



# NEW OPPORTUNITY EXISTS

**LIKO - NOE is a solution against:**  
global warming  
flash floods  
groundwater level decline



In the beginning, there was the idea that man should not only take from nature, but also give. The idea that it must be possible to perform construction work differently from most contemporary industrial buildings. That water is life and we will not survive without it. Along with this, an idea started to be born within us – that we in LIKO-S should at least try to show what an environmentally-friendly industrial or office building of the future could look like. That was the beginning of the LIKO-NOe project. All of the above-mentioned ideas gradually started to materialize and it was the Czech architect Zdeněk Fránek who gave the building its specific look.

**LIKO - NOE built in 27 days.**





## Water Management



LIKO-Noe can catch and reuse all the water that is used in it – both rainwater, which is caught in a retention lake, and wastewater, which it can purify thanks to a reed bed wastewater treatment plant. This water is then used for irrigation, nutrition of the living facade or for flushing toilets. Thanks to the large volume of water it perfectly evens out temperature fluctuations and protects the building particularly against overheating. Water is collected in a retention lake which is a water reservoir in periods of drought and the lake can also be used to retain and accumulate water in periods of flood rain.

## Living Facade



The LIKO-Noe building concept works with natural sources of cold and heat. An important part of this system is the irrigated living facade which cools the building in summer and warms it in winter. It also creates a favourable microclimate, because it does not reflect heat, it humidifies the air and reduces the dustiness of its surroundings. Thanks to the fact that the walls breathe, also the inner space is improved significantly. The living facade has also an aesthetic function. LIKO-S has obtained a utility model for this unique composition of the green diffusion-open facade.

## Diffusion-permeable walls



The composition of pressed wooden panels and ICYNENE sprayed thermal insulation gives the building diffusion permeability. Owing to this the building breathes – the walls allow water molecules to penetrate through the wall. Undesirable humidity and CO2 escape from the building.

## Insulation



The above-ground part of the building is insulated with ICYNENE® sprayed foam. It does not absorb water and, at the same time, it can let water vapours through. Thus, it allows the building to breathe. When the foam is applied, it expands up to a hundred times its original volume, thanks to which it fills up spaces that are difficult to access and creates a fully compact and airtight layer. The underground parts of the LIKO-Noe are then insulated with a hard, sprayed insulation which, in combination with the Polyurea sealing coat, creates a perfect damp-proof seal.

## Self-Supporting Wooden Structure

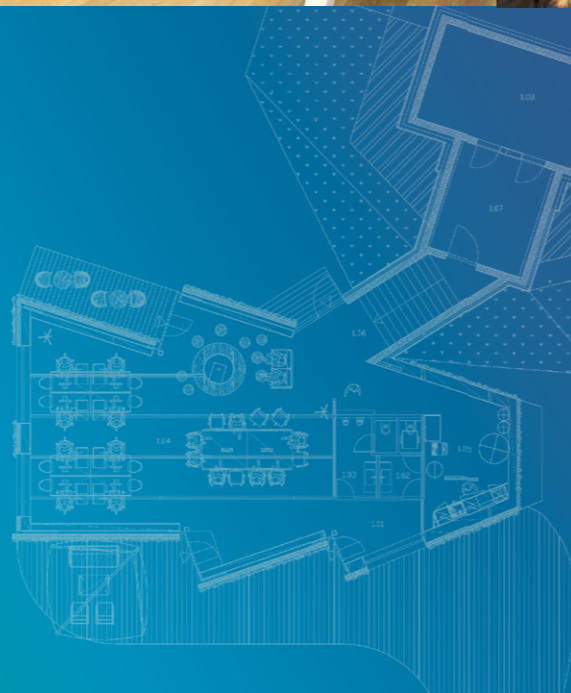


This includes solid glued multilayer NOVATOP panels. The architect's sketch was converted into a 3D model of the supporting structure. Then individual parts of the structure were machined with a CNC machine to within millimetre accuracy. So the panels were delivered to the construction site provided with all functional recesses. Thanks to this, the solid, all-wooden "construction kit" was assembled in just a few hours.

## Energy



The main energy source of the system is a ground/water heat pump which uses a ground collector as the primary source of energy and is supported by the surpluses from the photo-thermal facade. The south-oriented solar panel system with the photo-thermal facade provides optimum solar gains in the winter half of the year. The photo-thermal facade composition eliminates summer surpluses, reduces stagnation states and, in connection with the water surface improves solar gains thanks to water surface reflection. The symbiosis of the two, in many cases incompatible, technologies creates a unique solution in which the heat pump and solar panel system technologies complement each other.





## About LIKO - S

LIKO-S is a family company based in Slavkov u Brna, active on the market since 1992. The company is owned and operated by the family and two generations participate in its running. We manufacture and install adjustable and sliding partitions, Inhall Units (inLIKO®), and administrative, logistic and production facilities for business. Another segment of our business is thermal insulation of residential and industrial buildings with foam sprayed insulation, and also with custom metalworking for major European suppliers of technological units. Apart from that, we develop our own advanced solutions for environmentally-friendly buildings, interior layout designs, as well as attractive equipment for office spaces. Our aim is that our style, our philosophy, our approach to work and life are clearly distinguishable. Both employee and customer are for us partners who deserve to be at the centre of attention. Exactly in the spirit of the Bata traditions, in the spirit of fair and socially beneficial enterprise.

**LIKO - S, a.s.**

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