

SUSTAINABLE SOLUTIONS



RIVERCLACK

SHAPING ROOFS

SUSTAINABLE SOLUTIONS

Whether you're looking to reduce your CO₂ emissions or your energy costs, Riverclack® eco-friendly products and green building solutions help you meet your sustainability goals without compromising on quality.

Durable materials / 100% recyclable and up to 95% recycled

Detailed LEED® credit information

High SRI coatings available to reduce Heat Island Effect

Lower carbon emissions thanks to site roll forming facilities that drastically reduce transportation mileage

Photovoltaic modules that can be installed at any time without affecting the integrity of the roof

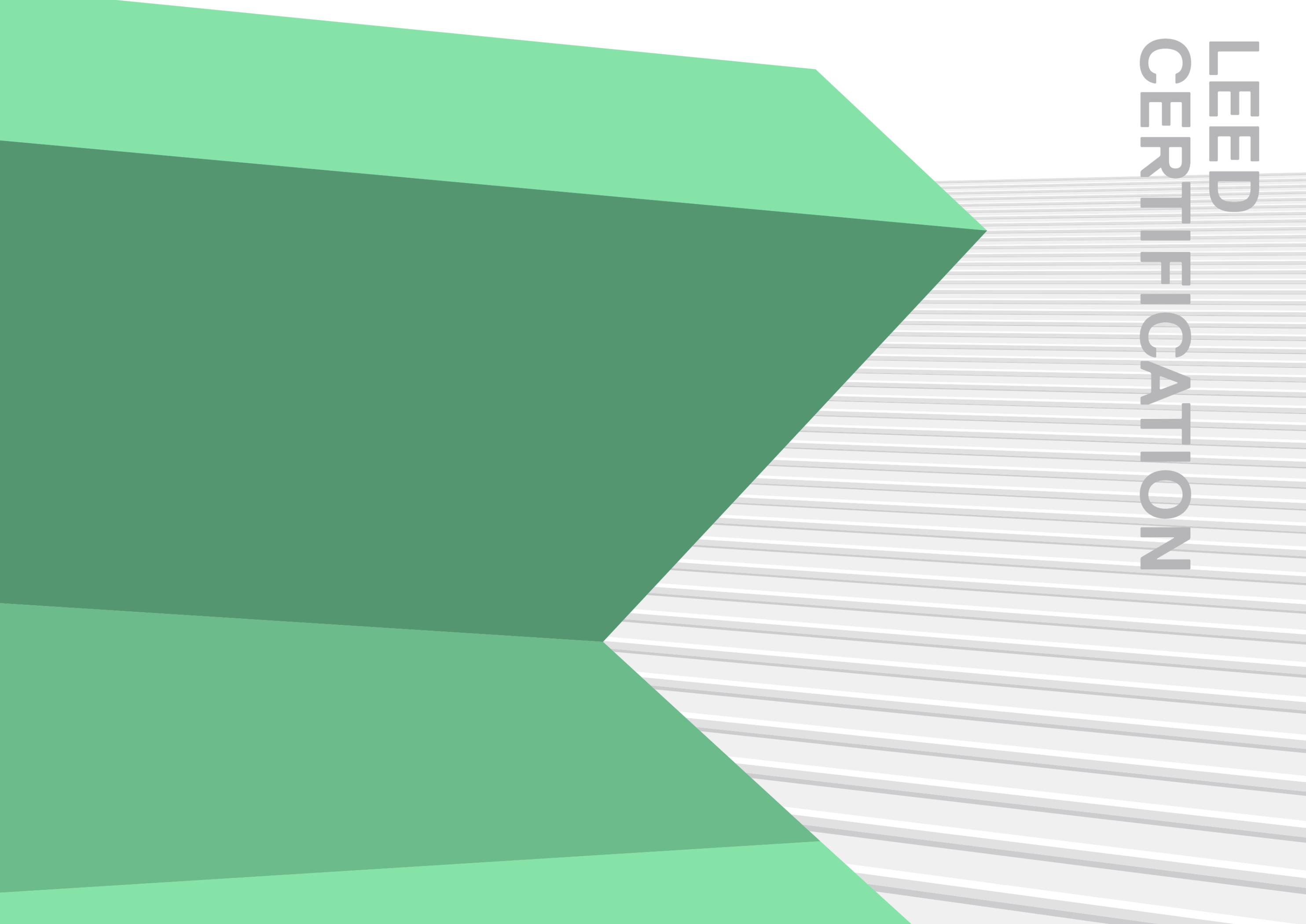
Long-lasting green roof options

ISO 14001 certified company

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LEED CERTIFICATION





RIVERCLACK CAN HELP YOU OBTAIN LEED CERTIFICATION

WHAT IS LEED®?

LEED® is an internationally recognized green building rating program designed to encourage construction of energy and resource efficient buildings that are also healthy to live in.

HOW DOES IT WORK?

LEED® promotes a whole building approach to sustainability. For a new construction, LEED® rates the green performance in seven main categories: Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, Indoor Environment Quality, Regional Priority and Innovation in Design.

Your building is awarded points towards credits in each category. The total number of points determines your LEED® certification level. LEED® 2009 has four certification levels: Certified, Silver, Gold and Platinum.

HOW DOES RIVERCLACK® HELP YOU ACHIEVE YOUR LEED® CERTIFICATION?

Riverclack® can help you gain points in four of the seven LEED® certification system categories (see chart overleaf).

RIVERCLACK AND LEED GREEN BUILDING PROGRAM CREDITS

SUSTAINABLE SITES (SS)

SS CREDIT 5.1: PROTECT / RESTORE HABITAT

Intent: conserve existing natural areas and restore damaged areas to provide habitat and promote biodiversity.

Riverclack® can't be directly eligible for points in this section, but can count towards credits. A Riverclack® Green Roof can count as a restored natural area.

SS CREDIT 5.2: MAXIMIZE OPEN SPACE

Intent: provide a high ratio of open space to development footprint to promote biodiversity.

Riverclack® can't be directly eligible for points in this section, but if designed to increase biodiversity, Riverclack® extensive green roofs can count towards credits.

SS CREDIT 6.1: STORMWATER DESIGN / QUANTITY CONTROL

Intent: Limit disruption of natural water hydrology by reducing impervious cover, increasing on-site infiltration, reducing or eliminating pollution from storm water runoff and eliminating contaminants.

Riverclack® can't be directly eligible for points in this section, but can count towards credits. The plants and growing medium of a Riverclack® Green Roof can absorb water that would otherwise become runoff, reducing the peak flow rates by 50% to 90% compared with conventional roofs.

SS CREDIT 6.2: STORMWATER DESIGN / QUALITY CONTROL

Intent: limit disruption and pollution of natural water flows by managing storm water runoff.

Riverclack® can't be directly eligible for points in this section, but can count towards credits. A Riverclack® Green Roof can manage the storm water runoff.

FURTHER LEED®: CREDIT INFORMATION

To discover exactly how Riverclack® can contribute to your LEED® green building rating, ask for a consultation with one of our trained LEED® experts.

SS CREDIT 7.2: HEAT ISLAND EFFECT / ROOF

Intent: reduce heat islands to minimize impact on microclimate and human and wildlife habitat.

Riverclack® can use coatings with an SRI (Solar Reflective Index) rating that meet the LEED® criteria for this credit. A Riverclack® Green Roof can also contribute towards credits here.

ENERGY & ATMOSPHERE (EA)

EA CREDIT 2: ON-SITE RENEWABLE ENERGY

Intent: encourage and recognize increasing levels of on-site renewable energy self-supply or order to reduce environmental and economic impacts associated with fossil fuel energy use.

Riverclack® provides a wide range of solutions for the use of photovoltaic modules that meet the LEED® criteria for this credit.

MATERIALS & RESOURCES (M&R)

MR CREDITS 4: RECYCLED CONTENT

Intent: increase demand for building products that incorporate recycled content materials, thereby reducing impacts from extraction and processing of virgin materials.

Riverclack® system products are 100% recyclable and have a high level of recycled content, helping you meet the LEED® criteria for these credits.

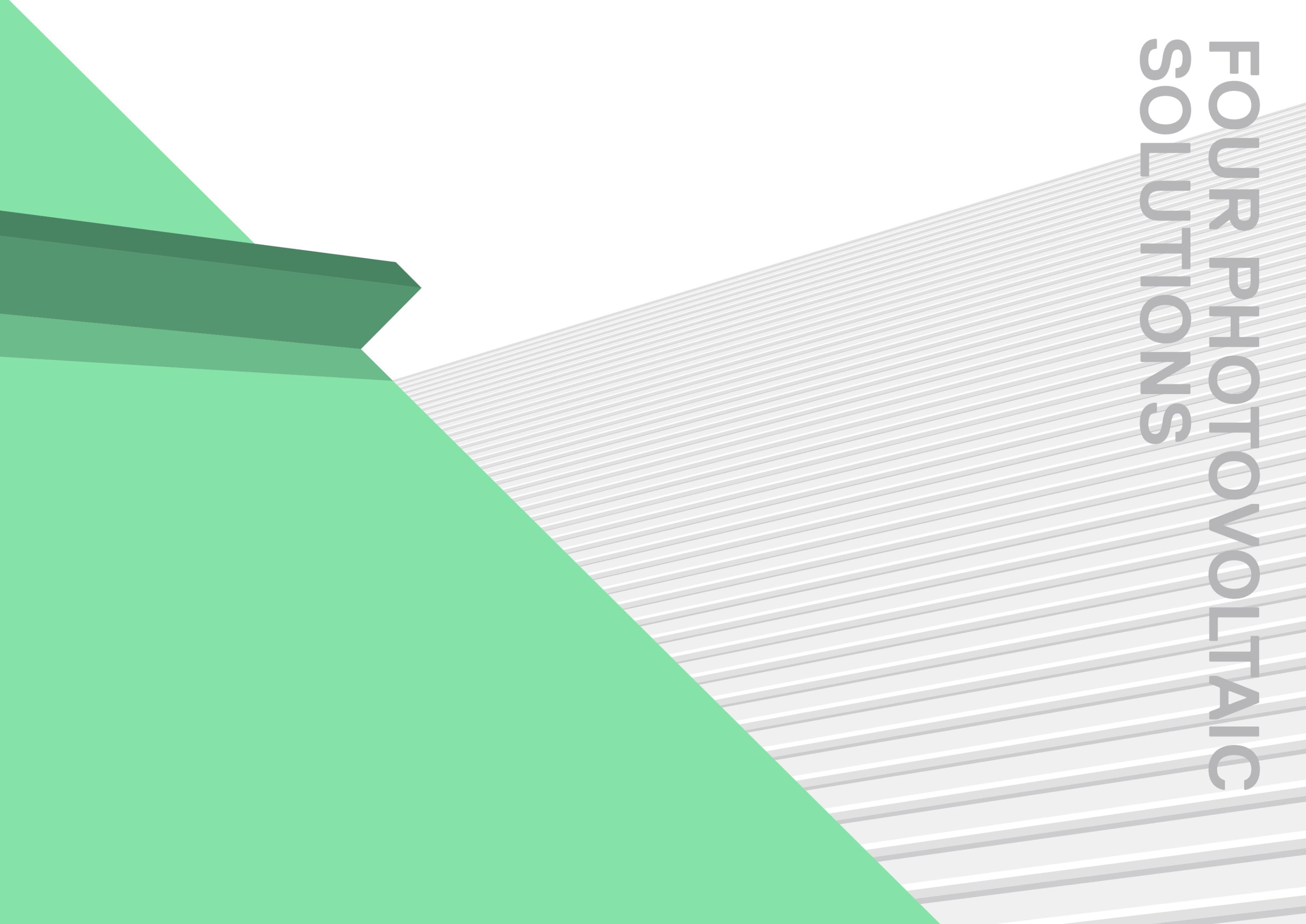
INDOOR ENVIRONMENTAL QUALITY (IEQ)

IEQ CREDIT 4.1: LOW EMITTING MATERIALS / ADHESIVE AND SEALANT

Intent: reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.

Sealants and tapes used for the installation of Riverclack® systems comply with the LEED® low-emissions requirements for this credit.

FOUR PHOTOVOLTAIC SOLUTIONS



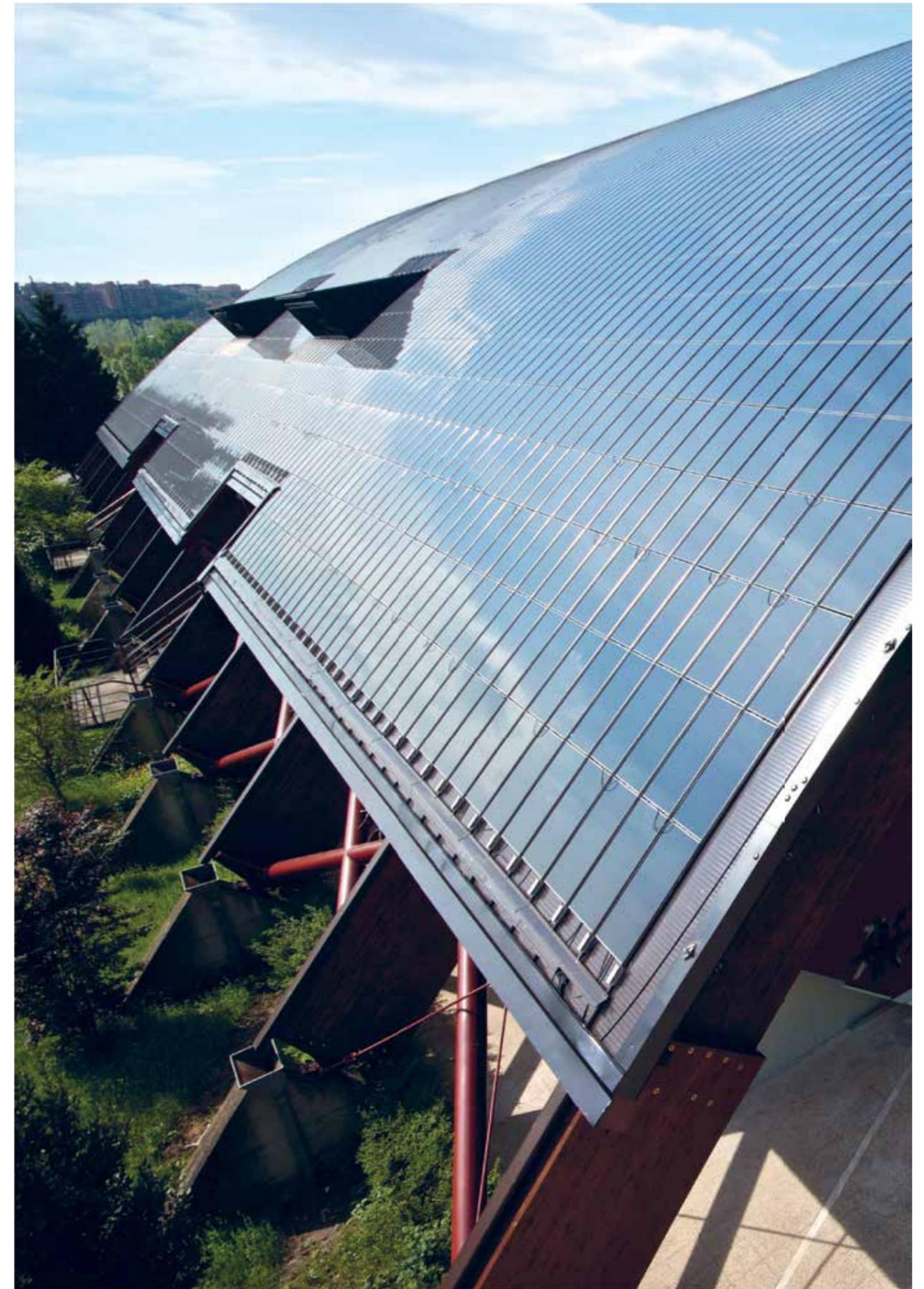
RIVERCLACK METAL ROOF AND PHOTOVOLTAIC SYSTEMS

A WINNING COMBINATION

How confident would you feel with a photovoltaic (PV) plant that wasn't built on a solid base? Exactly. The roofs on which most PV plants are installed will need replacing even before their payback period is up, making them a poor investment both financially and environmentally.

Riverclack® Solar Roofing Solutions are unlike any others on the market, combining high tensile aluminum alloys, snap-in locking systems and smart drainage systems to deliver the most reliable, quickly installed PV roofs ever.

SPORTS HALL / PERUGIA / ITALY



FOUR UNIQUE MOUNTING SYSTEMS TO FIT YOUR NEEDS

All Riverclack® Solar Roofing Solutions include SNAP-IN mechanisms for quick, solid, no-nonsense and perforation-free installation, so you can rest assured that the integrity of your roof will never be compromised.

Investing in a Riverclack® PV solution is a smart choice environmentally and financially. The long life guaranteed features of Riverclack® roof covering systems along with Riverclack's smart PV mounting options ensure a totally reliable solution that will reduce your building's energy costs for years to come.

4 SOLUTIONS

SOLAR ELIOS / Integration



SOLAR DECK / Versatility



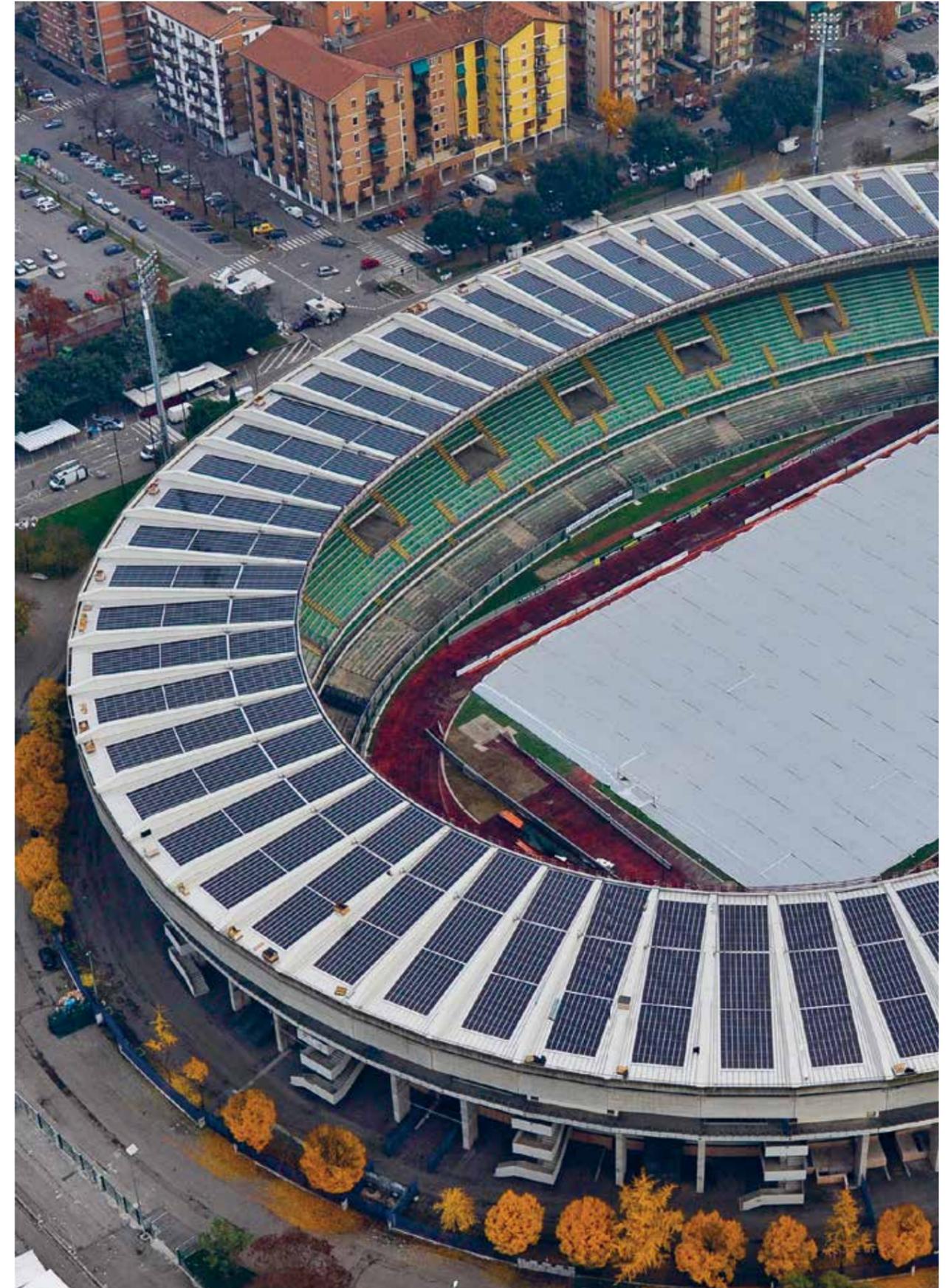
SOLAR FRAME / Enhanced Tradition



SOLAR CLIMPO / Freedom



BENTEGODI FOOTBALL STADIUM / VERONA / ITALY

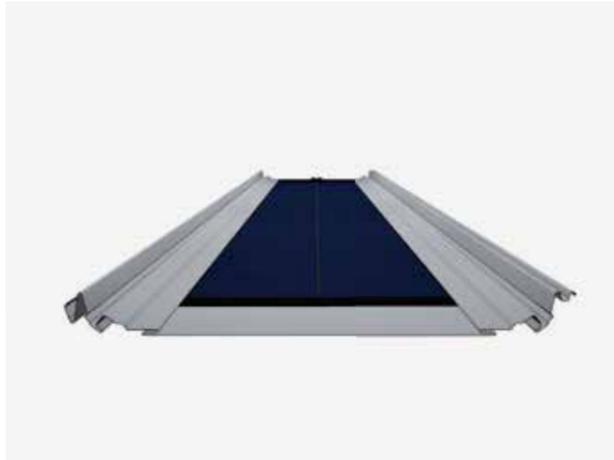


SOLAR ELIOS / INTEGRATION

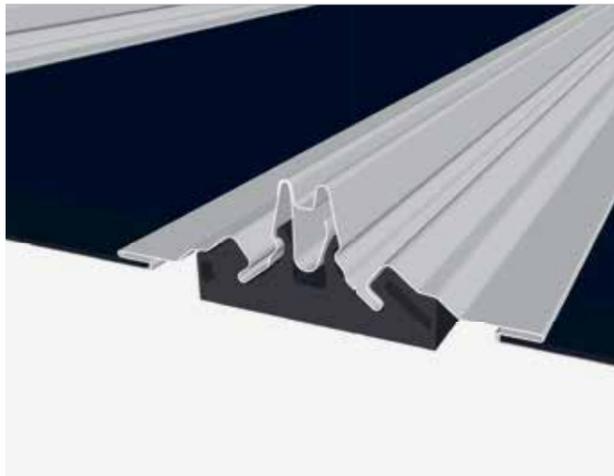
Lightness and reliability combined with optimal architectural and functional integration.

SOLAR ELIOS

OVERVIEW



DETAIL



PROJECT

RIMINI CONVENTION CENTER: 4.3MWp



INSTALLATION

1.



2.



3.



COMPLETE IN-ROOF PANEL INTEGRATION

ARCHITECTURAL INTEGRATION

ARCHITECTURAL FLEXIBILITY / CURVING

LIGHT WEIGHT /
NO STRUCTURAL REINFORCEMENT REQUIRED

FULLY WALKABLE / GLASS-FREE

NO ADDITIONAL COSTS FOR INSTALLATION
OF SOLAR PV MODULES

The Riverclack® SOLAR ELIOS system is based on flexible PV modules and can be used with both amorphous silicon (a-Si) and Copper Indium Gallium Selenium (CIGS) high-efficiency, flexible thin film laminates. There is also the possibility to incorporate the non-walkable Diamante polycrystalline laminates from Torri Solare.

Laminates are mechanically glued and sealed to the Riverclack® roof panels, guaranteeing the module's complete adhesion to its metal support for the entire lifespan of the roof itself.

With SOLAR ELIOS, you produce energy from the roof itself!

SOLAR DECK / VERSATILITY

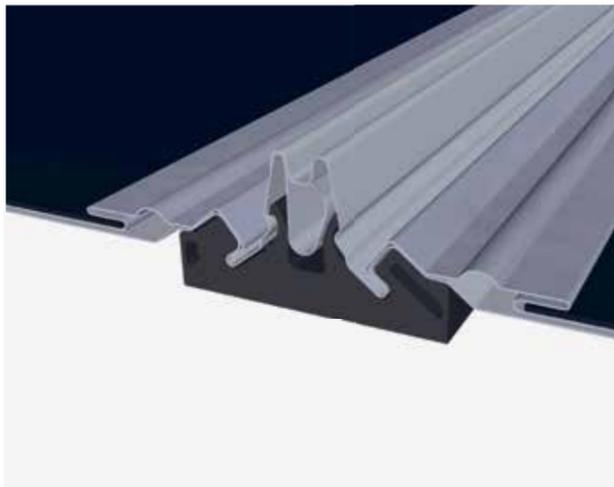
Exceptional architectural flexibility
and system versatility.

SOLAR DECK

OVERVIEW

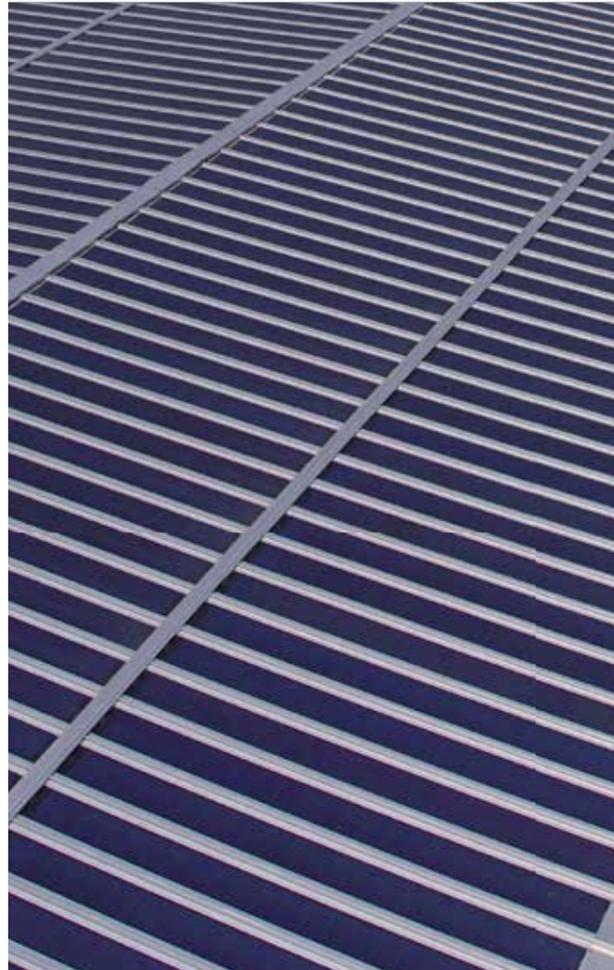


DETAIL



PROJECT

"CANTINA ETRUSCA" WINERY: 35KWp



INSTALLATION

1.



2.



3.



ARCHITECTURAL INTEGRATION

EXCEPTIONAL ARCHITECTURAL FLEXIBILITY / CURVING

LIGHT WEIGHT / NO STRUCTURAL REINFORCEMENT REQUIRED

FULLY WALKABLE / GLASS-FREE

MODULES ADDED OR REPLACED AT ANY TIME WITH MINIMAL EFFORT

EASY TO INSTALL / NO ROOF PENETRATION / NO ADDITIONAL ASSEMBLY

Riverclack® SOLAR DECK is the ideal system if you want to separate the costs of your roof from those of your PV plant, or if you want to add energy production to your existing (and already eco-friendly!) Riverclack® roof through an architecturally integrated solution.

Similar to the SOLAR ELIOS system, Riverclack® SOLAR DECK is based on the use of flexible thin film PV laminates. With SOLAR DECK, the laminates are glued and sealed to a metal tray that is then clipped into the Riverclack® panel without the need for perforation.

SOLAR DECK is easy to install and easy to replace should a module be damaged, simply unplug, unclip and replace!

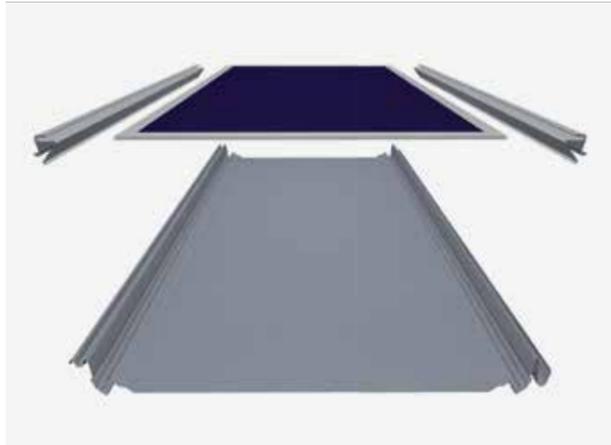
Because the system is so thin, it can also be curved for use on low radius curved roofs up to 5m.

SOLAR FRAME/ ENHANCED TRADITION

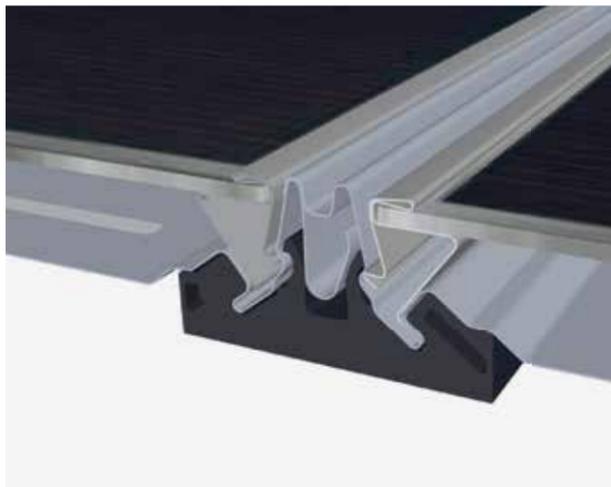
The ideal solution if you need to minimize the architectural impact of your PV system whilst looking for a high nominal power output from limited roof space.

SOLAR FRAME

OVERVIEW

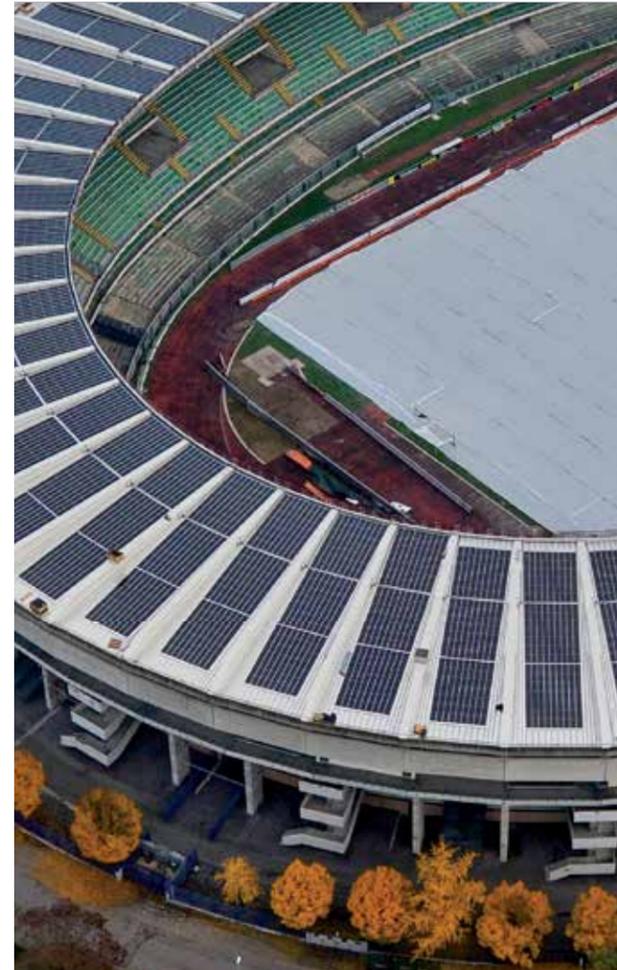


DETAIL



PROJECT

BENTEGODI FOOTBALL STADIUM: 999.1 KWp



INSTALLATION

1.



2.



3.



LOW ARCHITECTURAL IMPACT

MODULES ADDED OR REPLACED
AT ANY TIME WITH MINIMAL EFFORT

EASY TO INSTALL / NO ROOF PENETRATION

EXCELLENT VENTILATION /
NO TRADITIONAL FRAME LIMITING AIR STREAM

WIDE CHOICE OF SOLAR PV MODULES
AND SUPPLIERS

The Riverclack® SOLAR FRAME system uses a customized, high tensile metal frame that allows the snap-in installation of traditional rigid solar PV modules between the seams of the Riverclack® roof panels, thus minimizing the architectural impact.

The system gives you the choice of PV technology to suit your needs, from mono or polycrystalline to amorphous silicon, CIGS and CdTe.

The SOLAR FRAME mounting system is slipped along both sides of the PV modules which then simply click into place on the Riverclack® panels without any roof perforation.

SOLAR FRAME can be used with a 512mm PV panel width to fit into Riverclack®55 (550mm) roof sheets and a 600mm PV panel width to fit into Riverclack® 64 (640mm) roof sheets.

SOLAR CLIMPO / FREEDOM

The no-nonsense, quick and easy solution that delivers the quality, energy savings and long life you need.

SOLAR CLIMPO

OVERVIEW



DETAIL



PROJECT

MAIRAN WHAREHOUSE: 150KWp



INSTALLATION

1.



2.



3.



INSTALL WHENEVER YOU WANT

EASY TO INSTALL / NO ROOF PENETRATION

WIDE CHOICE OF SOLAR PV MODULES AND SUPPLIERS

With SOLAR CLIMPO, you have the choice of what to install and when to install it. Retrofit on an existing Riverclack® roof, or right from the start, SOLAR CLIMPO fits any kind of framed solar PV module to Riverclack® panels without any perforations.

Quick and easy to install, the SOLAR CLIMPO bracket allows for thermal movements and helps cut costs by eliminating the need for heavy mounting frames on the roof surface. Comprised of a polyamide two-slot bracket, a 5754 aluminum alloy locking clamp and a blocking screw, the geometric locking action of the clamp secures the bracket to the roof profile. The solar PV module is then fastened to the bracket and locked with a screw.

This simple system allows for the removal and replacement of single panels in case of damage.

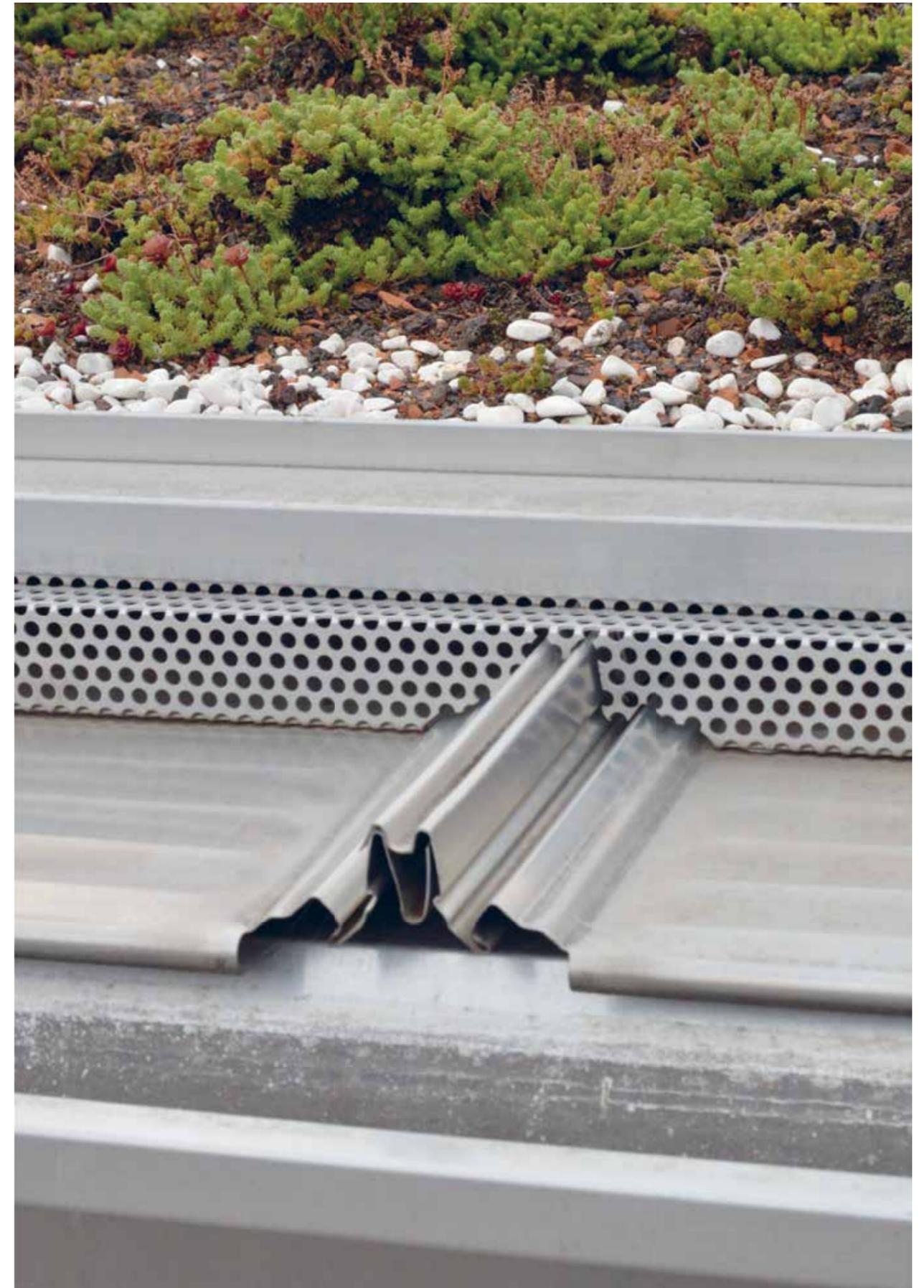
ACCESSORIES

Riverclack® Solar Roofing Solutions come with a series of accessories such as cable holders, cable covers and support brackets/clamps that ensure the optimal interface of the PV plant with your Riverclack® metal roof.



GREEN ROOFS

GREEN ROOFS/ FOR AN ECO-FRIENDLY URBAN ROOFSCAPE



THE BIG CHALLENGE OF THE URBAN ENVIRONMENT: MANY BUILDINGS LIMITED SPACE/ VERY LIMITED GREEN AREAS

HEAT ISLAND EFFECT

The lack of green areas in towns and cities not only creates a negative aesthetic and social impact, it helps to increase the air temperature through what is known as the “Urban Heat Island” (UHI) effect.

Thermal imaging shows us that built-up areas absorb more sunlight than vegetated areas, acting like a heat storage unit. Once released, that heat raises the air temperature and leads to increased energy consumption through air conditioning in warm weather.

Green roofs (or vegetated roofs) create vegetated ground on the open roof spaces of city buildings and help to combat the UHI effect through cooling action produced by the daily evapotranspiration cycles of plants.

MULTIPLE BENEFITS

The benefits of a Green Roof to the urban environment go far beyond a reduced UHI effect:

AESTHETIC IMPROVEMENT

IMPROVED AIR QUALITY

INCREASED BIODIVERSITY

STORM WATER MANAGEMENT

ADDITIONAL PUBLIC SPACE

IMPROVED ENERGY EFFICIENCY

IMPROVED ACOUSTIC INSULATION

A Riverclack® Green Roof can also make a significant contribution to the LEED® rating of your building, counting towards various credits in the Sustainable Sites category (see LEED® section of this brochure).

EXTENSIVE / INTENSIVE

EXTENSIVE GREEN ROOFS

LIGHTWEIGHT WITH SHALLOW RIB BUILD-UP HEIGHT INCLUDING VARIOUS SEDUM SPECIES, HERBS AND GRASSES.

ECO-ALTERNATIVE TO CONVENTIONAL SURFACE PROTECTION OR BALLAST LAYERS, SUCH AS GRAVEL OR PAVING.

NOT DESIGNED FOR PUBLIC ACCESS OR LEISURE PURPOSES.

MAINTENANCE REQUIRES 1-2 INSPECTIONS PER YEAR. GENERALLY DOES NOT REQUIRE IRRIGATION.

“BIODIVERSE GREEN ROOFS” ARE SPECIFICALLY DESIGNED TO INCREASE BIODIVERSITY BY ENCOURAGING A WIDER VARIETY OF BIRDS, INSECTS AND PLANT SPECIES TO THE AREA.



INTENSIVE GREEN ROOFS

DEEP GROWING MEDIUM THAT ALLOWS FOR USE OF TREES AND SHRUBS.

COMPARABLE TO BUILDING A CONVENTIONAL GARDEN ON A ROOF.

USUALLY ACCESSIBLE AND CAN RANGE FROM A PUBLIC GARDEN TO AN ENTIRE PARK.

GENERALLY QUITE COSTLY. REQUIRE EXTRA STRUCTURAL REINFORCEMENT TO THE BUILDING.



MAKE IT GREEN /MAKE IT RIVERCLACK

WATERPROOF

For any green roof system, high quality waterproofing is of the utmost importance. Riverclack®'s unique drainage channel guarantees no leaks into your building.

LONG-LASTING

A green roof delivers its real environmental and financial ROI over the long term, so you need a roof that will last. The aluminum surface of a Riverclack® roofing system provides an enduring solution with excellent protection against roots and moisture penetration.

ROBUST AND RELIABLE

Riverclack®'s exceptional structural performance can accommodate all extensive green roofs and many intensive green roofs. For intensive green roofs, you need to calculate the additional imposed loads from the chosen build-up.

ECO-FRIENDLY MATERIALS

Riverclack® Green Roofs use aluminum, a 100% recyclable material with a low "lifecycle cost", making it ideal for sustainable architecture.

VISUAL DIAGRAM

MAKE IT GREEN. MAKE IT RIVERCLACK®

SUBSTRATE

FILTER SHEET

DRAINAGE, STORAGE AND VENTILATION ELEMENT

WATER RETENTION FELT

RIVERCLACK



ACCESSORIES

Using soil and sedum from local suppliers reduces transportation mileage, shrinking your building's carbon footprint. Riverclack® provides a set of accessories that let you use the soils and sedums of your choice and that work best in your local climate*.

*We always recommend following the advice of local, experienced horticulturalists.



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ISCOM SPA
VIA BELVEDERE, 78
37026 PESCAZINA
ITALY

WWW.ISCOM.IT
INFO@ISCOM.IT
T +39 045 773 21 77
F +39 045 773 29 70

 iscom