

From visions to solutions

High-quality mounting systems for almost all common PV systems



Our vision - Your solution

Our Company

Since 1997, the team at Renusol has been developing, producing and selling mounting systems for the photovoltaic industry. PV solutions have been developed for all types of roof- and ground applications that are easy to plan and fast and effective to install.

Because of extensive experience in the international market and customizing PV systems to installer needs, Renusol has become a European market leader in roof integration and flat roof PV mounting solutions. Over 2.4 million photovoltaic modules have been installed worldwide on Renusol mounting systems.

Renusol has a sales and support network covering European core markets. With the addition of the Renusol America in 2011, Renusol mounting solutions are now available for the US market.

Renusol is headquartered in Cologne with the Research and Development Department based in Berlin.



Renusol at a glance

- 1997** Foundation as Econergy GmbH
- 1998** Market Introduction ConSole
- 2003** Market Introduction InterSole
- 2004** Takeover by Ubbink BV, NL, Change of Name: Ubbink Econergy Solar GmbH
- 2005** Integration into the Centrosolar Group
- 2006** Development into the European Market
- 2007** Expansion to France
- 2009** Change of Name: from Ubbink Econergy Solar GmbH to Renusol GmbH
- 2010** Foundation Renusol America Inc. in Atlanta

Mounting Systems

Product overview



Flat-roof: *ConSole / ConSole +*



On-roof: *VarioSole SE / MetaSole*



Integrated: *IntraSole SR / InterSole SE*



Ground-mounting: *TerraSole*

ConSole

Mounting system for PV modules on flat roofs and ground areas

The ConSole mounting system, available in four sizes, allows the quick and cost-effective assembly of all marketable framed PV modules on the flat roof without damaging the roofing as well as on ground areas. Simply fix the special aluminium section on the module, weight the ConSole according to the structural analysis and screw the module on the ConSole. The ConSole is made of recycled plastics, durable, weather-proof and absolutely chlorine-free. Furthermore, it is stackable, weights only a few kilograms and does not need any maintenance.



ConSole at a glance

- Mounting system for PV systems on flat roofs with a maximum inclination of 5° and on appropriate ground areas
- Straightforward and permanently stable installation
- No piercing of the roofing thanks to the patented ballast concept
- Light materials such as HDPE and PP plastics have little influence on the roof load
- Optimum irradiation angle of 25°
- Material: ConSole made of HDPE and/or PP, aluminium and/or clamp profiles, fastening material
- Also available as **ConSole DS** for thin-film modules 1100 mm x 1300 mm
- **TriSole**, ideal for PV-plants on flat-roofs with corrugated and trapezoidal sheets and for suitable ground surfaces



ConSole +

Mounting system for PV modules on flat roofs and ground areas

The ConSole+ is a further development of a PV mounting system, proven and successful in the market since 15 years. Due to advantageous benefits, ConSole+ sets new standards in all technical relevant areas of PV mounting. ConSole+ is a reasonably priced and efficient PV mounting system. The aerodynamically shape of ConSole+ results in a reduction of the necessary ballast. In the outer rows of a ConSole+ system, new developed windshots, named Streamliner+, prevent a higher wind load.



ConSole + at a glance

- Mounting system for PV systems on flat roofs with a maximum inclination of 5° and on appropriate ground areas
- Reduced ballast and maximization of surface coverage due to a low pitch angle of 15°
- Reduced wind load in the border areas due to the usage of Streamliner+
- Easy and fast fixation of the mounting rail
- For framed PV modules of 1570-1730 mm x 920-1054 mm (width x height)
- Optimum ventilation due to ventilation spots at the upper and lower part of ConSole+
- Material: **ConSole+** and Streamliner+ made of HDPE, aluminium and/or clamp profiles, fastening material

VarioSole SE

On-roof mounting system for PV modules on pitched roofs

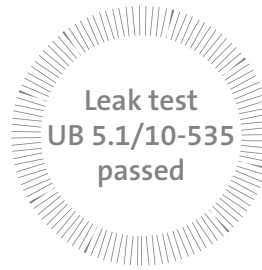
The universal VarioSole SE mounting system allows for easy, fast and cost-effective assembly of PV modules on the roof. The VarioSole SE is height-adjustable to be able to achieve optically perfect PV surfaces on uneven roofing. The patented module clamps universally match to all marketable framed modules. The installation with cross rail connectors is possible. The components are also available in black.



VarioSole SE at a glance

- Flexible on-roof mounting system for PV systems on pitched roofs
- For all framed PV modules with frame height of 31 mm and 34-51 mm
- Removing of the roofing not required
- Suited for all roofing types (slate, plain tile, corrugated Eternit plates)
- Enables an optically perfect PV-surface also on uneven roofing
- Stable, durable and universal, straightforward and easy installation
- Universal adjustable, patented module clamps
- Mounting in portrait and landscape format possible
- Material: roof hooks made of aluminium diecast and/or stainless steel, mounting rails and rail connectors made of weather-resistant aluminium, fastening material
- Also available as **VarioSole DS**, for thin-film modules with 1100 x 1300 mm size





MetaSole

On-roof mounting system for PV modules on trapezoidal sheet roofs

The MetaSole mounting system allows for easy, fast and cost-effective assembly of all marketable, framed PV modules on pitched roofs covered with trapezoidal steel sheets. Special clamp bases are directly screwed on the crest of the trapezoidal sheet using selfdrilling screws and then, the vertically adjustable module clamps are clicked on them to provide safe fit of the modules.



MetaSole at a glance

- Quick and easy, reasonably priced solution for all pitched roofs covered with trapezoidal metal sheet
- Clamp bases allow fast and easy mounting
- Framed PV modules of 31 mm and 34-51 mm height
- Roof pitch 5-45°
- Building-authority approval DiBt Z-14.4-627 submitted
- Trapezoidal metal panels with sheet thickness between 0.40 mm and 1.00 mm
- Snow load zone 3 and wind load zone 4
- Minimizing of logistic cost due to pre-assembled components
- Material: Clamp bases, self drilling screws, middle and end clamps, EPDM seals (absolute rain-water-tightness/density test UB 5.1./10-535)



- Qualified PV Mounting System
- Periodic inspection



IntraSole SR

Fully integrated mounting system for PV modules in pitched roofs

IntraSole SR is a mounting system with water drainage above the modules which is completely integrated in the roof. The system is convincing through its freely placeable mounting brackets to provide optimal load distribution, variable module clamps for the assembly of nearly all marketable framed modules and perfectly matched components which avoid the penetration of rain and condensate water into the roof. To be able to perfectly integrate the system optically into black roofs it is also available with black components.



IntraSole SR at a glance

- Innovative BIPV system with water drainage above the modules
- For mounting of all normal framed modules with window thicknesses of 34-50 mm with an inclination from 23°. (For roof pitches of 14° to 23°, additional measures for making the roof weatherproof are required according to the relevant guidelines.)
- Harmonized module integration through optimal height adjustment via brackets with slotted holes and the proven variable module clamps
- DIN 1055 – approved for snow load zone 2 (France B2), wind load zone 3
- Driving rain test carried out successfully according to prEN 1560
- Straightforward and permanently stable installation
- Material: mounting rails, module clamps, brackets, connectors, cross profiles, top-hat profiles, gutters, adapters above. Black powder coated or anodized as for the IntraSole Black
- 10 years product guarantee
- Also available: **IntraSole CL**, for mounting of all normal frameless modules.





InterSole SE

Integrated mounting system for PV modules in pitched roofs

The InterSole SE is a mounting system integrated in the roof which ensures water tightness by overlapping InterSole plates. The plates made of durable plastics are hooked in the roof laths like gutter tiles. During the installation, the anchors fastened on them can be used as steps. The anchors hold the mounting rails, on which the vertically adjustable module clamps can hold nearly all marketable, framed modules. The system provides easy, quick and safe installation and is convincing through its reasonable price.



InterSole SE at a glance

- Roof integration system for PV systems into pitched roofs of 15°-70° inclination
- Harmonious module integration through optimal height adjustment via the patented mounting brackets
- For the installation of framed PV modules of 31 mm and 34-51 mm height
- DIN 1055 on actions on structures (through snow load, wind load...), Eurocode
- Straightforward and permanently stable installation
- Patented system
- Material: patented HDPE plates or rolls, anchors, Esthétivettes, fastening elements
- Version **InterSole XL** available for industry roofs



TerraSole

Ground-mounting system for PV modules/laminates

The flexible TerraSole mounting system allows for easy and fast installation of PV modules and laminates (TerraSole DS) on ground areas. The foundation of the posts is optionally established by driving in or fastening on strip foundation. Height-adjustable posts and mounting heads on pivot bearings (angle of inclination 15-35°) ensure that the system can follow the ground surface harmonically. Flexible module holders and clamps can carry nearly all marketable PV modules and laminates.



TerraSole at a glance

- Ground-mounted system for PV plants
- Harmonious module field due to maximum terrain adaptation thanks to patented ball joint bearing
- For framed PV modules of 34-51 mm height and/or thin-film modules (DS version)
- Layout with regard to DIN 1055 Parts 4 and 5 and/or Eurocode 5
- Straightforward and permanently stable installation
- Patented system
- Material: Sigma posts made of galvanised steel, aluminium mounting rails, module clamps and/or clamp profiles (TerraSole DS), fastening material
- Version **TerraSole DS** available for thin film modules.



Quality and Services

Certification

Renusol mounting systems are quality approved by TÜV (Technical Inspection Agency) and fulfill the requirements according to DIN 1055 regarding the loading capacity of bearing structures. Thanks to solid, weather-resistant materials like aluminium, stainless steel, aluminium die casting and HDPE all systems are reliable, resilient and designed for a long lasting use.



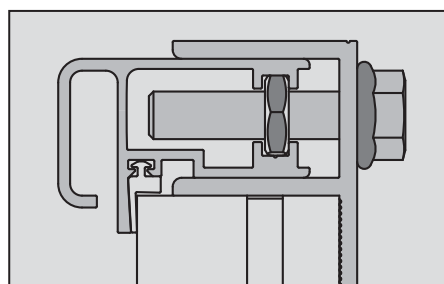
Comprehensive training and planning support for perfect mounting results

Renusol offers professional training courses to their customer. Both theoretical and practical technical and product knowledge is imparted in the half-day seminars. Upon request, Renusol offers regional training courses on a wholesaler's premises. Please send inquiries regarding the exact dates and the individual courses via E-Mail to info@renusol.com or call +49 221 788707-0



Detailed installation instructions

Our installation instructions explain each mounting step objectively and understandably. The relevant mounting details are shown step by step. Printed installation instructions are included with the delivery of every product. In addition, the latest version of the installation instructions are available for download at www.renusol.com



Comfortable project planning with our web-based configurator

With the Renusol project configurator available online around the clock, it is possible to configure suitable mounting systems for PV installations with just a few mouse clicks. The user-friendly online configurator provides maximum comfort for individual planning and for generating an offer. Moreover, all projects are clearly managed in a password protected area.



worldwide...

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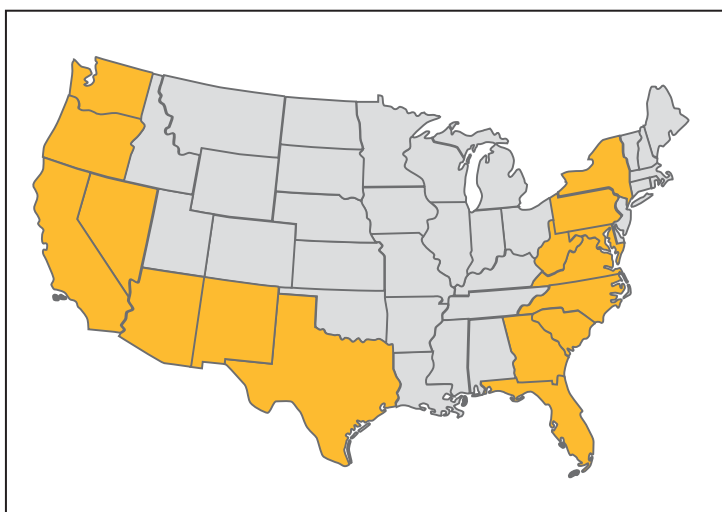
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Technical changes, mistakes and printing errors excepted.