



# Meidling Emergency Hospital Helipad

## Data and facts

<b>Company</b>	Porr Bau GmbH
<b>Type</b>	Steel construction
<b>Runtime</b>	07.2020 - 12.2021
<b>Principal</b>	Austrian General Accident Insurance Institution AUVA

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# Helipad for the Meidling Emergency Hospital.

but on the other hand simple and quick assembly without reworking on the construction site was guaranteed. For this purpose, a bolt connection was chosen between the double helix and the platform at a total of twelve contact points.

The radially running girders were connected to a central ring. A splice joint allowed both the bending moments to be transferred and the geometric tolerances to be compensated for by utilising the existing hole tolerance. The radial and tangential rows of beams were connected by means of head plates, and the safety net was attached to the ring beam. The seats of the connecting bridge are designed in such a way that independent movement to the existing structure is possible even in the event of an earthquake. Finally, the entire double helix was given a fire protection coating. At the outermost edge of the platform, we implemented lighting effects that set off the structure perfectly.

## **Drainage options and complex scaffolding.**

The drainage of the platform leads in an architecturally inconspicuous way along a strand of the double helix to the foundation. In the event of a damaged helicopter, the escaping kerosene would also be discharged via the sewers and collected via separators installed in the foundation.

A bituminous seal is applied over the primary concrete. This is where residual water that cannot be diverted on the top level is discharged. A level with heating mats is arranged in the secondary concrete. This heating level ensures that no snow remains on the platform and that the surface does not ice up. In the secondary concrete there are also drainage gullies, beacons, temperature sensors and lightning protection devices.

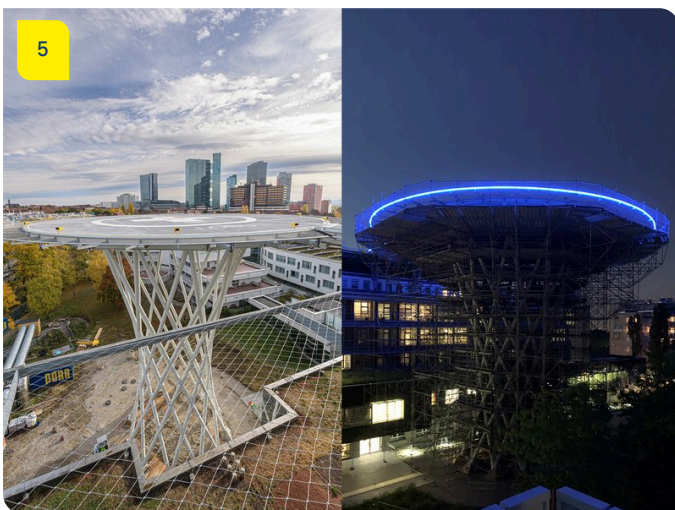
A particular challenge in this construction scheme was planning and executing the scaffolding. An internal scaffolding tower was necessary for the attachment and installation of the ladder elements. An external scaffolding with a height of 25m and a diameter of 36m was required to access every single point of the double helix and for the assembly of the platform. The scaffolding company carrying out the work had little experience with constructing the double-cantilevered scaffolding needed due to the cramped structural conditions.

## **Elaborate planning with successful completion.**

With regard to the plateau levels and the base area, the scaffolding had to be planned in such a way that the complex three-dimensional geometry of the double helix did not collide with the straight system scaffolding. One of the first subsections started with the scaffolding with an octahedron base. It was then gradually expanded with the installation of the ladders. Therefore, the accessibility for the assembly of the steel structure, the welding sequence and the site corrosion protection had to be fully planned before construction began.

The helipad went into operation on schedule in autumn 2021, and the contractually agreed total completion date, including the inventory and outdoor facilities, was achieved according to plan. This success was made possible by the excellent cooperation between several PORR departments working together to overcome the structural challenges.

# Impressions



## Image notes

1

An initial vision.

2

Leading role

The spectacular lifting of the 28m long platform beam with the central ring construction.

The rendering by FORUM - Architekten + Ingenieure ZT GmbH already showed the double helix to be built from steel pipes.

3 Leading role

The spectacular lifting of the 28m long platform beam with the central ring construction.

5 Ready for use both day and night.

The new helipad has been in use since autumn 2021.

4 Checkerboard-like pouring of the concrete.

Heating mats, drainage gullies, beacons, temperature sensors and lightning protection devices were integrated into the secondary concrete.

Do you have questions about the project or would you like to learn more? Feel free to contact us for further information.

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