



Life on Roofs





Roofs are more than just “functional components” for protecting building materials. Roofs give character to individual buildings and entire city districts. But roofs are also coming to be viewed more and more as reserve urban areas for creative planners looking for socially responsible concepts that counteract the loss of natural living spaces.

Green roofs are extending the variety of contemporary architecture. They fill the concept of “roof landscape” with new life: Nature – increasingly hemmed in by buildings and paved surfaces – returns as an attractive green element in residential, recreational and work environments.

ZinCo is a world leader and among the pioneers and trendsetters in the area of extensive and intensive green roofs. This success is due to the long-term close collaboration between our Research & Development and Application Engineering departments, in addition to our pro-active work with professional associations.

The resulting innovative systems inspire both architects and discerning clients to adopt a holistic and sustainable approach to the planning of private buildings and also large projects in the public domain.

People, their relationship to nature and life in an ecologically intact environment – these are ZinCo’s main focuses.

We welcome the challenges that come with this responsibility

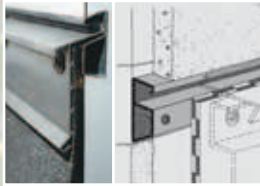
Ulrich Schäfer, Dieter Schenk and Robert Forster

Managing Directors, ZinCo GmbH



1968

The FZ rail is introduced and a sales organization is established for the EU region. Founding of Flachdach Zubehör GmbH ("Flat Roof Accessories GmbH").



1980

Focus on ZinCo's core competency: Roof greening systems



1985

Founding of the Deutscher Dachgärtner Verband e.V. ("German Roof Gardeners Association") as a club for competent roof gardeners.



1990

Setup of a soil supply network and marketing of the roof substrate Zincolit that is made from recycled clay brick Recycling.



1957



Company set up in Unterensingen by master craftsman, Walter Zink.

1972



Innovation phase for the climate roof: "From flat roof to roof garden". Public relations work on a broad front, integrating colleges and universities.

1978-1983



Market launch of Floradrain® FD 60 and FD 40 drainage elements.

1987-1990



Founding of ZinCo Switzerland. Introduction of the "Duo-Roof" and inclined roof system build-ups with Floratherm® and Floraset®.

1992-1993



Development and market launch of the Elastodrain® drainage element. Founding of Deutsche Zincolit GmbH

1995–1997

Expansion of export activities. The two German companies are merged to form ZinCo GmbH.



2002

Management buy-out: ZinCo GmbH is taken over by Ulrich Schaefer, Dieter Schenk, Roland Appl and Frank Stribel.



2012

Move in to the new technology center "Green Cubes".



2015

Manfred Krüger appointed Director of Sales Germany



1998



Development and market launch of "Fallnet®" fall protection system.

2003



Development and market launch of the Solar Base SB 200. Founding of ZinCo Singapore and ZinCo Denmark.

2013



Drainage element "nature-line" made of bio-plastic is launched

2017



Green Roof 4.0 concept design = green roof from the point of view of climate change





ZinCo roof greening is a mature competence

Green roofs draw on a combination of different areas of expertise. The initial technical-physical-architectural orientation of ZinCo as a flat roof specialist has grown, step by step, to include knowledge and experience related to plants and microbiology, water management for plant growth and landscape design. In its close collaboration with scientific institutes, ZinCo has acquired the fundamentals for its special competence in the development and production of green roof system build-ups, which is recognized worldwide today.

Safeguarding our high quality standards is closely related to ZinCo's international commercial experience over several decades. The different experiences of our contracting partners in various climate zones with

different building methods and statutory regulations are brought together in our Research & Development and Application Engineering departments. These ideas influence the development of new roof greening products and systems. At the same time, our partners benefit from the know-how and solution competence we have built up in adapting our system build-ups to specific architectural objects.

The goals are always the same for all projects of the ZinCo Technical Department: Premium quality across the entire System Build-up and innovative solutions for architectural vision.



Green roofs are better roofs

Safe and reliable System Build-ups by ZinCo are an investment in long-term building preservation, and their functional benefits are persuasive.

One benefit is the considerable extension in the lifetime of the roof waterproof membrane and structure. Green roofs protect against UV rays as well as mechanical and thermal stresses.

The System Build-up enhances sound proofing and also acts as an additional insulation. It also increases the thermal insulating value. In winter, this reduces energy losses and heating requirements, and in summer it provides thermal insulation due to the cooling effect of the plants.

Rainwater is stored in the system substrate materials. When heavy rains occur, water drainage into a building's storm sewer system is significantly delayed, reducing sewage system loads.

A natural microclimate with heightened oxygen production develops in the vicinity of roof plantings. Simultaneously, the plants filter out contaminants and reduce concentrations of fine dust in the air.

Green roofs allow for the expansion of usable area from an appealing experience of nature to the cultivation of the area for urban farming, without the need for additional space.





Nature as a creative dimension in architecture

Contemporary architecture has a high level of social responsibility. It defines living spaces. The aesthetics of nature as an added dimension in the building process extends the formal design task, creating space for new ideas.

For people in urban areas, the possibility of experiencing nature offers a bit of quality to life. In the context of the residential environment, greened roof areas become spaces for private retreat. In public areas, they provide opportunities for meeting others, for recreation and for active ways to structure free time. Architects around the world are realizing their new goals together with ZinCo.

The integration of natural living spaces into architecture is certainly no longer just a vision. Engineered solutions for load-bearing structures and long-term preservation of building materials have existed for a long time now. Creative treatment of recovered outdoor areas is now creating opportunities for a wide variety of uses.

The ZinCo Technical Department develops customized solutions for attractive designs in roof landscapes. It offers concrete assistance in planning, layout of technical details and fundamentals for the bidding process. Experienced partner companies handle the professional on-site implementation of planning goals.







Understanding climate change as a task

In the sum of their positive ecological and economic characteristics, green roofs make a relevant contribution toward achieving future-oriented sustainable architecture. Our towns and cities as conurbations are currently facing far greater challenges worldwide in terms of climate change than was the case in the past.

For ZinCo as an engine of innovation, the focus is increasingly on a holistic approach as regards exploiting the full potential of roof areas.

How can we reconcile an increase in overheating, severe rain events with flooding and the desire for tangible nature in an urban setting?

Encouraged by the fact that green roofs absorb dust and air pollutants, lower the urban heat island effect and relieve the sewerage system, intelligent solutions have emerged with resulting system variations that maximise this effect – starting with stormwater management on the roof, to the optimisation of cooling by means of an extremely high evaporation rate to biodiversity on roofs.



Water is an element of life

Water is one of the most valuable resources and is a life necessity – for people and flora. Green roofs make a protective and ecologically meaningful contribution to water management by their ability to store water.

Generally speaking, an extensive green roof won't need additional irrigation. However, in climate zones with very low precipitation levels ZinCo provides irrigation versions that work well with the resource water. The plant substrate that is installed retains up to 80 percent of the precipitation when it rains. This delays the drainage of excess water. Natural moisture in the roof plantings has a positive effect on the resulting microclimate.

Water has been used as a design element in landscape architecture for centuries. In traditional high-rise construction, however, many planners still consider water to be a "natural enemy." Yet water has long held a position of importance in conceptualizing green roof landscapes, and it enriches them with decorative fountains and watercourses.

The only crucial factors here are the load-bearing capacity of the roof construction and the choice of the appropriate green roof build-up. The ZinCo Technical Department has acquired experience in internationally acclaimed projects. This professional knowledge is shared with our customers and partners.







Safety is a key consideration

The constantly growing number of green roof structures is bringing safety aspects into focus. Engineered systems for preventing falls are intrinsic components of our system competence. This applies to the construction phase as well as maintenance work and use of the space as a roof garden or for sports or recreational uses in private and public spaces.

ZinCo is a leader in the development of system-integrated safety equipment. All components for individual and general protection are optimally integrated into the ZinCo concept, and so they are economical and quick to install. Yet they can also be used independent of the system.

All safety systems leave the roof membrane intact and penetration-free. The Fallnet® product line assures individual protection during planting and maintenance. Fastening options for safety belts are created in a few easy steps on single anchor points or rails as part of the ZinCo system.

Roof garden and roof terrace users are protected by railings. ZinCo has developed a universal mounting base for this purpose that enables penetration-free assembly of railing systems and customized railing designs.



Roof greening with integrated energy recovery

The sun is the foundation of life for plants and an inexhaustible source of energy for people. Exposed roof areas are in demand, both as sites for the recovery of clean, renewable energy by photovoltaics and as a green extension of living spaces. That is not really a conflict: utilization of roof areas for landscaping and the installation of solar power systems have proven to be a perfect combination offering technical and economical benefits.

The performance of photovoltaic systems depends on the ambient temperature. High temperatures, which on non-vegetated roof surfaces can easily rise to around 80°C, reduce power output.

The microclimate of green landscaped roof areas provides for cooling and improves the efficiency of solar power systems, making them more economical.

To install the solar technology, the ZinCo Technical Department has developed a solar base, a mechanical structure in the substrate that is compatible with the roof greening system. It offers secure mounting without damaging the roof membrane. The weight of the plant substrate anchors the solar energy systems adequately to withstand wind loads.





Tivoli Congress Center, Copenhagen, Denmark



VanDusen Botanical Garden, Vancouver, Canada



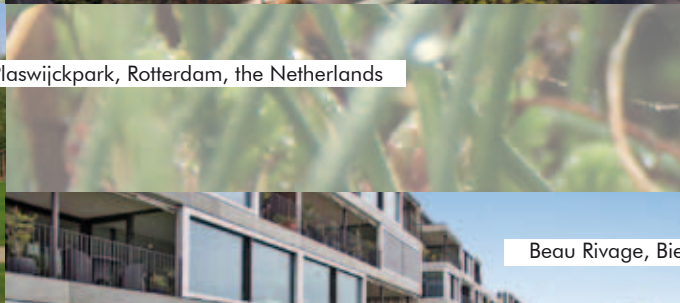
Subaru, Singapur



Green Place, Milan, Italy



Plaswijckpark, Rotterdam, the Netherlands



Beau Rivage, Biel, Switzerland





Koe-Bogen, Duesseldorf, Germany



High Line Park, New York, USA



Barbican Beech Gardens, London, Great Britain



Multi-Function Hall, Daressalaam, Tanzania



Office Building Leuro, Lima, Peru




Opera, Athens, Greece

www.zinco-greenroof.com



Informations about the ZinCo-Network worldwide under www.zinco-greenroof.com



Partnership for the best green roofs in the world



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