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17 to 21 March 2025

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Green oases in the urban jungle

Frankfurt am Main, 19 November 2024. Green facades and roofs contribute to a natural appearance and improved air quality, especially in cities. However, the greenery on these parts of buildings must be well planned to avoid endangering the structural integrity of the building and prevent moisture from getting inside the building. Consequently, such facades and roofs place special demands on the building's water-bearing systems.

More green areas in urban settings

Many cities lack green areas. Greening facades and roofs mitigates this problem and, in addition, utilises areas that would otherwise remain unexploited. This has advantages for people, animals and the environment: green facades and roofs improve the microclimate, lower temperatures and improve air quality in city centres. They also help to sustain biodiversity and provide a habitat and retreat for small and wild animals. Plants also protect buildings from the weather, heavy rain, hail and storms, as well as from UV radiation and vandalism such as graffiti. They reduce sound reflection, thus lowering noise levels, and provide protection from direct sunlight. This cools the building naturally and actively counteracts the formation of inner-city heat islands. Greening the exterior of buildings also helps to improve the quality of life in the city and is visually appealing. These measures help to preserve the landscape despite urban development.

Nevertheless, it is essential that experts be consulted in advance before undertaking any greening project. The choice of plants depends on the orientation, shading and light reflection from other buildings. If an existing building is to be greened, it is essential that the statics be checked beforehand. Subsequent facade greenery can easily be installed in the course of re-insulating the house wall. In this case, attention must be paid to the maximum wall load, the additional weight of the plants and pressure stability. It is a good idea to involve the property owner and the relevant building authorities to keep track of potential subsidies and town-planning requirements, especially those relating to the protection of historical monuments.

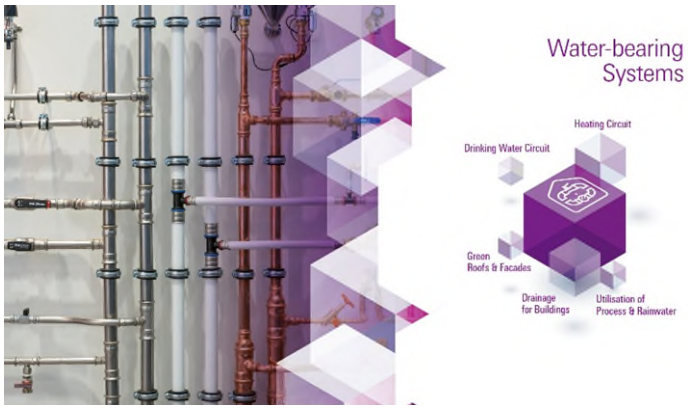
Demands on water-bearing systems

Depending on the type of green roof and its requirements, the roof can be designed and built with or without a slope. Extensive green roofs tend to have a slope of 2 %, while retention green roofs are built without a slope at 0°. Professional and quality-conscious planning, execution, product and system solutions are essential to ensure that the water cannot damage either the building or the plants. Apart from effective roof sealing, this also includes drainage elements, guttering and downpipes. In many cases, excess water can be recycled and fed back into the building's water system. To prevent damage, the roof seal must also be root-resistant in accordance with the guidelines of the German Research Society for Agriculture and Landscape Development (FLL).

When it comes to façades, a distinction is made between ground-based and wall-based vegetation. Unlike ground-based vegetation, wall-based plants do not need to be in contact with the ground and can be positioned at greater heights. In this case, however, the water and nutrients must be supplied via the building and not via the ground and precipitation. Hence, the supply system should be checked and maintained regularly. Moreover, the irrigation and drainage system must be protected against frost in winter.

Dr Gunter Mann, President of the German Association of Building Greening (BuGG), who knows the market inside out, says, “Unfortunately, many builders and planners still have prejudices and reservations about green roofs and green walls. We are able not only to draw on around 50 years of experience and tried and tested guidelines. We also have experts at our disposal and can point to around 150 million square metres of completed green roofs – more than any other country!”

Water supply trends at ISH 2025
The future of water-bearing systems is one of the main subjects at the world's leading trade fair for HVAC and Water in Frankfurt am Main. From efficient drinking-water and heating circuits to the sustainable use of process water and rainwater, innovative water technologies play a key role in reducing water consumption and operating costs in line with global climate targets. At ISH from 17 to 21 March 2025, exhibitors in the ‘water-bearing systems’ solution field will present innovations in the fields of hygiene, pressure management, hot-water heating and circulation systems. Information about the various solution fields can be found here.



Sustainable water usage includes the use of process and rainwater. Experts from the field of ‘water-bearing systems’ present the latest solutions at ISH. Source: Messe Frankfurt Exhibition GmbH

The special 'Green Roofs & Facades' area at ISH is a prime source of information about greening solutions. There, green roof and facade contractors, service providers, organisations and institutions will provide information about the latest options for creating green roofs and facades. The partners of this special area are the German Association of Building Greening (BuGG), the German Association for Water Recycling and Rainwater Harvesting (FbR) and the German Sanitation, Heating and Air Conditioning Association (ZVSHK).

Full details at a glance
Visitors will find a comprehensive overview of the solution fields and events, as well as exhibitor information, on the ISH 2025 website at www.ish.messefrankfurt.com

ISH – The World's Leading Trade Fair for HVAC and Water
The next ISH will be held from 17 to 21 March 2025.

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