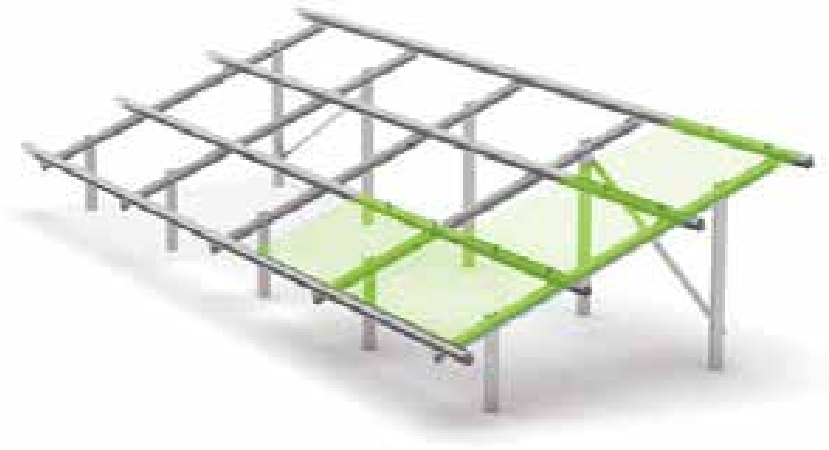




TWO-POLE SYSTEM

Two-pole structure – 3 modules horizontally mounted

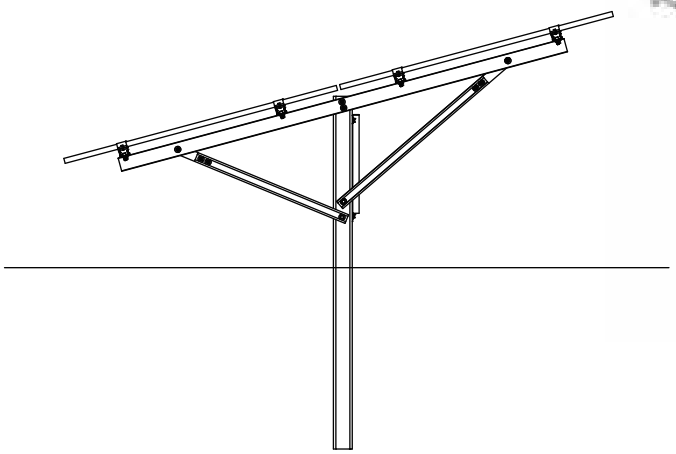


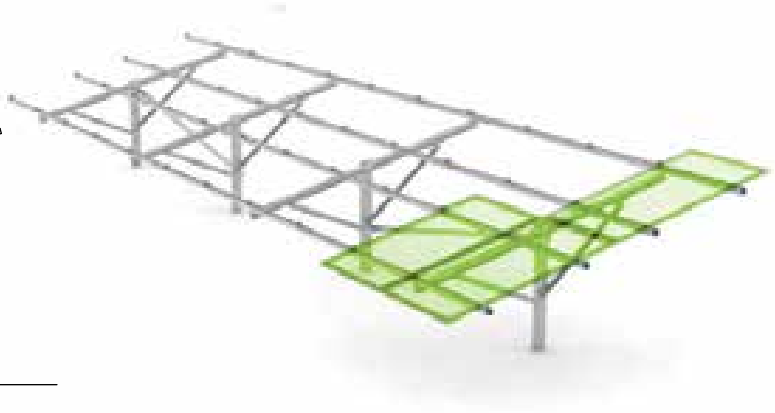




SINGLE-POLE SYSTEM

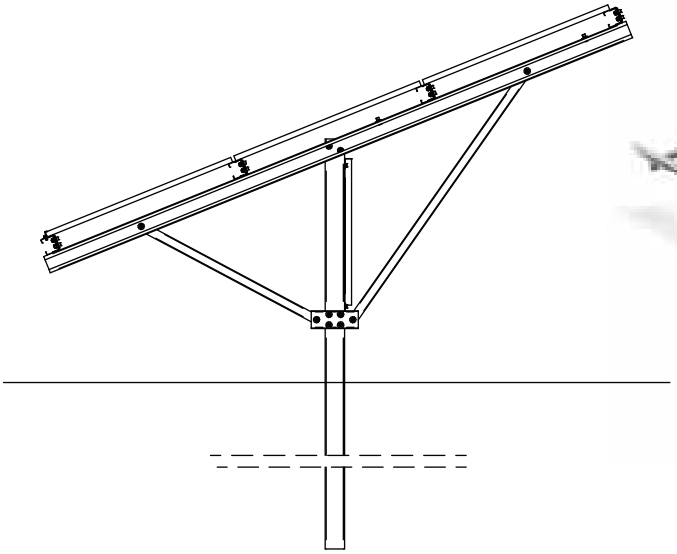
Single-pole structure – 2 modules vertically mounted





SINGLE-POLE SYSTEM

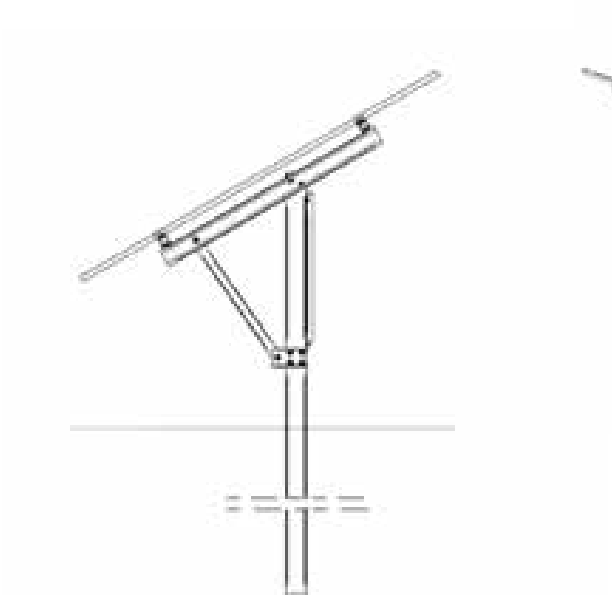
Single-pole structure – 3 modules horizontally mounted

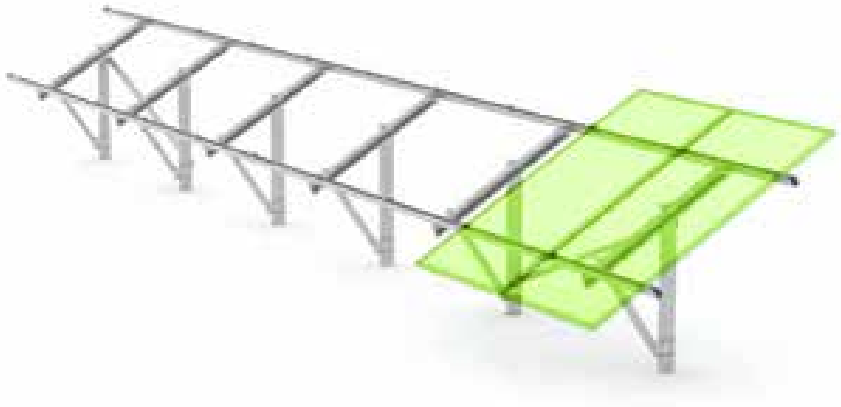




SINGLE-POLE SYSTEM

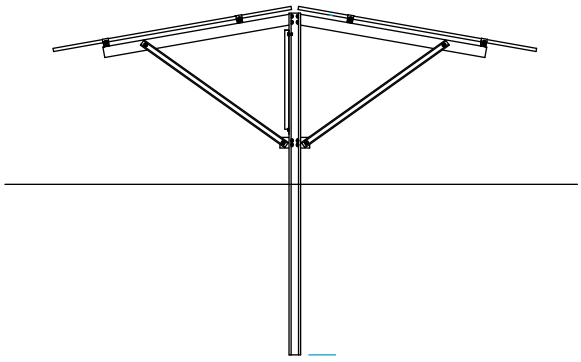
Single-pole structure – 1 module vertically mounted

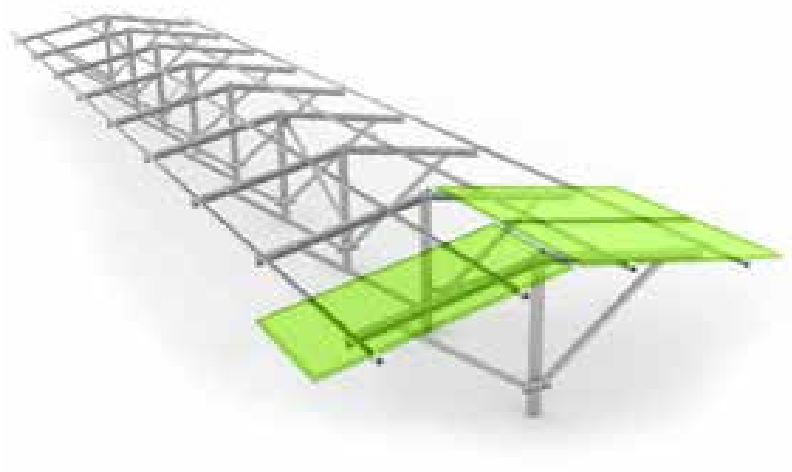




SINGLE-POLE SYSTEM

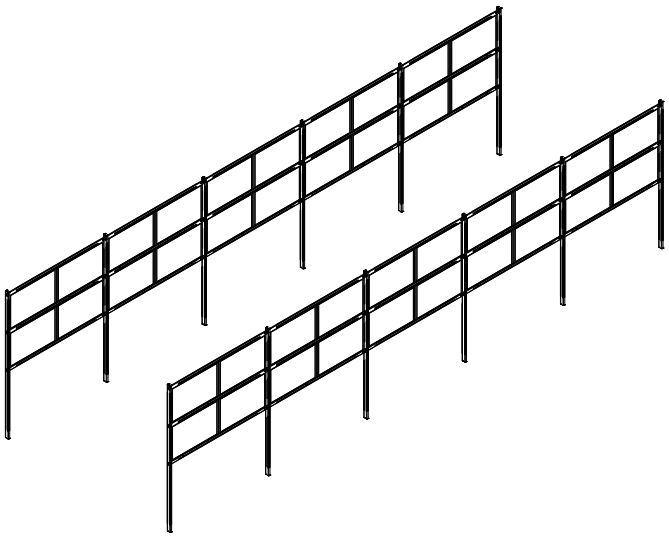
Single-pole structure – 2 modules vertically mounted, EAST-WEST orientation

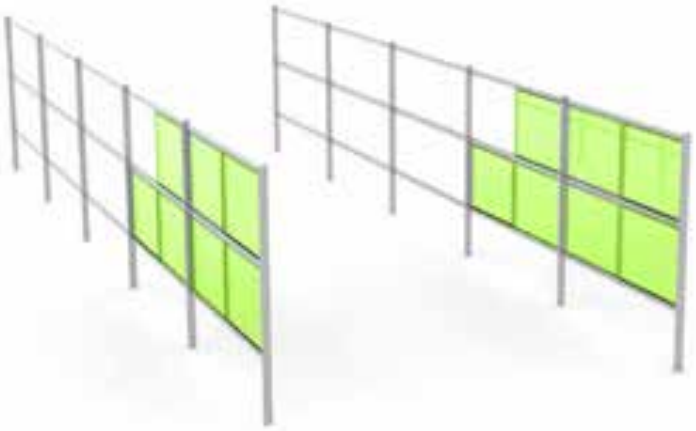




VERTICAL SYSTEM

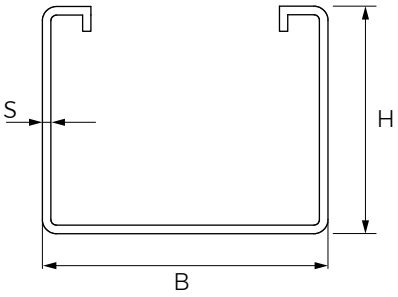
Vertical structure – 2 modules horizontally mounted (agrivoltaic)





“BASIC”
PANEL ANCHORING PROFILE

Slotted steel photovoltaic structural profile with pitch-spaced holes for ground-mounted photovoltaic installations



To be sized according to the project



PRODUCT STRENGTHS

OPTIMIZED SLOT SPACING
Designed to simplify and speed up fastening operations.

HIGH INSTALLATION VERSATILITY
Thanks to its ability to be secured to most existing structural configurations.

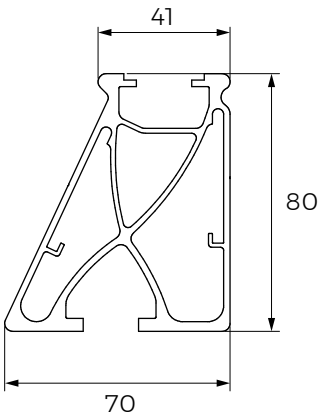
IDEAL FOR REWAMPING PROJECTS
Allows systems to be replaced or upgraded without invasive structural modifications.

AVAILABLE WITH TWO PROTECTIVE FINISHES
Hot-dip galvanizing and sendzimir galvanizing ensure durability and corrosion resistance.



“PREMIUM” PANEL ANCHORING PROFILE HE-PR301

Aluminium photovoltaic structural profile for ground-mounted photovoltaic installations





PRODUCT CODE	WEIGHT (Kg/m)	LENGTH (mm)	AREA (cm^2)	Ix (cm^4)	Iy (cm^4)	Wx (cm^3)	Wy (cm^3)
HE-PR301-60	2,669	6000	9,848	77,848	35,287	27,642	18,641

PRODUCT STRENGTHS

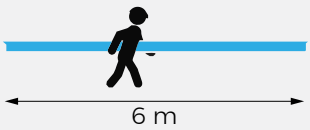
FAST
Saves 50% on field installation time.

LIGHTWEIGHT
Profile in aluminium alloy EN AW 6060 T6 according to EN 755-2:2013. Due to its very low specific weight of 2.7 kg/dm3, aluminium is light to handle during laying. A 6 m long bar can be easily handled by one person.

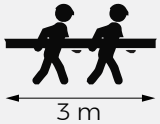
SIMPLE
Thanks to the sequential fastening system, PV clamps and profile connection joints can be mounted quickly and easily.

LIGHTER

PR301
ALUMINIUM
2,7 Kg/dm³



STEEL
7,8 Kg/dm³



TO BE USED WITH:

- **HE-GPR-300** - Aluminium junction, 40 x 3 x 300 mm
- **HE-STI-KIT** - Fixing kit
- **HE-MIM/HE-MTM** - Preassebled PV clamps for sequential mounting
- **HE-MIR/HE-MTR** - Preassembled PV clamps RLS system (Rapid Locking System)

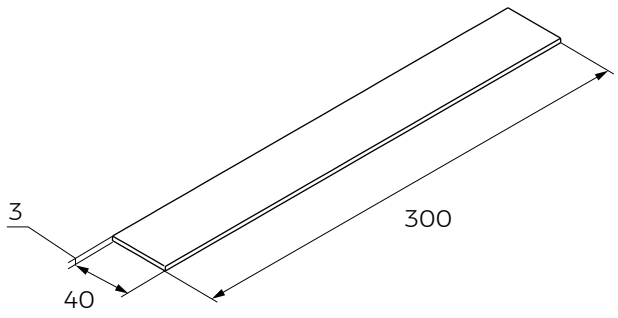
OPERATING INSTRUCTIONS

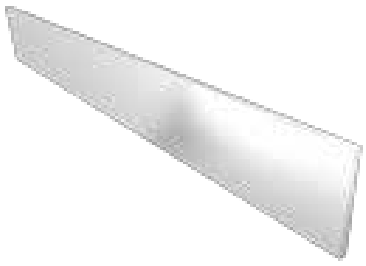
Define the design of the 2 piles ground installation according to the snow and wind loads of the area of installation, as directed by the structural engineer and/or geologist

- Screw the HE-STI-KIT cams into the holes of the beam.
- Lay the HE-PR301 profiles on the beam by tightening the cams in the lower chamber of the profile with suitable torque.
- Joint the structure profile bars using HE-GPR-300 junctions.
- Mount the Hammer Energy aluminium clamps.

JUNCTION FOR STRUCTURE PROFILE SERIES HE-PR300

Aluminium junction for ground-mounted photovoltaic installations structure profile HE-PR301





100 pcs

PRODUCT CODE	DIMENSION (mm)	THICKNESS (mm)
HE-GPR-300	300 x 40	3

PRODUCT STRENGTHS

LIGHTWEIGHT
Made of aluminium EN AW6060 T6 according to UNI EN 12020-2 norm.

STRONG
By joining the structure profiles, larger and stronger PV field structures can be created.

TO BE USED FOR:

ground-mounted PV installations, for joining the structure profile HE-PR301.

OPERATING INSTRUCTIONS

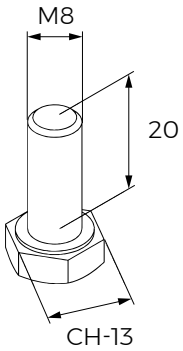
Fasten the HE-GPR-300 junction to the HE-PR301 structure profile using self-drilling screws (not included in the package).

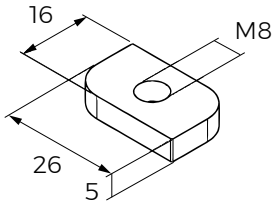
MADE TO MEASURE



COMPONENTS/SPARE PARTS FOR STRUCTURE PROFILE HE-PR301

Components/spare parts or fixing the HE-PR301 structure profile to the beam







20 kit

PRODUCT CODE	DESCRIPTION
HE-10088	Cam
HE-VI08X20.TE	Screw

PRODUCT STRENGTHS

SIMPLE
A single part number includes all the components needed to attach the HE-PR301 structure profile to the beam.

RESISTANT
Stainless steel and Geomet® cam treatment provide optimal resistance to corrosion and weathering.

TO BE USED FOR:

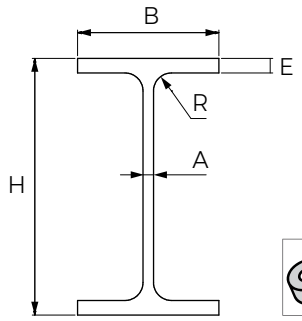
The junction of the HE-PR301 structure profile to the beam.

OPERATING INSTRUCTIONS

Screw the HE-STI-KIT cams into the holes in the beam. Lay the structure profile on the beam, tightening the cams in the lower chamber of the profile with suitable torque.

FOUNDATION POLE

Hot-dip galvanized steel IPE foundation pole for photovoltaic fields



To be sized according to the project

PRODUCT STRENGTHS

STRONG
Steel provides strength and adaptability to all types of terrain.

DURABLE
Hot-dip galvanizing treatment, through iron-zinc alloy, protects the steel from corrosion and weathering.

SIMPLE
Thanks to the sequential laying system, the beams can be assembled quickly and easily.

TO BE USED WITH:

Hot-dip galvanized steel beam

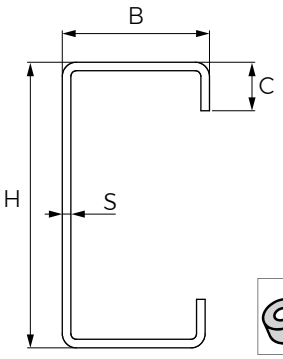
OPERATING INSTRUCTIONS

Define the design of the two-poles ground-mounted PV plant according to the snow and wind loads of the installation area, as directed by the structural engineer and/or geologist.

- Plant the IPE poles by means of a pile driver.
- Screw the galvanized steel beam to the IPE poles, using suitable hardware (not included in delivery).

BEAM

Hot-dip galvanized steel perforated beam for photovoltaic ground installations



To be sized according to the project

PRODUCT STRENGTHS

STRONG
Steel provides strength and adaptability to all types of terrain.

DURABLE
Hot-dip galvanizing treatment, through iron-zinc alloy, protects the steel from corrosion and weathering.

QUICK
Thanks to the HE-STI-KIT fastening kit, the beam can be connected to HE-PR301 aluminium structure profiles quickly and easily.

TO BE USED WITH:

- HE-GPR-301 - Aluminium structure profile for ground-mounted photovoltaic installations
- HE-STI-KIT - Fixing kit

OPERATING INSTRUCTIONS

To fasten the beam to the aluminium structure profile, use the HE-STI-KIT fastening kit, consisting of screw, washer and cam. Insert the hex head metric screw and stainless steel washer into the holes of the beam. Screw the screw to the cam.



THE SYSTEM'S STRENGTHS

Hammer Energy is the ideal solution for ground-mounted photovoltaic systems because it is

TAILOR-MADE
ACCORDING TO YOUR PROJECT

FASTER
-50% ON SITE INSTALLATION TIME

LIGHTER
THANKS TO THE ALUMINUM STRUCTURE PROFILE

SIMPLER
THANKS TO THE SEQUENTIAL LAYING SYSTEM

PROJECT CONSULTING SERVICE

Hammer Energy offers a dedicated project consulting service: it supports you, together with its trusted technical partners, from the stage of geological inspection and extraction testing.



1

SYSTEM CONSULTING
Hammer Energy introduces you, in person or remotely, to the solutions available for your system and the individual components to be used.



2

LOGISTICS ASSISTANCE
Thanks to trusted logistics service partners, the Hammer Energy system is delivered directly to your job site, throughout Italy and abroad.



3

TECHNICAL ASSISTANCE
Hammer Energy is with you at the time of installation, in person or remotely, to give you technical support on the installation of the system.



4

AFTER-SALES SERVICE
Once the installation is completed, Hammer Energy stays with you to solve the needs related to the structure of the installation.

CAGE SYSTEM

GROUND-MOUNTED PHOTOVOLTAIC SYSTEMS WITH CAGE STRUCTURE: SPEED, EFFICIENCY AND SUSTAINABILITY

Looking for a **fast, safe and cost-effective** photovoltaic solution?

Ground-mounted photovoltaic systems with cage structures are the ideal solution for those seeking **maximum flexibility and minimal installation costs.**



ASSEMBLY IN JUST A FEW MINUTES
Each cage can be assembled in 4–5 minutes, without special tools. Ideal for temporary installations or applications where removability is required.

REDUCED COSTS AND SIMPLIFIED LOGISTICS
The cages are delivered disassembled, assembled on site and filled with inert material available locally.
No heavy transport, no complications, and no geological surveys or pull-out tests required, unlike conventional ground-driven structures.

GUARANTEED STRENGTH AND SAFETY
Hot-dip galvanized steel and stainless steel structures, designed to withstand wind, snow and extreme weather conditions.

MINIMAL ENVIRONMENTAL IMPACT
Filled with locally sourced stones, with the option to enhance the installation with flowers and plants. Respect for nature and harmony with the surrounding landscape.

COST-EFFECTIVE AND RECYCLABLE
Competitive cost and virtually no disposal requirements: the entire system is recyclable.



IDEAL FOR QUARRIES, DESERT AREAS AND HARD-TO-REACH LOCATIONS.

CHOOSE THE PHOTOVOLTAIC SOLUTION
THAT COMBINES **SPEED, SAFETY AND SUSTAINABILITY.**





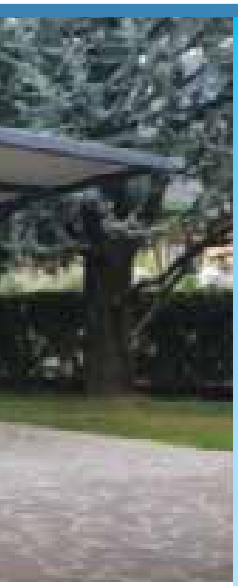








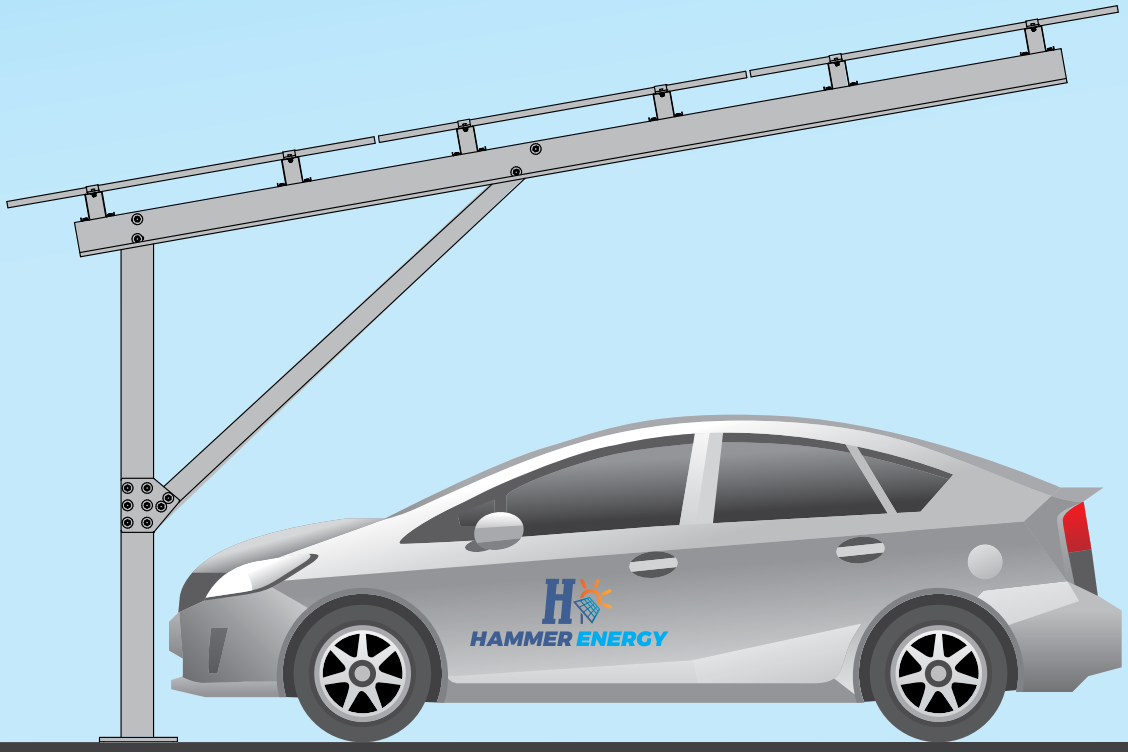








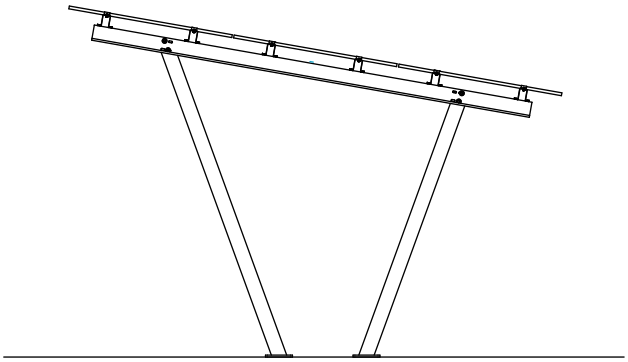
PHOTOVOLTAIC CARPORT



THE SYSTEM

CARPORT CANOPY

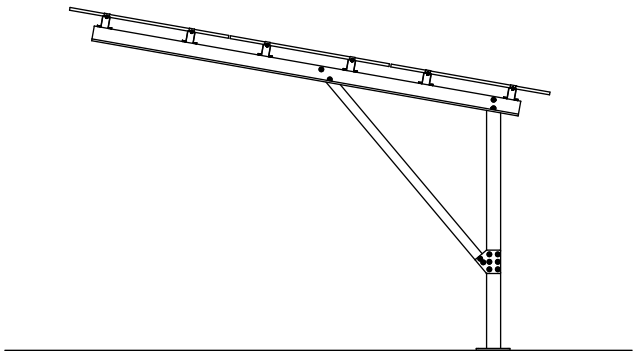
Double-column – 1 row of vehicles

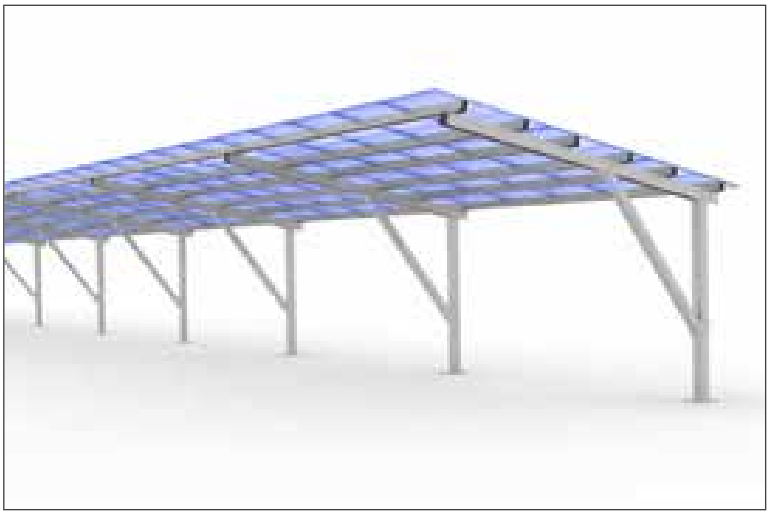




CARPORT CANOPY

Single side-column cantilevered – 1 row of vehicles

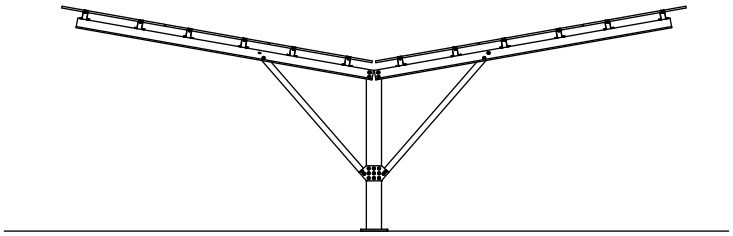






CARPORT CANOPY

Single central column – 2 rows of vehicles





IMPORTANT NOTE

A parking space is defined as an area of approximately 5×2.5 m. For each pair of parking spaces (approximately 5×6 m, including two parking spaces and the space occupied by the columns), 3 rows of 5 vertically mounted modules (15 modules in total) are to be considered, with approximate dimensions of 1,760 × 1,134 × 30 mm - power of 440 Wp.

The supply of materials is intended solely as the supply of the individual components. The manufacturer guarantees only that the materials used and the finished product comply with the technical and performance specifications indicated in the technical data sheet and with the applicable regulations, and further guarantees the suitability of the product solely for its intended use.

All assessments concerning the suitability of the product to meet the requirements of the specific project in which it is to be used, the suitability of the installation site, and the technical and performance characteristics of the product itself, including structural calculations where required by applicable regulations or accepted engineering practice, are the sole responsibility of the purchaser, the engineer responsible for the system, and the installer.

Accordingly, the manufacturer assumes no liability for damage that cannot be directly attributed to product non-conformity, including, by way of example and without limitation: incorrect or omitted assessment of the performance characteristics of the entire system and its supports; incorrect or improper installation methods or use of the product; use in applications other than those for which the product was designed; and incorrect or omitted assessment of the permissible loads of the structures involved.
In particular, the engineer responsible for the system is responsible for assessing the suitability of the supplied materials for the specific installation and for carrying out structural verifications based on the product technical data sheets provided, the airflow acting on the installation, the roof morphology, and the specific characteristics of the installation site.
Accordingly, Hammer Energy cannot be held liable for damage to property and/or persons caused by incorrect structural sizing by the engineer responsible for the system.

STRUCTURE INSTALLATION SERVICE

The structure can be installed in two different ways:



CONVENTIONAL INSTALLATION WITH CONCRETE FOUNDATION (CIVIL WORKS REQUIRED)

The conventional installation method involves excavating a foundation and constructing a concrete footing. Installation times are longer, and the structure is permanent.



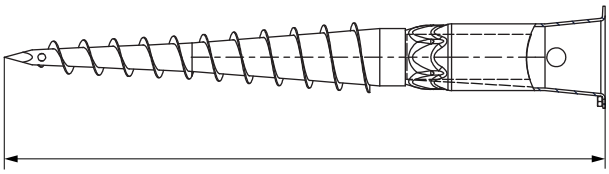
WITH GROUND SCREW FOUNDATION (INSTALLED USING SPECIALIZED MACHINERY ON ANY TYPE OF GROUND)

The use of a ground screw foundation allows for **faster installation,** eliminating the need for civil works. It can be installed on uneven terrain and **removed up to 4 times using the same screw.** It can also be used on sites where geological conditions are less favorable.



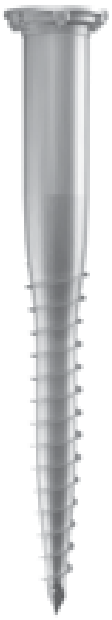


GROUND SCREW





NEW PRODUCT





INSTALLATION SPEED

REMOVABLE STRUCTURE

LESS BUREAUCRACY
Permits are easier to obtain because the structure is removable

SUITABLE FOR CHALLENGING GEOLOGICAL CONDITIONS AND UNEVEN TERRAIN
Allows for structural adjustment to accommodate differences in ground level

TECHNICAL NOTES

1. DESCRIPTION OF THE SYSTEM

The Hammer Energy structure system is designed to build structures for the installation of photovoltaic panels and consists of profiles and mounting accessories made of extruded aluminum, galvanized steel, and stainless steel.

2. REFERENCE NORMS

- UNI EN 755-2:2008 “Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 2: Mechanical properties”
- UNI EN ISO 3506-1:2010 “Mechanical properties of corrosion-resistant stainless steel fasteners. Part 1: Bolts, screws and studs”
- UNI EN 1990:2006 “Eurocode - Basis of structural design”
- UNI EN 1991-1-3:2004 “Eurocode 1 - Action on structures - Part 1-3: General actions - Snow loads”
- UNI EN 1991-1-4:2010 “Eurocode 1 - Action on structures - Part 1-4: General actions - Wind actions”
- UNI EN 1999-1-1:2009 “Eurocode 9 - Design of aluminium structures - Part 1-1: General structural rules”
- Hammer s.r.l. has a Quality Management System certified according to UNI EN ISO 9001:2015.

3. SCOPE OF APPLICATION

The Hammer Energy system is designed for connecting photovoltaic panels to pitched roofings made of trapezoidal sheet metal or tile and pantile roofs, flat roofs, and on ground-mounted photovoltaic installations.

4. APPLICATION GUIDELINES

The designer and/or installer must verify the durability of the system as a function of environmental conditions, according to Eurocode 9.

The loadability of the system depends on the quality of system installation and proper connection of the system to the support.

The information and recommendations provided in this catalog are based on principles, equations and safety factors believed to be correct at the time of its preparation. The values are the result of evaluation of test results under laboratory conditions. It will be the responsibility of the designer and/or installer to determine whether the product and accessories used are suitable for the intended use and suitable prior to installation/purchase.

5. SIZING RECOMMENDATIONS

For pitched roof installations, it is recommended:

- not to make continuous sections of profiles longer than 13 m, corresponding to 2 profiles of 6,5 m or 4 profiles of 3,25 m (profile deformations due to thermal expansion are limited, so as not to create problems with the functionality of the system: stresses on the modules, loosening of clamps, deformations of support structures and/or profile attachment points on support structures);
- to carry out installations in which the profile overhangs beyond the last support structure by no more than a length equal to 1/3 of the spacing between two supports.

For two-pole ground installations, it is recommended:

- not to make continuous sections of profiles longer than 36 meters, corresponding to 6x 6 m profiles (profile deformations due to thermal expansion are limited, so as not to create problems with the functionality of the system: stresses on the modules, loosening of clamps, deformations of support structures and/or profile attachment points on support structures);



- follow the specific directions of the ground installation designer, the technical reports of the geologist and/or structural engineer of the specific site.

  Complying with the previous recommendations, there is no requirement for the position of the junction within the span.

6. WARNING

Hammer S.r.l. reserves the right to make changes to the products presented in this catalog at any time, without the obligation of prior notice. Drawings and installation suggestions are also subject to change.
The use of products other than in strict accordance with the guidelines provided in this catalog, or any modification by the fitter, will void the warranty.

See the website **www.hammerenergy.solar** for any updates.

GENERAL TERMS AND CONDITIONS OF SALE

1. DEFINITIONS

1.1 The terms defined in this clause will have the following meaning in the Contract:
"Catalog" means the document that lists the products sold by Hammer Energy and describes their technical characteristics;
"GTCs" means these general terms and conditions of sale governing the purchase and sale relationship of the Products between Hammer Energy and the Buyer;
"Buyer" means the person identified in the Order Confirmation as the purchaser of the Products
"Order Confirmation" means the purchase confirmation form which contains the Buyer's data, as well as, inter alia, the type, quantity and prices of the Products sold by Hammer Energy to the Buyer and regulated by the GTCs;
"Contract" means jointly the Order Confirmation and the GTCs;
"Force Majeure" means any event that (i) obstructs, delays or prevents a Party from performing one of its obligations, (ii) is beyond any reasonable control of such a Party, (iii) is unforeseeable, (iv) occurs without fault or negligence on the affected Party, (v) cannot be prevented by the affected Party, although acting with reasonable care and due diligence;
"Hammer Energy" means Hammer Srl, with its registered office in Montegrosso d'Asti (AT), Via della Guardia n. 11/13/15/17/19, VAT number n. 00094860053, registered in the Asti Register of Companies, REA n. AT-46448;
"Hammer Energy Price List" means the document that lists the prices applied by Hammer Energy for the sale of the Products;
"Party" means Hammer Energy or the Buyer, depending on the context, and "Parties" means Hammer Energy and the Buyer jointly;
"Price" means the price for the sale of the Products indicated in the Order Confirmation;
"Hammer Energy Products" means the goods referred to in the Catalog to be sold according Order Confirmation, as described therein.

2. EFFECTIVENESS OF THE GTCs

2.1 The GTCs are binding for the Parties and supersede and replace and all prior understanding and agreements, in whatever form regarding the subject matter, as well as any other form pre-arranged by the Buyer.

2.2. The GTCs apply to all Order Confirmations intervened between Hammer Energy and the Buyer during the validity period of the Hammer Energy Price List.

2.3 In the event that the GTCs are in conflict with the provisions contained in the Order Confirmation, the latter will prevail over the GTCs.

3. HAMMER ENERGY CATALOG AND PRICE LIST

3.1 The Buyer expressly declares to have read the Catalog and the Hammer Energy Price List, and to accept the contents of these documents.

3.2 The Buyer acknowledges that the Hammer Energy Price List could be composed of one or more documents depending on the type of Products.

3.3 Hammer Energy reserves the right to change at any time and without notice both the Catalog and the characteristics of the individual goods described therein - in order to adapt them to regulatory, technical or commercial requirements - and the Hammer Energy Price List.

4. OBJECT

4.1 Hammer Energy undertakes to sell the Products to the Buyer, and The Buyer undertakes to purchase, according to all terms and conditions set forth in the Order Confirmation and in the GTCs.



5. PACKAGING, TRANSPORT AND DELIVERY

5.1 Hammer Energy undertakes to pack the Products with material suitable for transport.

5.2 The Parties agree that the delivery of the Product takes place EXW headquarters of Hammer Energy (Incoterms 2010).

5.3 Hammer Energy reserves the right to deliver the Products by partial deliveries.

6. PRICE

6.1 The Buyer undertakes to pay Hammer Energy the Price according to the methods specified in the Order Confirmation.

7. WARRANTIES

7.1 Hammer Energy warrants that the Products are:

(a) fit for the purpose for which they are intended;

(b) manufactured accurately, diligently and according to the highest industry standards;

(c) compliant with all the requirements prescribed by applicable law.

7.2 The warranty period for avoidance and defects of the Products is twelve (12) months from the date of delivery of the Products.

7.3 The Buyer is required to report to Hammer Energy the defects of the Products within 8 calendar days from the discovery, on pain of loss of such a right.

7.4 Defective parts must be returned to Hammer Energy, together with proof of purchase (invoice and sales note). Hammer Energy following the report received, reserves the right to make its own assessment based on the samples provided and, where necessary, an inspection.

7.5 No agent, distributor or other intermediary of Hammer Energy is authorized to offer any warranty other than those contained in the GTCs.

8. LIMITATIONS OF LIABILITY

8.1 The Buyer acknowledges that Hammer Energy is in no case liable for defects or damage caused by (i) negligent use of the Products, (ii) installation of Products by personnel not active in the window industry, (iii) failure to maintain the Products, (iv) repairs, replacement of individual components or maintenance carried out by persons not authorized by Hammer Energy, (v) use or maintenance of the Products that does not comply with the indications in the technical documentation and (vi) use of spare parts or consumables not supplied by Hammer Energy.

8.2 The Buyer expressly acknowledges that Hammer Energy is in no case liable for damages, compensation or indemnity in the following cases:

(a) losses regarding production or profits, as well as indirect costs or damages caused by defects or product malfunction;

(b) use of the Product for purposes other than those for which the Product is intended.

8.3 With regard to surface finishes only, the warranty is not applicable in the event of unexpected defects, in particular in the case of finishes or surfaces that have changed their original condition as result of: (i) use of brushes and / or abrasive or aggressive products for cleaning, (ii) damage caused by scratches or abrasions, (iii) alterations, improper installations, vandalism and in any case incorrect use, (iv) fire damage or other accidental events, (v) non-maintenance, against Hammer Energy's indications, (vi) application in saline environments, (vii) exposure to solvents, chemicals or to chemically aggressive environments.

8.4 Within the maximum limits established by law, Hammer Energy''s liability is in any case limited to the Price, for each Order Confirmation.

9. RETENTION OF TITLE

9.1 Pursuant to Article 1523 of the Italian Civil Code:

(a) the sale of Hammer Energy Products is understood to be carried out with Hammer Energy Products under the ownership of Hammer Energy until full payment of the Price

(b) the risks on the Hammer Energy Products and the responsibility for loss, damage or other losses of Hammer Energy Products pass to the Buyer from the moment of delivery of the Hammer Energy Products

9.2 Until the transfer of ownership of the Hammer Energy Products is completed, the Buyer is not allowed to sell or otherwise dispose of the Hammer Energy Products without Hammer Energy's consent.

9.3 The Buyer undertakes to keep the Hammer Energy Products in perfect condition. Ordinary and extraordinary maintenance of Hammer Energy Products is the Buyer's responsibility.

9.4 Hammer Energy has the right, at any time and at its own expense, to inspect the Hammer Energy Products to verify their status. Inspections have not to adversely affect the Buyer's right to normal use of Hammer Energy Products.

9.5 In the event of termination of the Contract due to default by the Buyer, Hammer Energy may withhold, by way of indemnity, the payment installments already received, without prejudice for compensation for damages.

10. TERMINATION

10.1 In the event of default by one of the Parties with respect to the obligations deriving from the Contract, the other Party may terminate the Contract pursuant to Article 1454 of the Italian Civil Code, provided that the defaulting Party has not remedied it within fifteen (15) calendar days of receipt of the letter of formal notice specifying the nature of the breach of Contract.

11. TRANSFER OF THE CONTRACT

11.1 The Buyer is not allowed to transfer or assign, in whole or in part, any of the rights and / or obligations provided for in the Contract without the prior written consent of Hammer Energy.

11.2 The Buyer hereby gives his consent for Hammer Energy to transfer, in whole or in part, the Contract or the rights and / or obligations provided for in the Contract. To this end, the Buyer, as soon as requested by Hammer Energy, has to promptly carry out all those obligations that may be necessary for the purpose of the transfer of the Contract.

11.3 Hammer Energy may disclose all the information in its possession relating to the Contract, including those relating to its negotiation, as well as those relating to the Buyer which are necessary for the purpose of the transfer of the Contract.

12. FORCE MAJEURE

12.1 In the event of a Force Majeure event, the Party whose performance of its obligations is prevented has to notify the other Party within five (5) calendar days providing all relevant details and has to do everything possible to immediately remedy the situation.

12.2 No Party will be liable for any non-fulfillment of the obligations provided for by the Contract to the extent that the fulfillment has been hindered or delayed or prevented by a Force Majeure event communicated in accordance with this Clause. The deadline to perform will be postponed accordingly.

13. FINAL PROVISIONS

13.1 The Contract constitutes the entire manifestation of all the understandings and agreements between the Parties in relation to its object and constitutes the only source of rights and obligations between them, superseding and



replacing any previous understanding and agreement in verbal and written, or otherwise reached through facta concludentia.

13.2 Each Party acknowledges that it has not relied on any pre-contractual declaration when agreeing to sign the Contract.

13.3 Any modification or integration to the Contract will not be valid, effective and binding unless it is made in writing and signed by both Parties, in particular by the Party against which such a modification or integration is invoked.

13.4 The possible tolerance of one of the Parties to the conduct of the other Party, which result in a violation of the provisions contained in the Contract, does not constitute a waiver of the rights deriving from the violated provisions, nor the right to demand the exact fulfillment of all the terms and all the conditions provided therein.

13.5 The rights and remedies included herein are not exclusive in nature, but are in addition to the other rights and remedies available under applicable law.

13.6 The headings of the individual Clauses have been set aside for the sole purpose of facilitating the reading of the Contract and, therefore, they should not be taken into account for the interpretation of the Contract.

13.7 If any provision of the Contract is found by any court or other competent authority to be invalid or unenforceable, that provision will be deemed to be deleted from the Contract and the remaining provisions of the Contract will remain in full force and effect. The Parties will therefore negotiate in good faith in order to agree on the terms of a mutually satisfactory provision replacing the provision deemed void and unenforceable. In the event that no agreement is reached on a new provision, the Contract will remain valid and enforceable unless the invalid provision is of material importance to at least one of the Parties and it can reasonably be assumed that the Parties would not have signed the Contract without such an invalid provision.

14. APPLICABLE LAW AND JURISDICTION

14.1 The Parties expressly agree that the Contract is governed solely by Italian law without regard to the conflict of laws rules of such a legal system. In addition, the Parties exclude the applicability of the Convention on Contracts for the International Sale of Goods 1980 and its amendments.

14.2 The Parties expressly agree that any dispute arising out of or relating to the validity, execution or termination of the Contract will be subject to Italian jurisdiction and, in particular, to the exclusive jurisdiction of the Court of Asti.

Buyer:
Signatory person:
Title:
Place:
Date:

_____

Pursuant to Articles 1341 and 1342 of the Italian Civil Code, the Buyer expressly accepts the following clauses: Clause 3 (Hammer Energy Catalogue and Price List), Clause 8 (Limitations of Liability), Clause 11 (Transfer of the Contract), Clause 14 (Applicable Law and Jurisdiction).

Buyer:
Signatory person:
Title:
Place:
Date:

_____

RETAILER

Ed. 1 - 2027

HAMMER ENERGY

Hammer Energy is a trademark by:
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