



# Kirchheim near Munich

## Kirchheim Secondary School

### Data and facts

Company	PORR GmbH & Co. KGaA
Type	Educational institutions
Runtime	01.2021 - 12.2022
Principal	Zweckverband Staatliche weiterführende Schulen im Osten des Landkreises München

[Project report online](#)

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# Teaching and learning inside a masterpiece of concrete engineering

## Flexible learning environments and central meeting spaces

The new educational facility includes the school building, the playground, the four-court gym and the sports fields. The architectural firm heinlewischer, which was commissioned with the design, wanted the new five-storey school building to create “the impression of a neatly arranged stack of precisely cut wooden boards”. Access balconies running around the building and the loosely arranged rooms create a sense of openness. The balconies, which are fitted with enhanced slip resistance, also serve as escape routes to the four emergency staircases, and the high-up outdoor areas can even be used as teaching spaces. The underlying principle – that learning, discussion, and communication can take place anywhere and at any time – is a recurring theme throughout the entire school campus. Inside the building, organic shapes predominate. The foyer, which extends over all floors with four gallery levels and is equipped with skylights to provide natural light, and the free-form auditorium, which seats 600 people, are the primary meeting places. The walls and ceilings are made of solid reinforced concrete; nearly one fifth of the total 9500m<sup>2</sup> wall area is made of visually appealing exposed concrete. The auditorium ceiling is a composite steel structure spanning over 25m. The individual parts of the building are connected by more than 60 prefabricated staircases with a width of 2.40m and cantilever steel staircases in the atrium area. The recessed basement houses the building engineering room and sprinkler system and was built as a watertight reinforced concrete structure.

## Close coordination is the key to success

“The 90 different radii, variable heights, and curved ceilings in the interior made the architectural geometry extremely challenging,” says PORR site manager Marijana Ereiz. A total of 230 special formwork elements were used, more than 30 of them for the high, curved walls alone. The shoring was erected around the edge beams at heights of 10 to 22m. “A project of this complexity requires constant coordination of all parties involved if we are to stay on schedule and within budget, which is why we use state-of-the-art digital tools for planning and documentation,” Ereiz adds.

In addition to work preparation, the safety of the construction site crew is also a top priority. A work safety concept was specially developed – and successfully implemented – to accommodate the various projections involved in erecting the formwork for the structural slabs and edge beams, not to mention the formwork erected at heights of more than 20m.

# Impressions



## Image notes

1

Kirchheim Secondary School, Kirchheim

PORR realised the shell of the new secondary school in Kirchheim near Munich.

2

Kirchheim Secondary School, Kirchheim

Organic shapes in the interior: curved ceilings and curved exposed concrete walls.

3

Kirchheim Secondary School, Kirchheim

Curved special formwork in the edge area of the floor slabs.

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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