

H 
HAMMER ENERGY
#passionforsolar

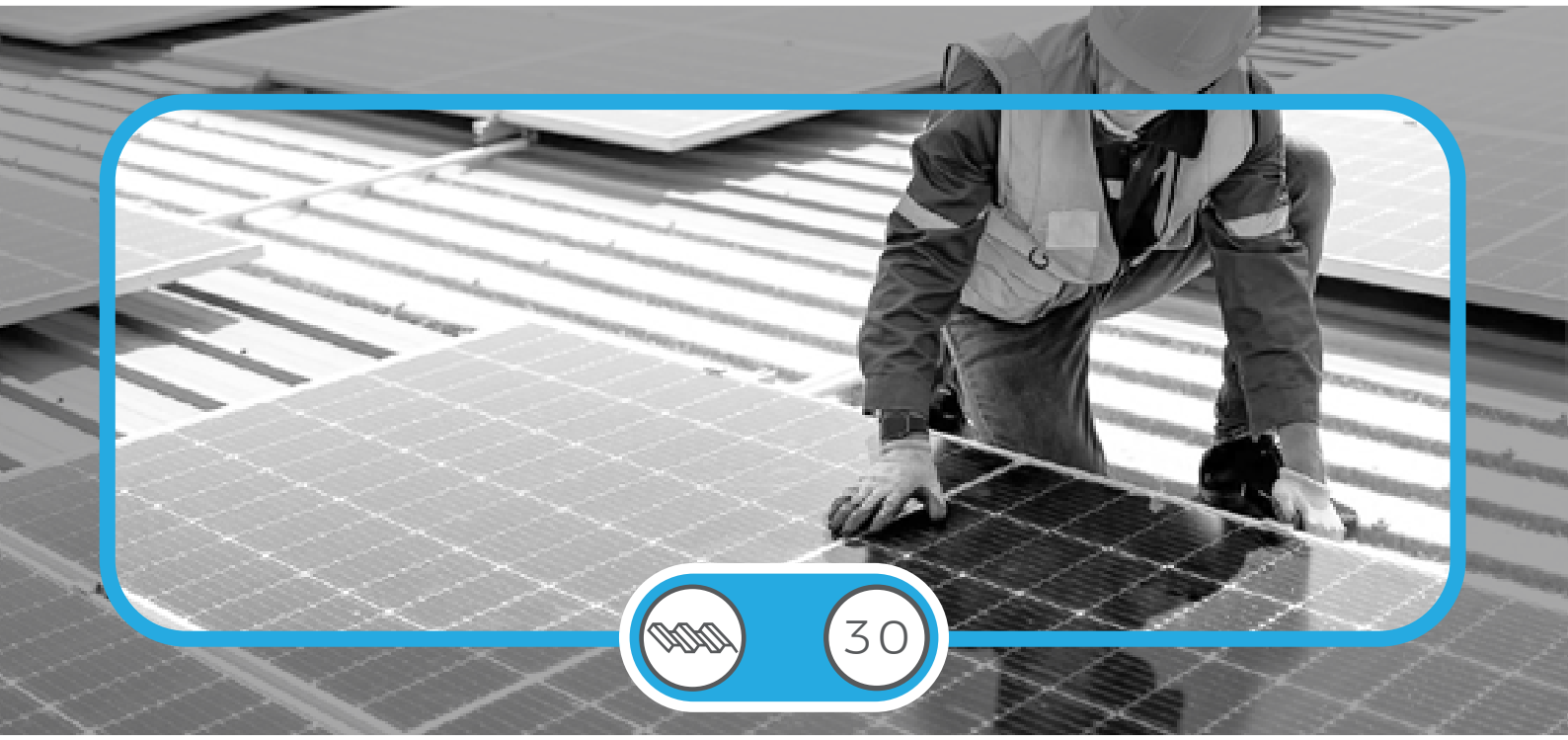


**STRUCTURE
SYSTEM
FOR PHOTOVOLTAIC INSTALLATIONS**



Icon of a solar panel with a wavy line below it, representing a specific solar technology or component.

6



Icon of a solar panel with a wavy line below it, representing a specific solar technology or component.

30



Icon of a solar panel with a sun symbol above it, representing a specific solar technology or component.

48

INDEX

ABOUT US 2

QUALITY 3

THE SYSTEM 6

Hooks	10
Profiles	16
Clamps	18
Accessories	24
Components	26

THE SYSTEM 30

Profiles	34
Clamps	36
Accessories	42
Components	44

THE SYSTEM 48

Poles and beams	53
Profiles	54
Accessories	56
Clamps	58

TECHNICAL NOTES 62

GENERAL TERMS AND CONDITIONS 64



**TILE / PANTILE
ROOFING**



**TRAPEZOIDAL
SHEET METAL / ONDULIN
ROOFING**



**GROUND-MOUNTED
PHOTOVOLTAIC
INSTALLATIONS**





ABOUT US

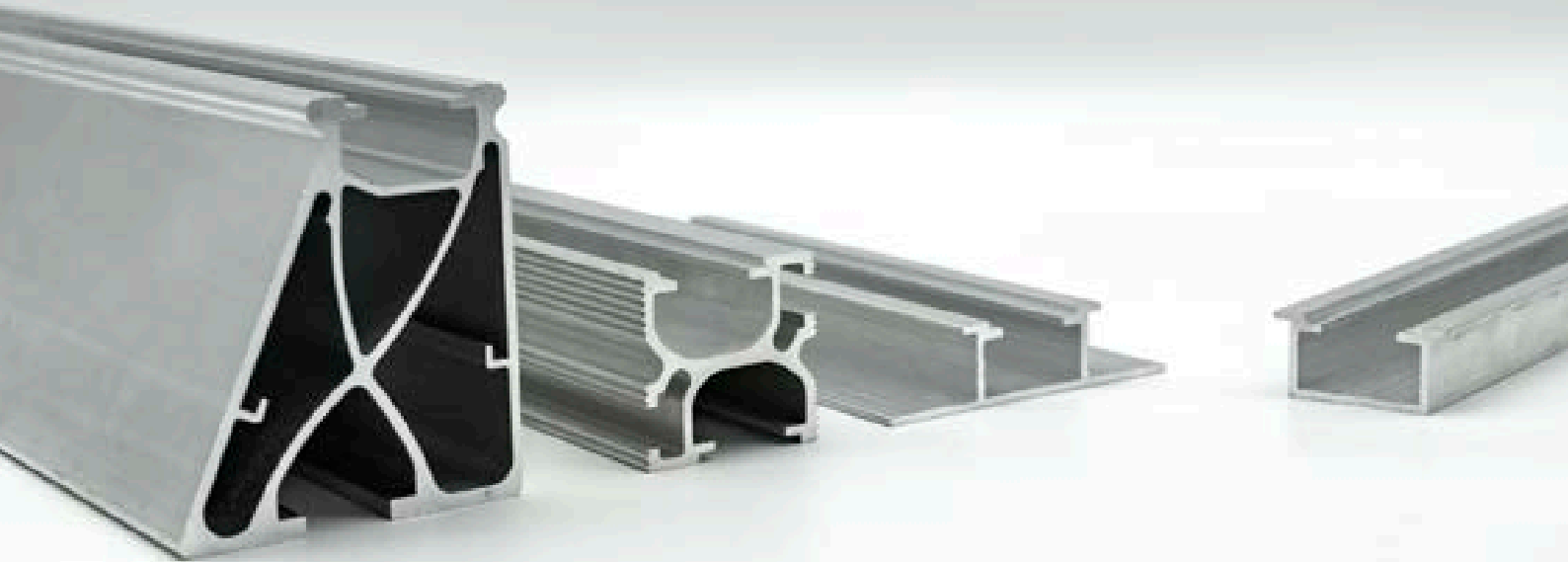
We are an Italian company operating **since 1972** in Montegrosso d'Asti (AT), Piedmont.

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.

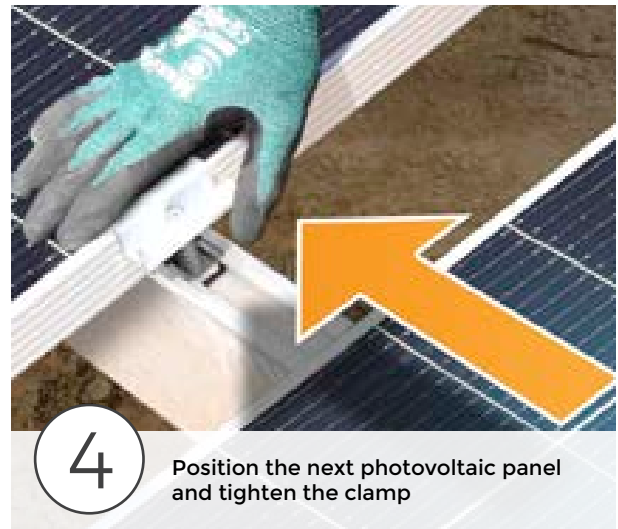
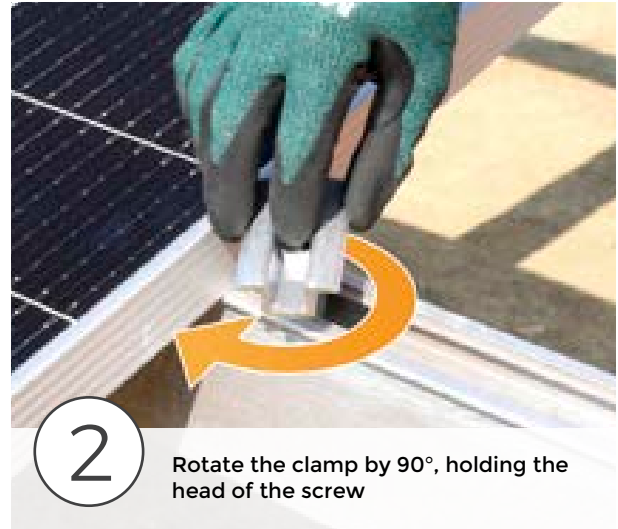
All processing cycles are designed to ensure complete traceability of the production lot and our products meet the requested performance parameters in terms of durability and corrosion resistance.

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



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.



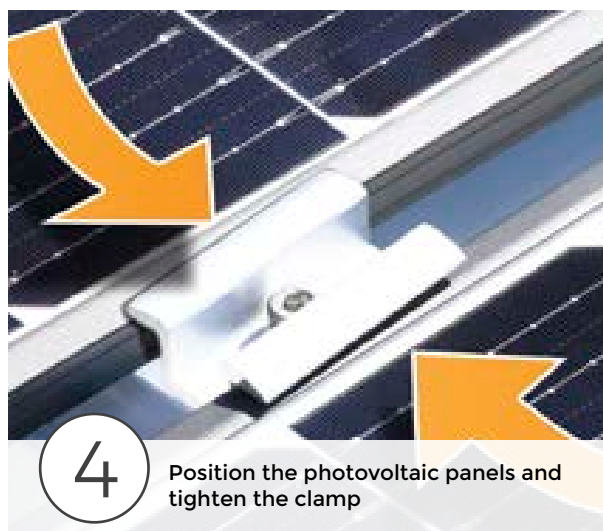
See in this video an example of mounting the preassembled clamps with the profile HE-PR301

VIDEO TUTORIAL



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.



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



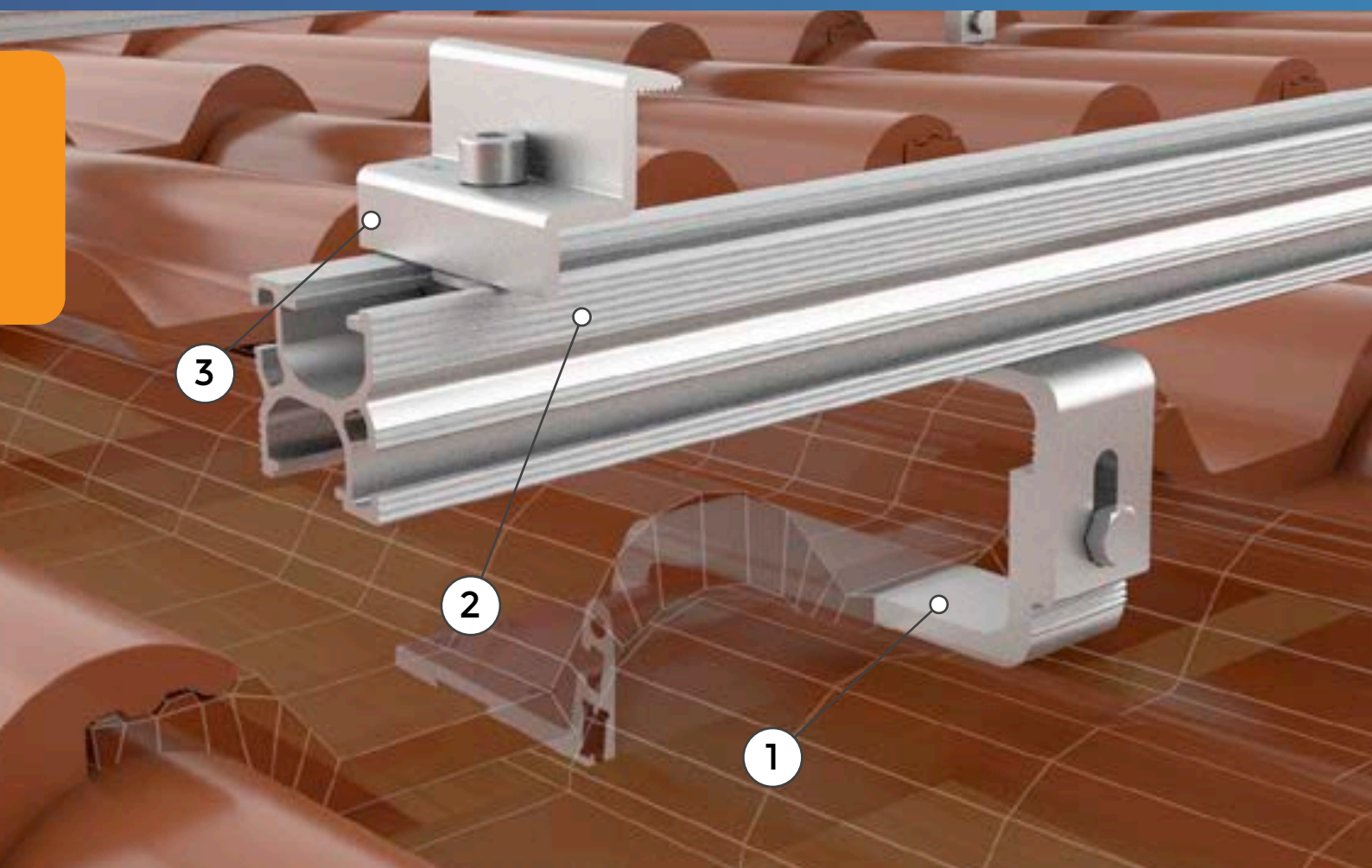


TILE / PANTILE ROOFING



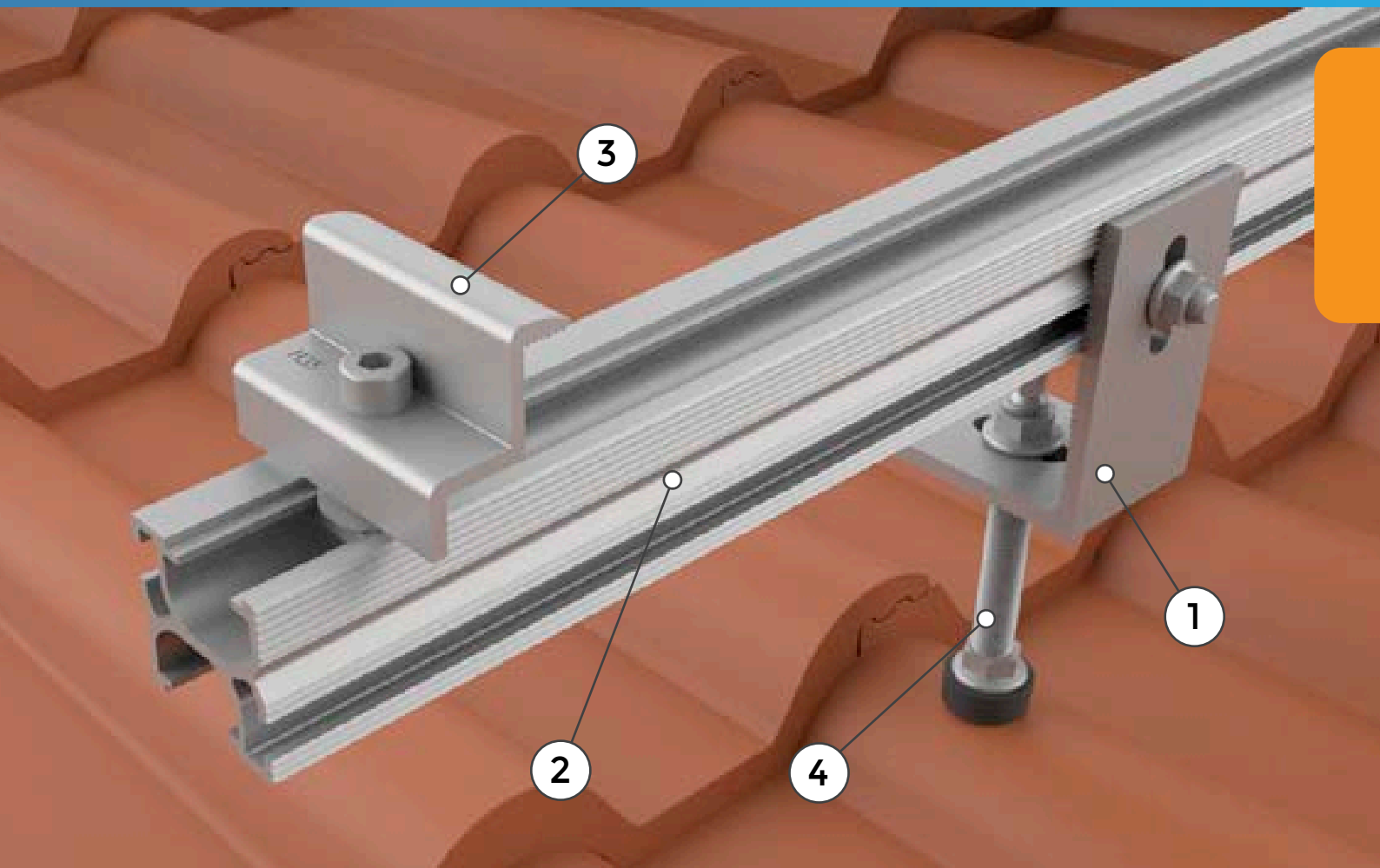
THE SYSTEM





EXAMPLE OF STRUCTURE ON TILE ROOFING WITH ROOF HOOK

- 1** **HE-STA-01**
Three-way adjustable aluminium roof hook
- 2** **HE-PR201**
Photovoltaic aluminium structure profile for installations of photovoltaic panels on tile and pantile roofs
- 3** **HE-MTR-35**
End aluminium preassembled photovoltaic clamp, "Rapid Locking System" (RLS)



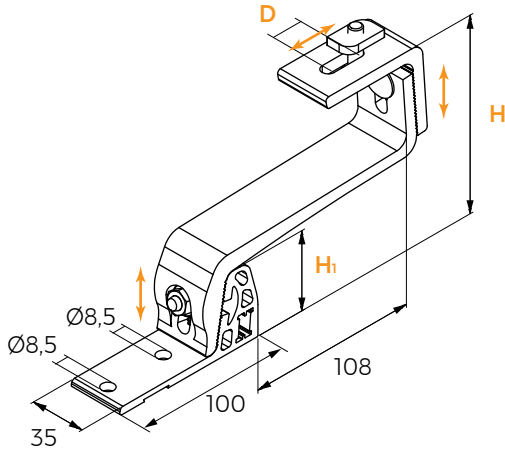
EXAMPLE OF STRUCTURE ON TILE ROOFING WITH L-HOOK

- 1** **HE-STL-01**
Aluminium L-hook for photovoltaic installations on tile or pantile roofs
- 2** **HE-PR201**
Structure profile for installations of photovoltaic panels on tile and pantile roofs
- 3** **HE-MTR-35**
End aluminium preassembled photovoltaic clamp, "Rapid Locking System" (RLS)
- 4** **HE-VF10X**
Double thread screw for photovoltaic installations



ALUMINIUM HOOK

Three-way adjustable aluminium hook for photovoltaic installations on tile or pantile roofs



PRODUCT CODE	WEIGHT (gr)	D HORIZONTAL REGULATION (mm)	H ₁ HEIGHT OUT OF LOWER TILE (mm)	H HEIGHT OUT OF PROFILE (mm)	TIGHTENING SPANNER	TORQUE (Nm)
HE-STA-01	445	20	51 ÷ 67	125 ÷ 161	13	10



PRODUCT STRENGTHS

LIGHTWEIGHT

Made of aluminium according to UNI EN 12020-2

STRONG

Aluminium and stainless steel screws guarantee excellent durability. The holding values are excellent even with the arm fully extended.

PREASSEMBLED

The hook is ready to use, thanks to the preassembled components

QUICK

The frame profile can be fastened in a quick, adjustable and secure way.

VERSATILE

Knurls on the base and hook allow a wide range of adjustment, to easily pass over any size tile or roof tile.



TO BE USED FOR:

Tile or pantile roofs, in combination with HE-PR201 structure profile.

The hardware for attaching the hook to the profile is included in the package.



OPERATING INSTRUCTIONS

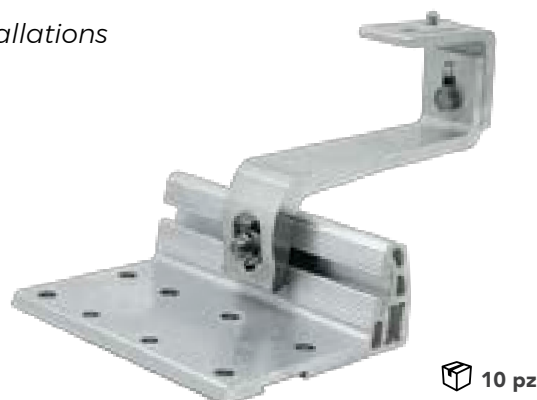
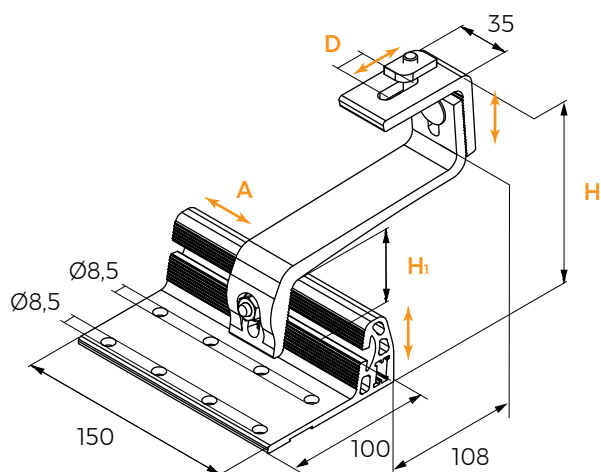
Attach the bracket to the beams using suitable wood screws (not included in the package) or suitable pan head screws

Act on the adjustments to achieve the desired distance between the tile/pantile and the PV panel. Attach the HE-PR201 structure profile to the top of the bracket using the components included in the package.



ALUMINIUM HOOK

Four-way adjustable aluminium hook for photovoltaic installations on tile or pantile roofs



PRODUCT CODE	WEIGHT (gr)	A HOOK HORIZONTAL REGULATION (mm)	D HORIZONTAL REGULATION (mm)	H ₁ HEIGHT OUT OF LOWER TILE (mm)	H HEIGHT OUT OF PROFILE (mm)	TIGHTENING SPANNER	TORQUE (Nm)
HE-STA-02	778	115	20	51 ÷ 67	125 ÷ 161	13	10

PRODUCT STRENGTHS

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

STRONG
Aluminium and stainless steel screws guarantee excellent durability. The holding values are excellent even with the arm fully extended.

PREASSEMBLED
The hook is ready to use, thanks to the preassembled components.

QUICK
The frame profile can be fastened in a quick, adjustable and secure way.

VERSATILE
Knurls on the base and hook allow a wide range of adjustment, to easily pass over any size tile or roof tile.

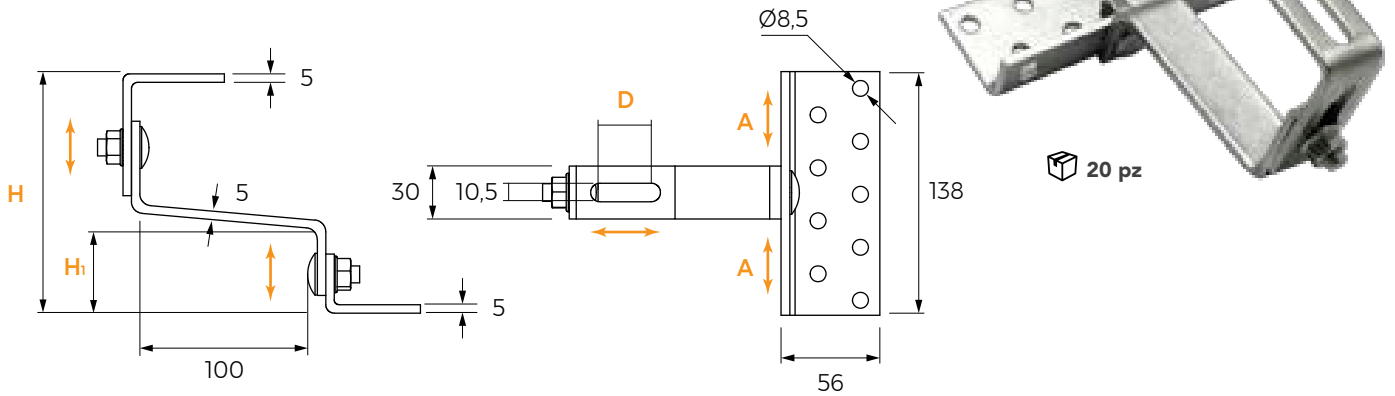
TO BE USED FOR:
Tile or pantile roofs, in combination with HE-PR201 structure profile.
The hardware for attaching the hook to the profile is included in the package.

OPERATING INSTRUCTIONS
Attach the bracket to the beams using suitable wood screws (not included in the package) or suitable pan head screws
Act on the adjustments to achieve the desired distance between the tile/pantile and the PV panel.
Attach the HE-PR201 structure profile to the top of the bracket using the components included in the package.



STAINLESS STEEL HOOK

Four-way adjustable stainless steel hook for photovoltaic systems



PRODUCT CODE	WEIGHT (gr)	A HOOK HORIZONTAL REGULATION (mm)	D HORIZONTAL REGULATION (mm)	H ₁ HEIGHT OUT OF LOWER TILE (mm)	H HEIGHT OUT OF PROFILE (mm)	TIGHTENING SPANNER	TORQUE (Nm)
HE-STI	776	-50 / 0 / +50	29	38 ÷ 50	114 ÷ 156	13	10



PRODUCT STRENGTHS

ADJUSTABLE

Adjustable in four directions, thanks to the 3 square holes on the base and slots on the hook.

READY FOR USE

It can be used in system installation without any preparation thanks to the preassembled components.

STRONG

high values of snow load and wind load.



TO BE USED FOR:

Tile/pantile roofing with roof pitch from 20°, in combination with the HE-PR201 structure profile and HE-STI-KIT profile fastening kit.



OPERATING INSTRUCTIONS

Fasten the bracket to the beams using suitable wood screws (not included) or suitable pan head screws.

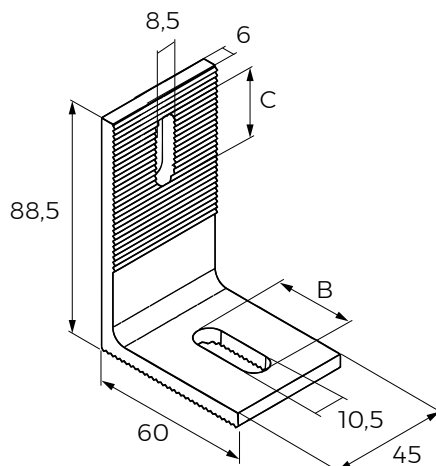
Act on the adjustments to get the desired distance between tile/pantile and PV panel.

Fasten the HE-PR201 structure profile to the top of the bracket using the HE-STI-KIT fastening kit.



ALUMINIUM L-HOOK

Aluminium L-hook for photovoltaic installations on tile or pantile roofs



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



PRODUCT STRENGTHS

LIGHTWEIGHT

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

STRONG

Aluminium and stainless steel screws guarantee excellent durability.

QUICK

The frame profile can be fastened in a quick, adjustable and secure way, thanks to the screw and nut included in the package and to the knurls that allow millimetric mechanical engagement on the profile groove



TO BE USED FOR:

Tile or pantile roofs, in combination with HE-PR201 structure profile and double thread screw HE-VF10X...



OPERATING INSTRUCTIONS

Drill a hole \varnothing 10 to 12 mm in pantile or roof tile; insert HE-VF10X... double thread screw into the hole up to the height of the EPDM gasket. Position the short side of the L-bracket over the double thread screw. Tighten the nut of the double thread screw. Repeat for all hooks in the installation. Position the metric screw included in the package into the slot on the long side of the bracket. Position the structure profile at the slot on the long side of the bracket, adjusting it in height by means of the knurling on the bracket and the fastening hardware.

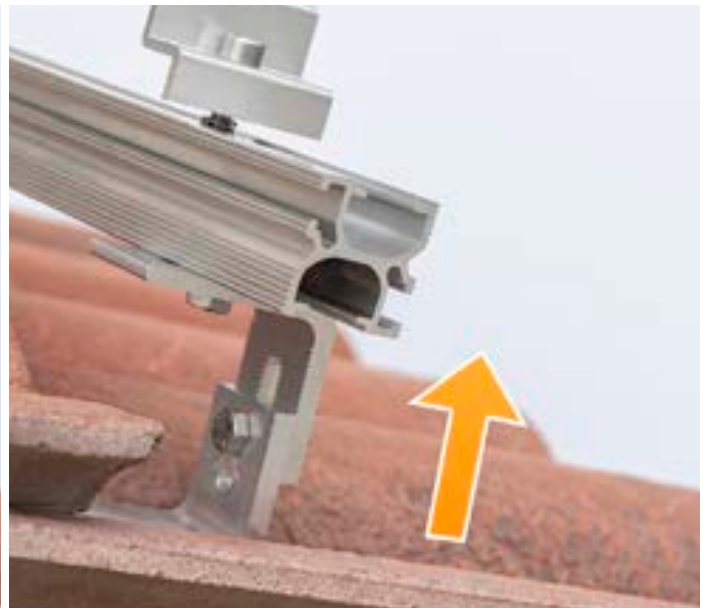


MADE TO MEASURE



ALUMINIUM ROOF HOOKS: ADJUSTMENTS

Hammer Energy **HE-STA-01** and **HE-STA-02** roof hooks offer multiple adjustments to fit any roof with wooden beams for tiles or pantiles.





ALUMINIUM L-HOOKS: ADJUSTMENTS

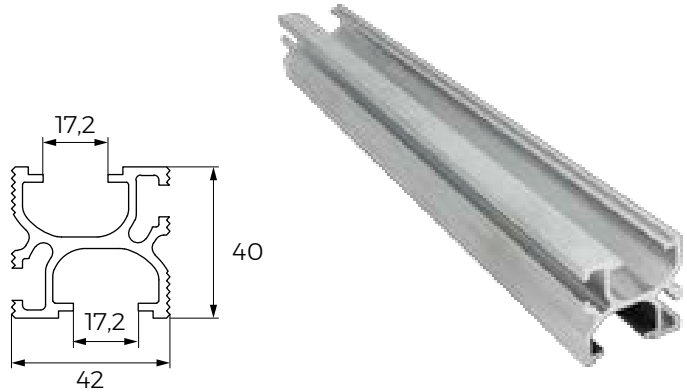
HE-STL-01 L-hooks allow quick, easy and adjustable laying at every stage of installation of photovoltaic systems on tile or pantile roofs.





HE-PR200 SERIES STRUCTURE PROFILE

Photovoltaic aluminium structure profile for installations of photovoltaic panels on tile and pantile 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-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

VERSATILE

Usable for both large and small PV installations due to optimized bar lengths and designed to be used with both L-hooks and standard hooks. One profile fits all solutions.

REVERSIBLE

Designed to improve installation efficiency, the profile has symmetrical grooves for connection to hooks and clamps.

LIGHTWEIGHT

The profile, realized in aluminium alloy EN AW 6060 T6 according to UNI EN 12020-2, is light to handle. The 3250 mm bars have an optimised length to reduce scraps and facilitate handling on construction site.

RESISTANT

Moments of inertia and bending modulus optimised to withstand high snow and wind loads.



OPERATING INSTRUCTIONS

Define the hooks spacing according to the snow and wind loads of the installation area and the hook technical specifications, as specified by the structural engineer.

To join the bars, use the couplings HE-GPR-200

The profile HE-PR201 has two mounting methods: with standard hooks or, alternatively, with L-hooks combined with double-threaded screws.

For the mounting with HE-STL-01 L-hooks and HE-VF... double thread screws:

- ▶ pre-drill the pantile or roof tile with diameter from 10 to 12 mm, and apply the HE-VF... fastening screw
- ▶ assemble the L-hook HE-STL-01 on the double thread screw, using screw and nut
- ▶ repeat previous steps for all HE-STL-01 hooks
 - assemble the profile on the HE-STL-01 hooks,
- ▶ adjusting the profile height using the checkering on the hooks and with the help of screw and nut
- ▶ fasten the clamps on the upper slot of the profile

For the mounting with standard roof hooks:

- ▶ secure the hook base to the roof substructure by means of suitable fasteners
- ▶ adjust the hook to the desired tile height and tile/panel spacing
- ▶ fasten the profile to the hooks, using suitable fasteners. If the HE-STI stainless steel hooks are used, the hook should be fastened to the profile using the HE-STI-KIT fastening kit. If aluminum hooks HE-STA-01 or HE-STA-02 are used, the components for attaching the hook to the profile are included in the hook package.



RELATED PRODUCTS:

- ▶ **HE-STI** - Roof hook in A2 stainless steel, in combination with fastening kit HE-STI-KIT
- ▶ **HE-STL-01** - Aluminium roof hook, L form factor, in combination with double thread screw
- ▶ **HE-VF10X200, HE-VF10X250, HE-VF10X30** - Double thread screw
- ▶ **HE-STA-01** and **HE-STA-02** - Aluminium adjustable roof hooks
- ▶ **HE-GPR-200** - Aluminium coupling for profiles 12x5x180 mm, 4 holes \varnothing 4,5 mm
- ▶ **HE-MIS/HE-MTS** - Simple aluminium clamps
- ▶ **HE-MIM/HE-MTM** - Preassembled photovoltaic clamps for sequential mounting of photovoltaic panels
- ▶ **HE-MIR/HE-MTR** - Preassembled clamps RLS (Rapid Locking System)

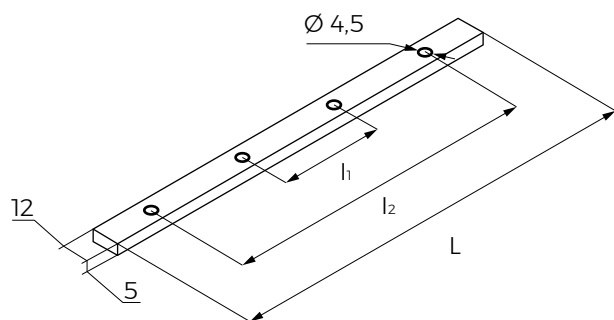


JUNCTION FOR PHOTOVOLTAIC STRUCTURE PROFILE SERIES HE-PR200

Aluminium junction for photovoltaic structure profile HE-PR201



100 pz



PRODUCT CODE	h (mm)	l ₂ (mm)	L (mm)
HE-GPR-200	45	135	180



PRODUCT STRENGTHS

LIGHTWEIGHT

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

SIMPLE

Through the holes it is possible to join the profiles with self-drilling screws.

STRONG

By joining the structure profiles, it is possible to create larger and stronger photovoltaic structures on pantile and tile roofs.



TO BE USED FOR:

Tile or pantile roofs for the junction of the structure profile HE-PR201.



OPERATING INSTRUCTIONS

Attach the HE-GPR-200 joint to the HE-PR201 structure profile using self-drilling screws (not included in the package).

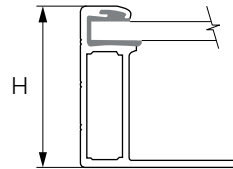
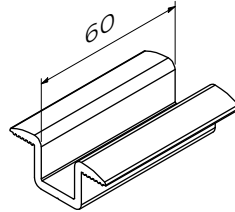
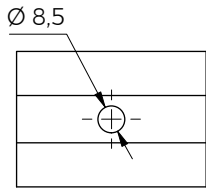
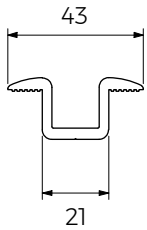


MADE TO MEASURE



MID SIMPLE CLAMP

Mid simple aluminium clamp for photovoltaic modules



100 pz

PRODUCT CODE	WEIGHT (gr)	H - MODULE THICKNESS (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.



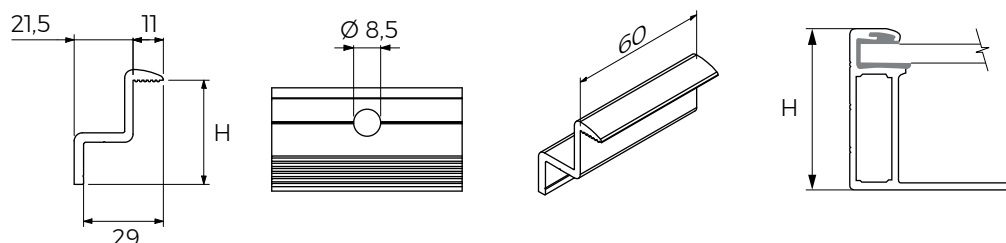
CUSTOMIZABLE

■ UPON REQUEST Black anodized



END SIMPLE CLAMP

End simple aluminium clamp for photovoltaic modules



50 pz

PRODUCT CODE	WEIGHT (gr)	H - MODULE THICKNESS (mm)	CLAMP FOOTPRINT (mm)
HE-MTS-30	32	30	21,5
HE-MTS-31	32	31	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.



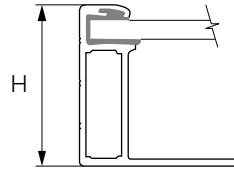
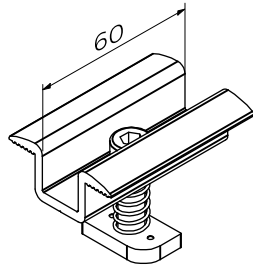
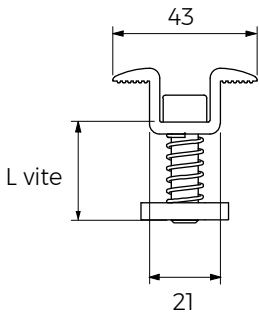
CUSTOMIZABLE

■ ON REQUEST Black anodized



PREASSEMBLED MID CLAMP

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



100 pz

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.



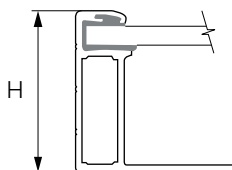
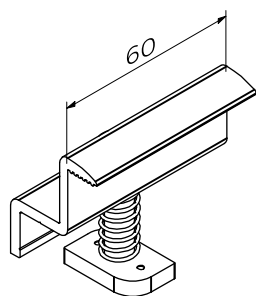
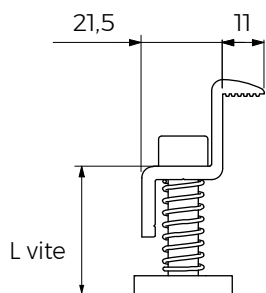
CUSTOMIZABLE

■ ON REQUEST Black anodized



PREASSEMBLED END CLAMP

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



50 pz

PRODUCT CODE	WEIGHT (gr)	H - MODULE THICKNESS (mm)	CLAMP FOOTPRINT (mm)	THREADING	L SCREW (m)	TORQUE (Nm)	TIGHTENING SPANNER
HE-MTM-30	49	30	21,5	M8	25	15	6
HE-MTM-31	50	31	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 HE-PR300



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.



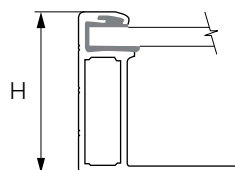
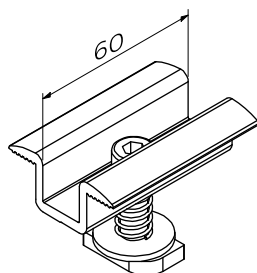
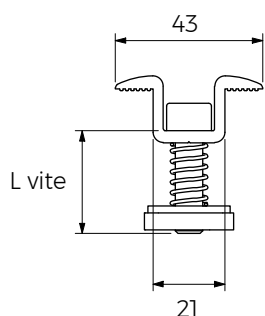
CUSTOMIZABLE

■ ON REQUEST Black anodized



RLS MID CLAMP

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



100 pz

PRODUCT CODE	WEIGHT (gr)	H - MODULE THICKNESS (mm)	CLAMP FOOTPRINT (mm)	THREADING	L SCREW (m)	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.



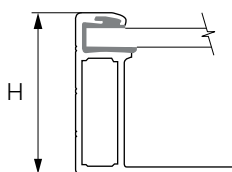
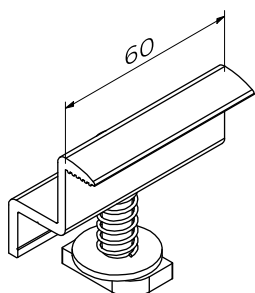
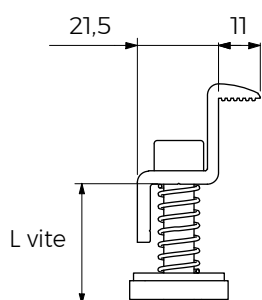
CUSTOMIZABLE

■ ON REQUEST Black anodized



RLS END CLAMP

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



50 pz

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-31	56	31	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.



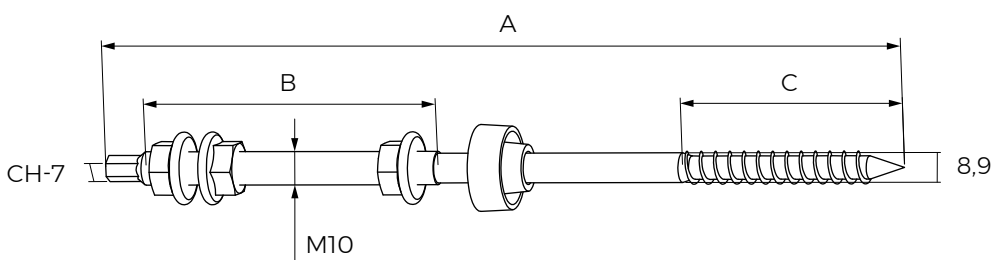
CUSTOMIZABLE

■ ON REQUEST Black anodized



DOUBLE THREAD SCREW

Double thread screw for photovoltaic installations, premounted with 3 nuts DIN 6923 and EPDM gasket



 25 pz



PRODUCT CODE	A (MM)	B (MM)	C (MM)	THREADING 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 pre-assembled nuts and gasket.

VERSATILE

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

RESISTANT

Thanks to the screw body made of A2 stainless steel.



TO BE USED FOR:

- **roofs with corrugated panels** and wooden beams or in trapezoidal metal sheet with wooden substructure, in combination with HE-PR201 structure profiles and HE-STL-01 L-hook.
- **tile or pantile roofs** with wooden beams, in combination with the HE-PR201 structure profile and HE-STL-01 L-hook



OPERATING INSTRUCTIONS

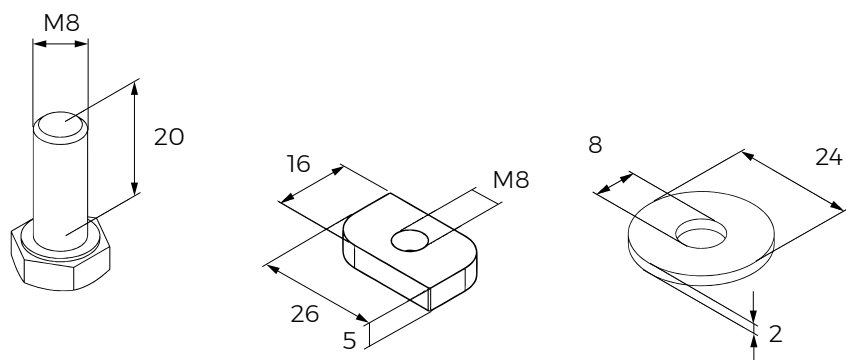
Drill a hole of \varnothing 10 to 12 mm in the pantile, tile or sheet metal and the wooden beam underneath; insert the double thread screw into the hole up to the height of the EPDM gasket. Position the short side of the L-bracket over the double thread screw. Tighten the nut of the double thread screw.

Repeat the operation for all hooks in the photovoltaic installation.



KIT FOR ROOF HOOK FASTENING

Kit for fastening HE-STI roof hook
to structure profile HE-PR201



PRODUCT CODE	TIGHTENING SPANNER	TORQUE
HE-STI KIT	13	10



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.



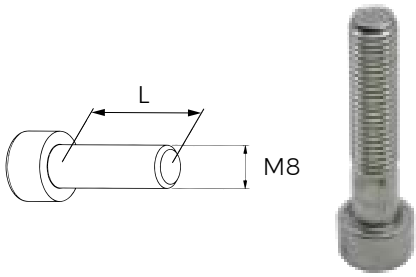
OPERATING INSTRUCTIONS

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.



COMPONENTS AND SPARE PARTS FOR SIMPLE CLAMPS

Stainless steel screw for Hammer Energy solar clamps



 200 pz

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.



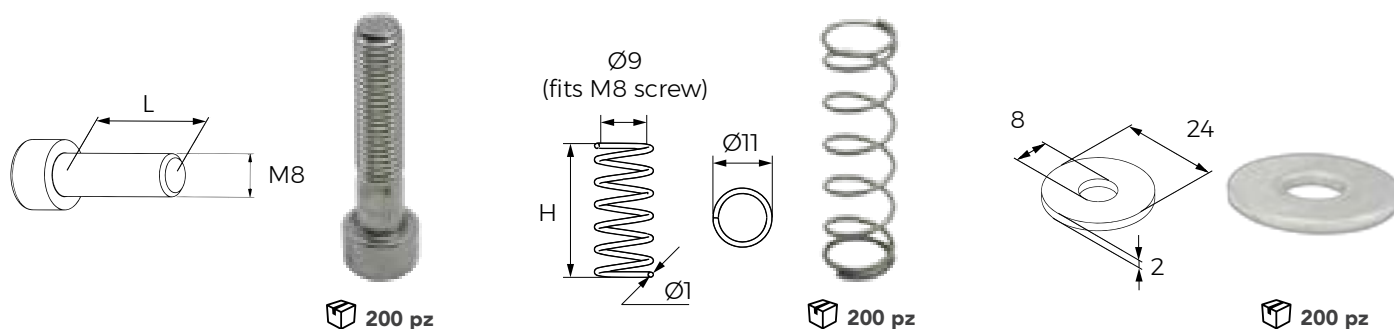
OPERATING INSTRUCTIONS

For the HE-MIS and HE-MTS clamps: insert the screw in the clamp, then screw it onto cam.



COMPONENTS AND SPARE PARTS FOR RLS PREASSEMBLED CLAMPS

Stainless steel screw and spring for Hammer Energy solar clamps



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-MIR-31	HE-RO08X24	HE-VI08X30	HE-M03
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-VI08X40	HE-M02
HE-MIM-42	-		
HE-MIR-42	HE-RO08X24		
HE-MTM-46	-	HE-VI08X45	HE-M02
HE-MTR-46	HE-RO08X24		
HE-MIM-46	-		
HE-MIR-46	HE-RO08X24	HE-VI08X50	HE-M02
HE-MTM-50	-		
HE-MTR-50	HE-RO08X24		
HE-MIM-50	-	HE-VI08X50	HE-M02
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.



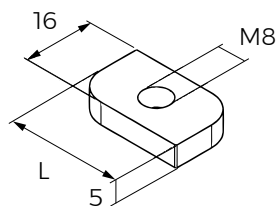
OPERATING INSTRUCTIONS

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



CAM FOR CLAMPS

Cam for Hammer Energy photovoltaic clamps



 200 pz

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

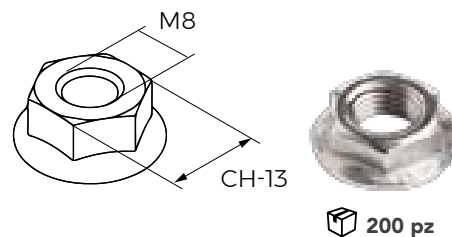
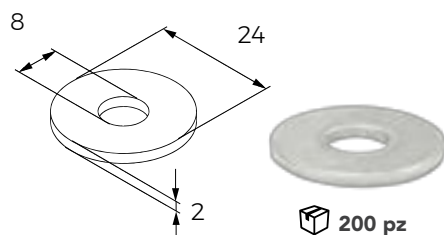
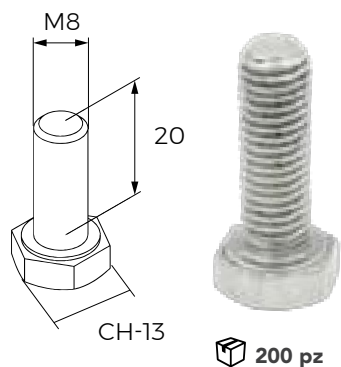
For HE-MIS e HE-MTS clamps: screw the cam to the metric screw HE-VI08X...after inserting the screw into the clamp.

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 / SPARE PARTS

Components and spare parts for HE-STL-01 and HE-STI-KIT



SPARE PARTS FOR PRODUCT CODE	BAND WASHER	HEXAGONAL HEAD SCREW	HEXAGONAL NUT
HE-STL-01	-	HE-VI08X20.TE	HE-DA08.FL
HE-STI-KIT	HE-RO08X24		



PRODUCT STRENGTHS

RESISTANT

Stainless steel ensures maximum durability.



TO BE USED FOR:

Products listed in the table.



OPERATING INSTRUCTIONS

Use in combination with HE-10088 cam.
Use a 13 wrench for tightening.



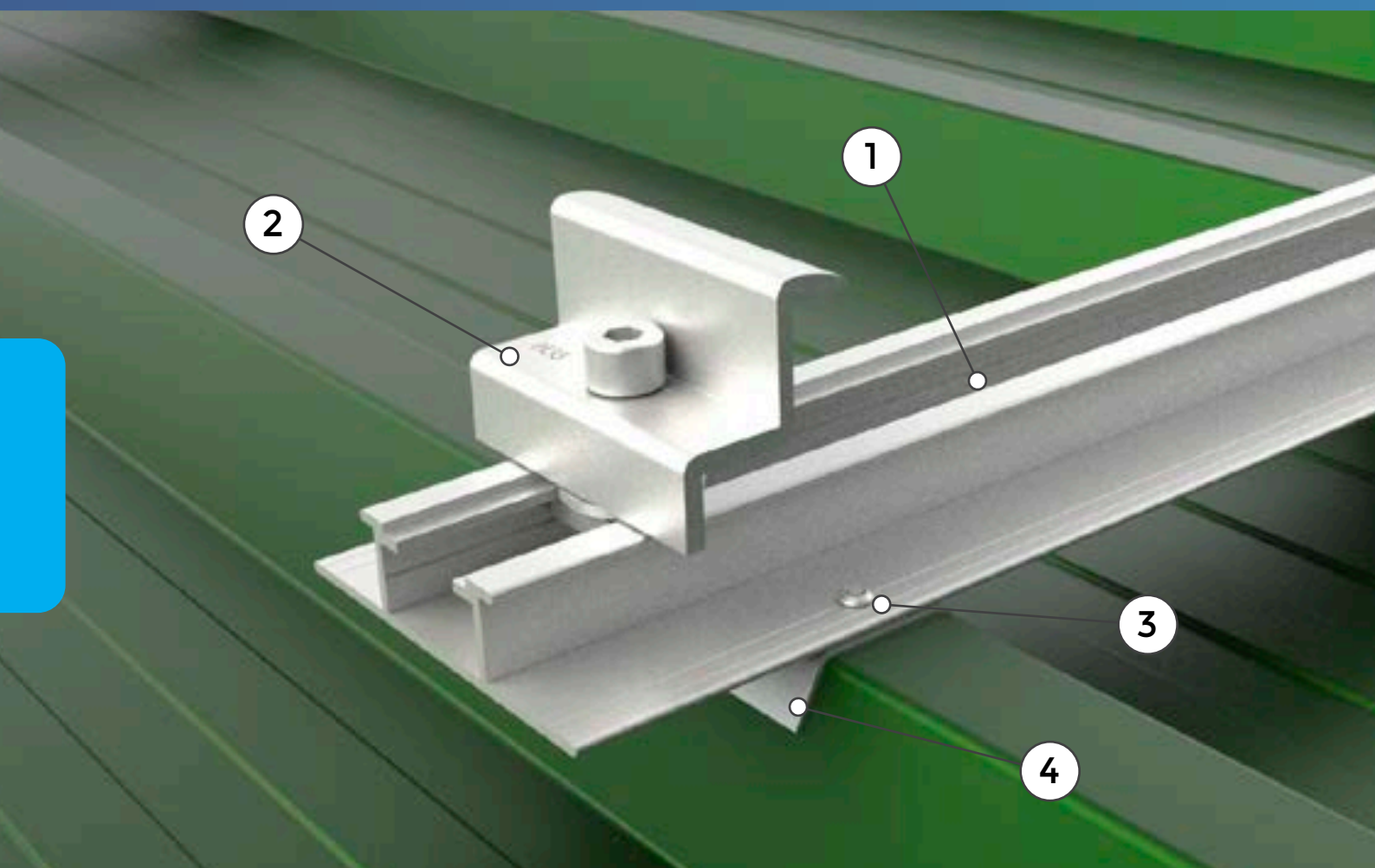


TRAPEZOIDAL SHEET METAL/ONDULIN ROOFING



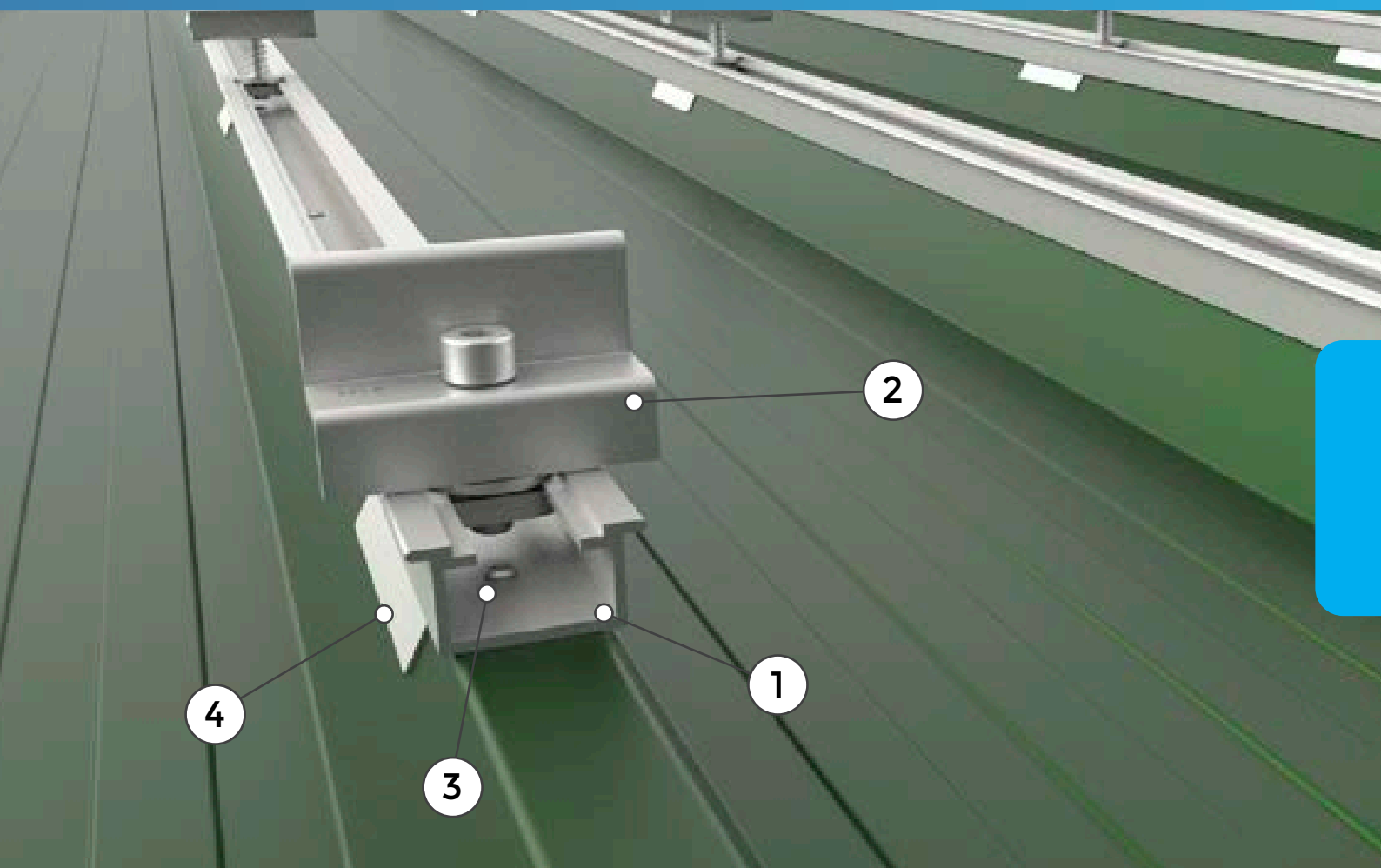
THE SYSTEM





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**
Aluminium blind rivet with EPDM gasket
- 4 HE-ALBUT-50**
One-sided butyl sealing tape for photovoltaic installations




EXAMPLE OF VERTICAL STRUCTURE ON TRAPEZOIDAL SHEET METAL ROOF

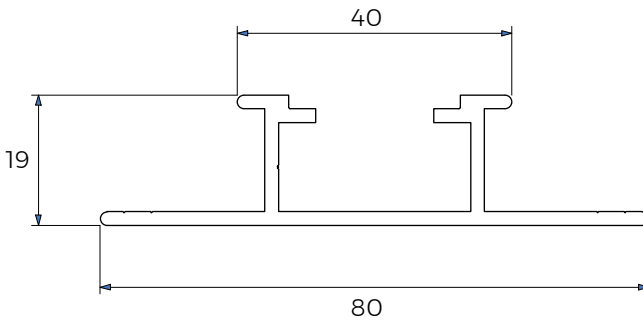
- 1 HE-PR102**
Mounting rail for vertical installation of photovoltaic panels on trapezoidal sheet metal roofs
- 2 HE-MTR-35**
End aluminium preassembled photovoltaic clamp, "Rapid Locking System"
- 3 HE-RIV52191**
Aluminium blind rivet with EPDM gasket
- 4 HE-ALBUT-50**
One-sided butyl sealing tape for photovoltaic installations

HORIZONTAL MOUNTING RAIL SERIES HE-PR100

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



 50pz 300 mm bar slice



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
HE-PR101-03	0,731	300	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-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.

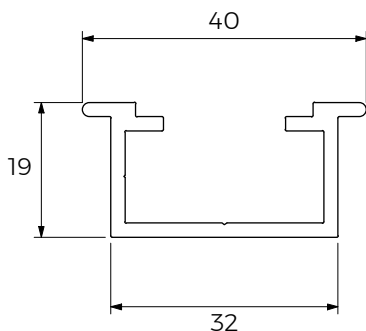


MADE TO MEASURE



VERTICAL MOUNTING RAIL SERIES HE-PR100

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



PRODUCT CODE	WEIGHT (Kg/m)	LENGTH (mm)	AREA (mm ²)	I _x (mm ⁴)	I _y (mm 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-RIV52191** - Aluminium rivet 5,2 x 19,1 mm 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.

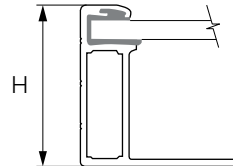
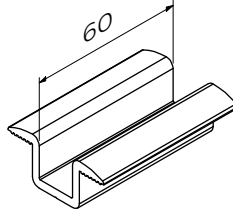
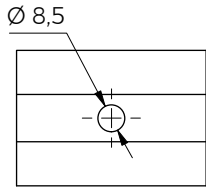
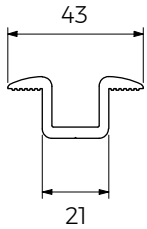
Apply the clamps to the upper profile groove.



MADE TO MEASURE

MID SIMPLE CLAMP

Mid simple aluminium clamp for photovoltaic modules



 100 pz

PRODUCT CODE	WEIGHT (gr)	H - MODULE THICKNESS (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.



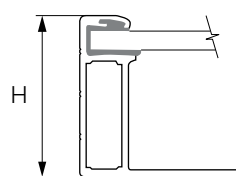
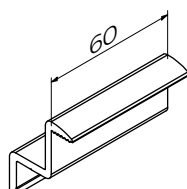
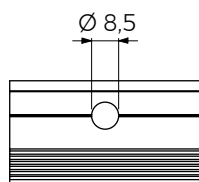
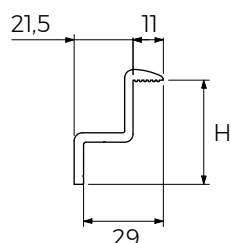
CUSTOMIZABLE

 UPON REQUEST Black anodized



END SIMPLE CLAMP

End simple aluminium clamp for photovoltaic modules



50 pz

PRODUCT CODE	WEIGHT (gr)	H - MODULE THICKNESS (mm)	CLAMP FOOTPRINT (mm)
HE-MTS-30	32	30	21,5
HE-MTS-31	32	31	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.

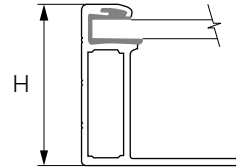
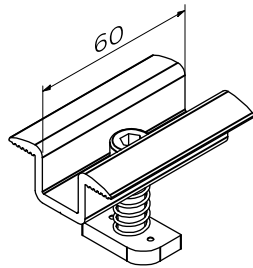
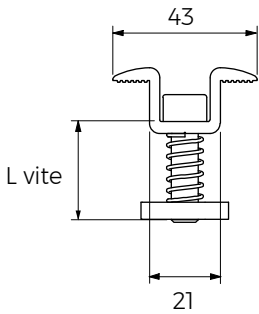


CUSTOMIZABLE

■ ON REQUEST Black anodized

PREASSEMBLED MID CLAMP

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



100 pz

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.



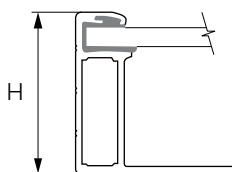
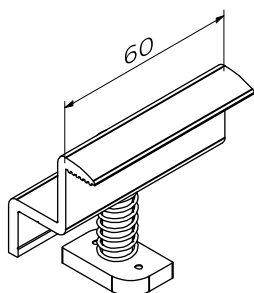
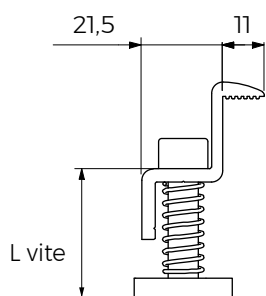
CUSTOMIZABLE

■ ON REQUEST Black anodized



PREASSEMBLED END CLAMP

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



50 pz

PRODUCT CODE	WEIGHT (gr)	H - MODULE THICKNESS (mm)	CLAMP FOOTPRINT (mm)	THREADING	L SCREW (m)	TORQUE (Nm)	TIGHTENING SPANNER
HE-MTM-30	49	30	21,5	M8	25	15	6
HE-MTM-31	50	31	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 HE-PR300



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.

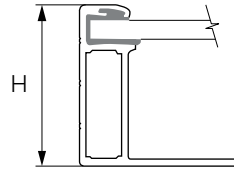
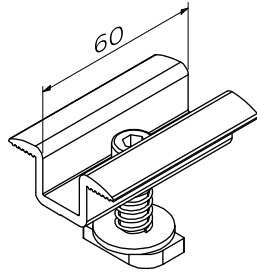
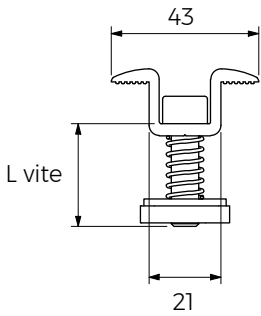


CUSTOMIZABLE

■ ON REQUEST Black anodized

RLS MID CLAMP

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



PRODUCT CODE	WEIGHT (gr)	H - MODULE THICKNESS (mm)	CLAMP FOOTPRINT (mm)	THREADING	L SCREW (m)	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.



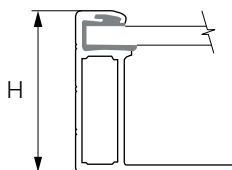
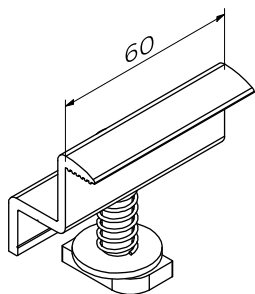
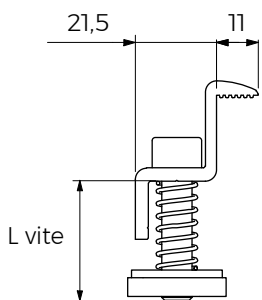
CUSTOMIZABLE

■ ON REQUEST Black anodized



RLS END CLAMP

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



50 pz

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-31	56	31	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.

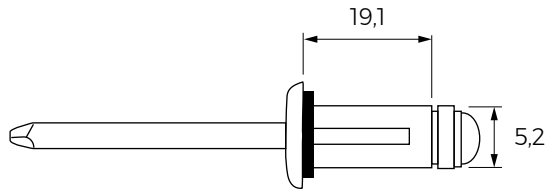


CUSTOMIZABLE

■ ON REQUEST Black anodized

ALUMINIUM BLIND RIVET

Aluminium blind rivet for photovoltaic systems, with EPDM gasket



250 pz

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 aluminium/butyl sealing tape.



OPERATING INSTRUCTIONS

Drill holes in structure profile HE-PR101/HE-PR102 and the trapezoidal sheet metal underneath with \varnothing 5,5 mm hole.

Insert the rivet and use the riveting machine to fasten it.



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.



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

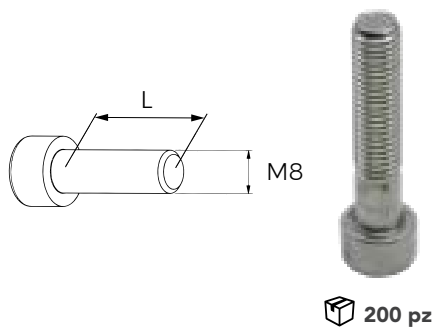


TO BE USED FOR:

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

COMPONENTS AND SPARE PARTS FOR SIMPLE CLAMPS

Stainless steel screw for Hammer Energy solar clamps



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.



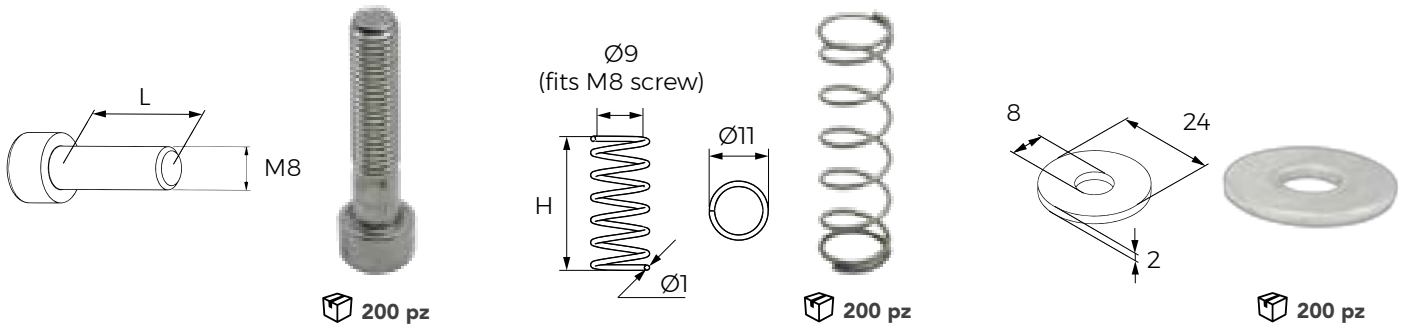
OPERATING INSTRUCTIONS

For the HE-MIS and HE-MTS clamps: insert the screw in the clamp, then screw it onto cam.



COMPONENTS AND SPARE PARTS FOR RLS PREASSEMBLED CLAMPS

Stainless steel screw and spring for Hammer Energy solar clamps



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-MIR-31	HE-RO08X24		
HE-MTM-35	-		
HE-MTR-35	HE-RO08X24	HE-VI08X30	HE-M03
HE-MIM-35	-		
HE-MIR-35	HE-RO08X24		
HE-MTM-38/40/42/44	-		
HE-MTR-38/40/42/44	HE-RO08X24		
HE-MIM-42	-	HE-VI08X35	HE-M02
HE-MIR-42	HE-RO08X24		
HE-MTM-46	-		
HE-MTR-46	HE-RO08X24		
HE-MIM-46	-		
HE-MIR-46	HE-RO08X24	HE-VI08X40	HE-M02
HE-MTM-50	-		
HE-MTR-50	HE-RO08X24		
HE-MIM-50	-		
HE-MIR-50	HE-RO08X24		
HE-MTM-50	-	HE-VI08X45	HE-M02
HE-MTR-50	HE-RO08X24		
HE-MIM-50	-		
HE-MIR-50	HE-RO08X24		
HE-MTM-50	-		
HE-MTR-50	HE-RO08X24		
HE-MIM-50	-		
HE-MIR-50	HE-RO08X24		
HE-MTM-50	-		



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.

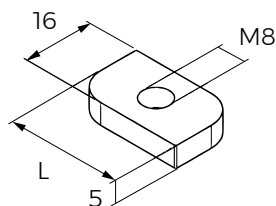


OPERATING INSTRUCTIONS

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

CAM FOR CLAMPS

Cam for Hammer Energy photovoltaic clamps



 200 pz

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

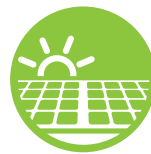
For HE-MIS e HE-MTS clamps: screw the cam to the metric screw HE-VI08X...after inserting the screw into the clamp.

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.

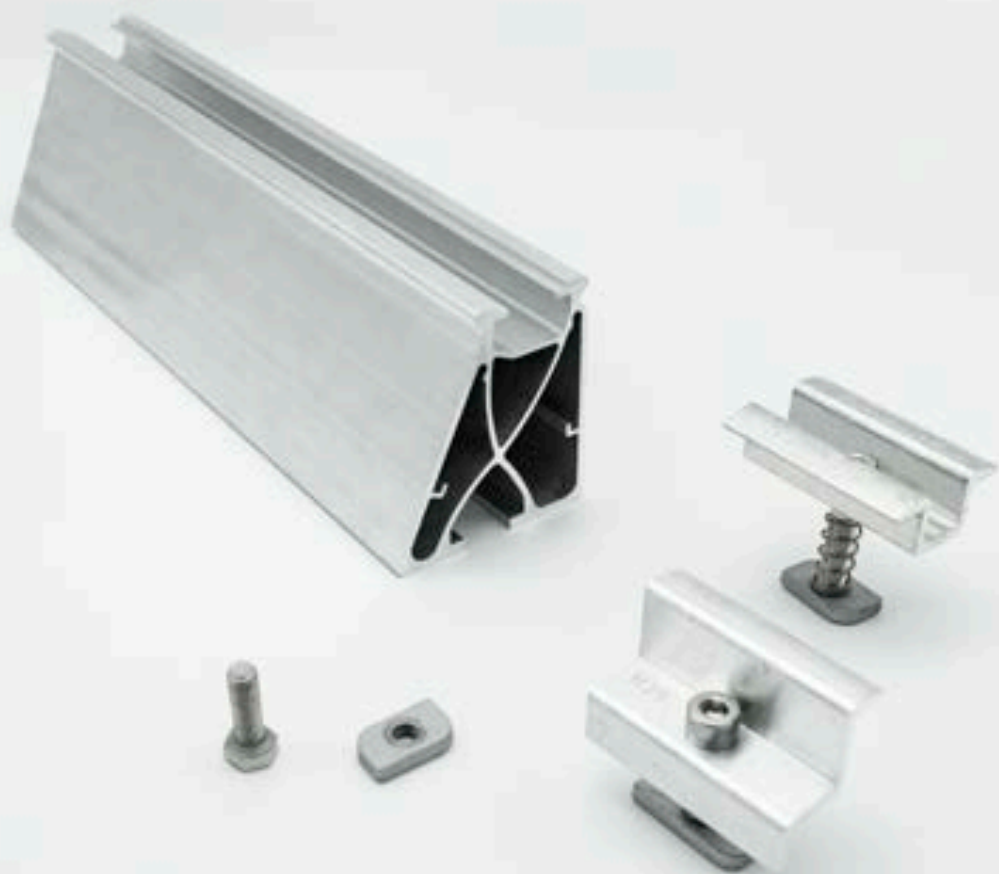


NOTES





GROUND-MOUNTED PHOTOVOLTAIC INSTALLATIONS

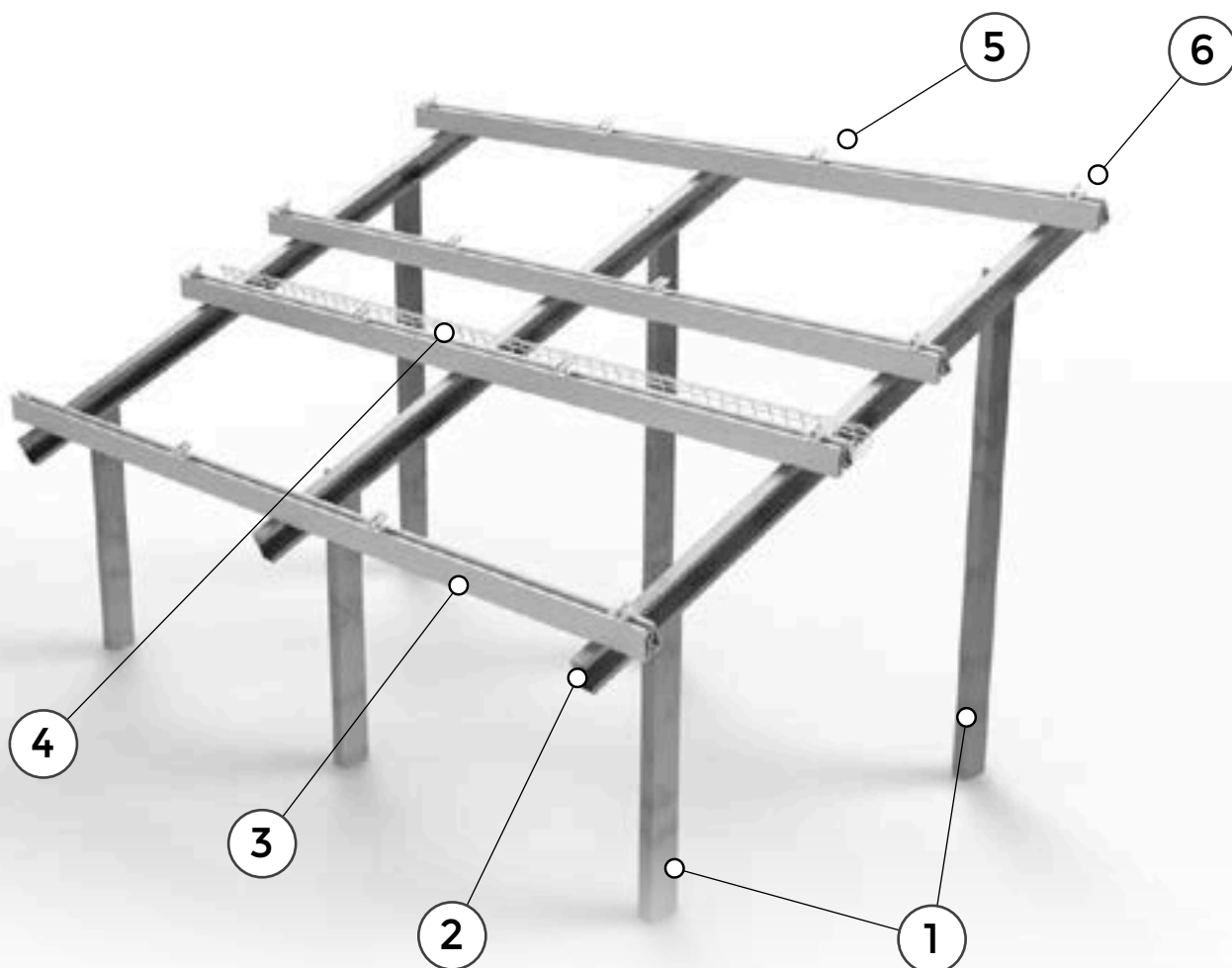
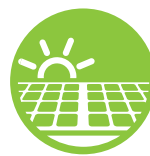


THE SYSTEM





EXAMPLE OF GROUND-MOUNTED
PHOTOVOLTAIC INSTALLATION



1 FOUNDATION POLE
Hot-dip galvanized steel IPE foundation pole

2 BEAM
Hot-dip galvanized steel perforated beam

3 HE-PR301-60
Aluminium photovoltaic structure profile,
6000 mm length

4 HE-PC300
Cable tray in galvanized welded steel wire

5 HE-MIM / HE-MIR
Mid clamp

6 HE-MTM / HE-MTR
End clamp

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

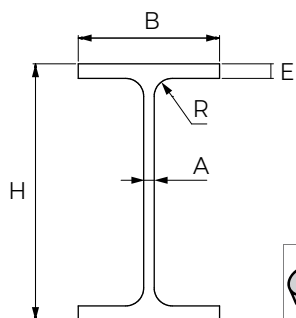
AFTER-SALES SERVICE

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



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



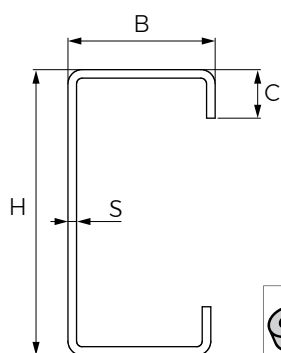
OPERATING INSTRUCTIONS

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

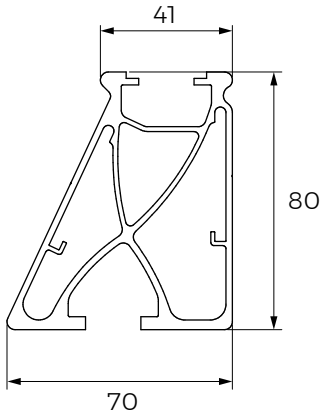


OPERATING INSTRUCTIONS

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.

STRUCTURE PROFILES SERIES HE-PR300

Aluminium photovoltaic structure profile for ground-mounted photovoltaic installations



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-PR301-60	2,669	6000	9,848	77,848	35,287	27,642	18,641



PRODUCT STRENGTHS

FAST

Saves 50% on field installation time.

LIGHT

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.



TO BE USED WITH:

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



OPERATING INSTRUCTIONS

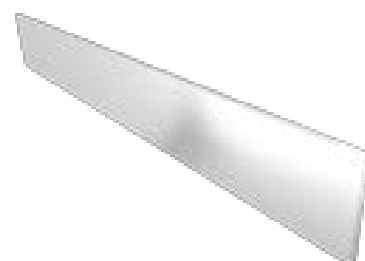
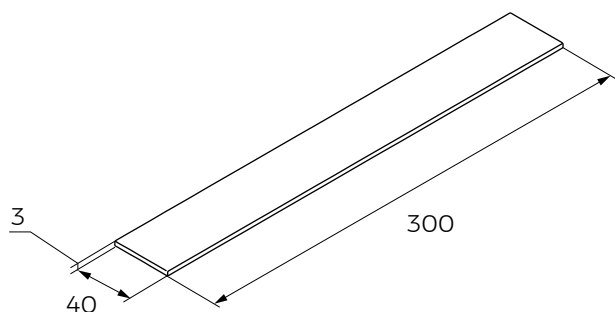
Define the design of the 2 piles ground installation according to the snow and wind loads of the area of installation, as directed by the structural engineer and/or geologist

- ▶ 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 pz

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

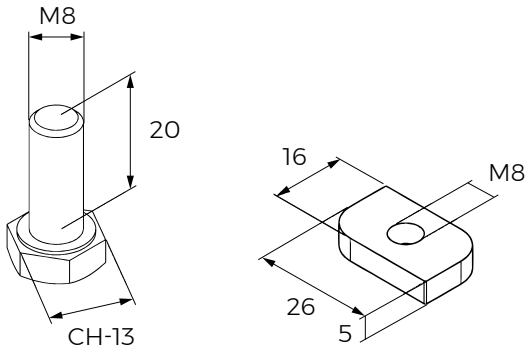
Fasten the HE-GPR-300 junction to the HE-PR301 structure profile using self-drilling screws (not included in the package).



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.



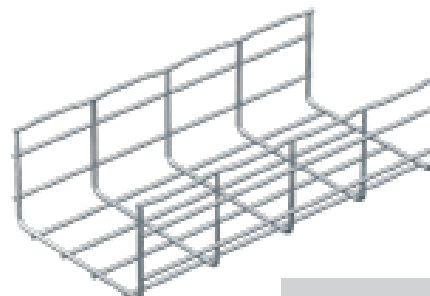
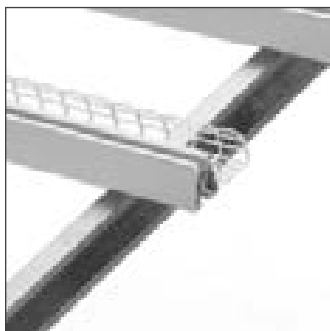
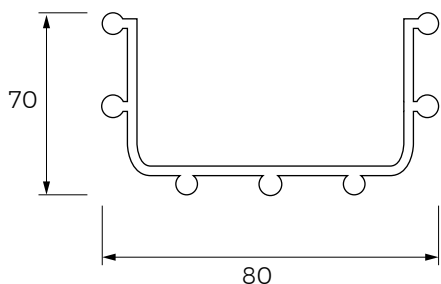
OPERATING INSTRUCTIONS

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.



CABLE TRAY

Cable tray in galvanised welded steel wire, 2000 mm length



PRODUCT CODE
HE-PC200



PRODUCT STRENGTHS

LIGHTWEIGHT

The cable tray is light but strong for tidy cable routing.

DURABLE

The galvanisation treatment protects the steel from corrosion and weathering.

SIMPLE

Thanks to the clip, the fixing to the frame profile is quick and easy

SAFE

The wire mesh structure prevents insects from forming nests and small animals from damaging the cables.



OPERATING INSTRUCTIONS

Fasten the steel wire cable tray to the HE-PR301 structure profile by means of the fastening clip.

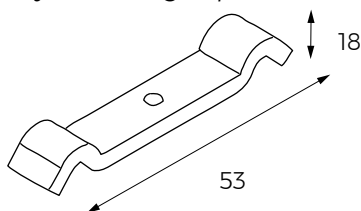


TO BE USED WITH:

- ▶ HE-PR301 - Aluminium structure profile for PV ground installations
- ▶ HE-CF200 - Cable tray fastening clip in soldered wire

CABLE TRAY FASTENING CLIP

Cable tray fastening clip in soldered wire



PRODUCT CODE
HE-CF200



PRODUCT STRENGTHS

STRONG

The steel guarantees strength over time.

DURABLE

The galvanisation treatment protects the steel from corrosion and weathering.

QUICK

Fixing the clip with a self-drilling screw is quick thanks to the perforation line along the HE-PR301 aluminium structure profile.



OPERATING INSTRUCTIONS

Position the clip to the galvanised welded steel wire cable tray; screw it to the aluminium structure profile, using a self-drilling steel screw (not included in delivery).

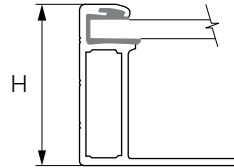
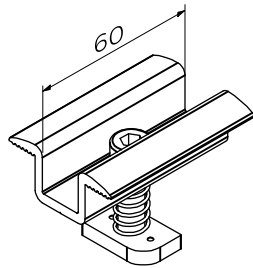
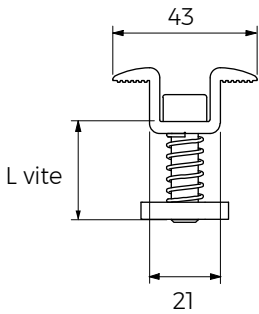


TO BE USED WITH:

- ▶ HE-PR301 - Aluminium structure profile for PV ground installations
- ▶ HE-PC200 - Cable tray in galvanised welded steel wire

PREASSEMBLED MID CLAMP

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



100 pz

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.



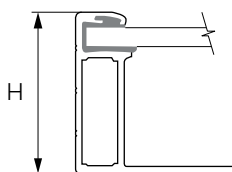
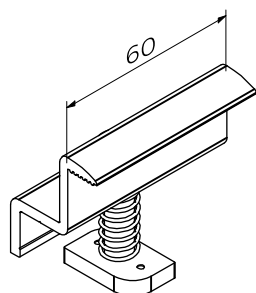
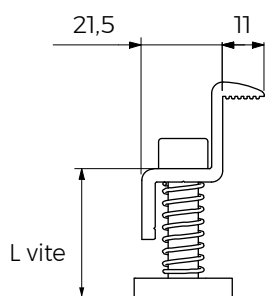
CUSTOMIZABLE

■ ON REQUEST Black anodized



PREASSEMBLED END CLAMP

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



50 pz

PRODUCT CODE	WEIGHT (gr)	H - MODULE THICKNESS (mm)	CLAMP FOOTPRINT (mm)	THREADING	L SCREW (m)	TORQUE (Nm)	TIGHTENING SPANNER
HE-MTM-30	49	30	21,5	M8	25	15	6
HE-MTM-31	50	31	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 HE-PR300



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.

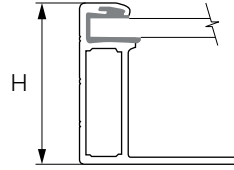
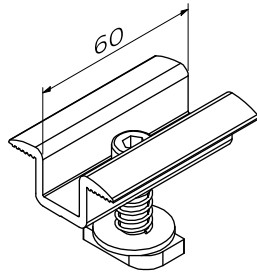
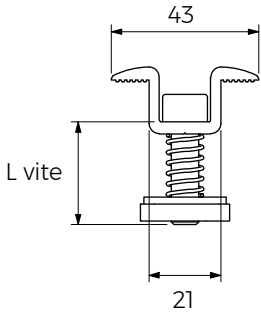


CUSTOMIZABLE

■ ON REQUEST Black anodized

RLS MID CLAMP

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



PRODUCT CODE	WEIGHT (gr)	H - MODULE THICKNESS (mm)	CLAMP FOOTPRINT (mm)	THREADING	L SCREW (m)	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.

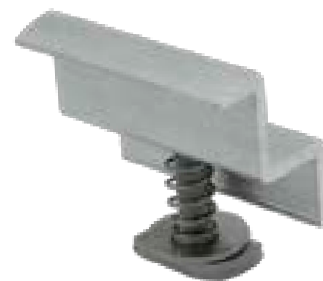
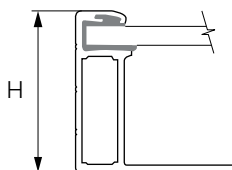
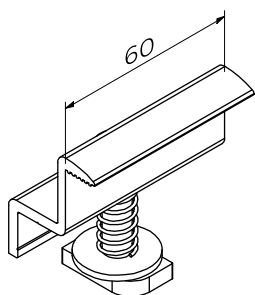
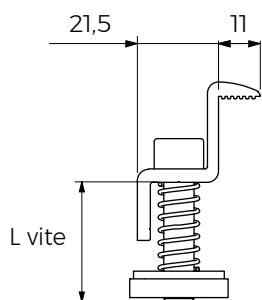
CUSTOMIZABLE

■ ON REQUEST Black anodized



RLS END CLAMP

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



50 pz

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-31	56	31	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.

CUSTOMIZABLE
■ ON REQUEST Black anodized

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. 2 - 2024



Hammer Energy is a trademark by:

Hammer s.r.l.

Via della Guardia, 11/13/15/17/19
14048 Montegrosso d'Asti - AT

www.hammerenergy.solar

hammer@hammer.biz

