

TETRIQX

Serial housing construction for Austria

Affordable housing in Austria is in short supply

Demand is particularly concentrated in growing urban areas, even as new residential construction is declining significantly. In 2025, only 31,979 homes in new buildings were approved across Austria – the lowest figure since comparable statistics began in 2010. Yet estimates suggest that around 50,000 new homes are needed every year.

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1 Outdoor spaces such as loggias are already incorporated into the TETRIQX design. © WGA ZT GmbH

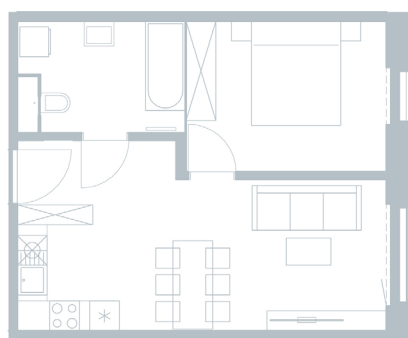
At the same time, rising construction costs, limited human resources, stringent quality and energy-efficiency requirements, and scheduling pressure are placing ever greater demands on residential construction. What is needed are construction methods that consistently integrate planning, production and assembly.

This is precisely where methods such as serial construction comes in, more closely linking the individual stages of the construction process. **TETRIQX**, a serial building product with a high degree of prefabrication, combines digitally designed building components with industrial production at the factory and efficient assembly on site.

Standardisation reduces planning effort and simplifies coordination throughout the entire process – from planning and production through to assembly. This makes schedules and costs easier to manage reliably. Compared with conventional methods, TETRIQX can shorten the construction period by at least four months and, depending on the project and approval processes, may also reduce the overall project duration.

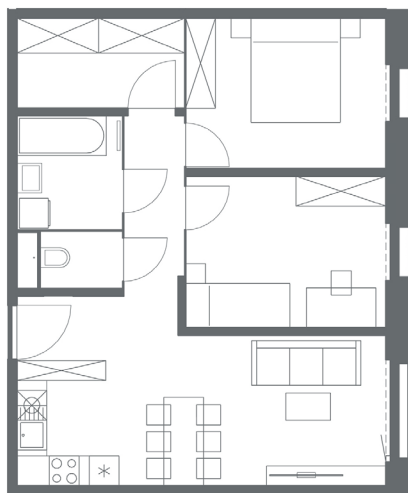
System design

TETRIQX is based on a modular configuration and three predesigned residential building types for buildings of between three and seven storeys. The system works with three apartment types, each with a predefined floor plan: Type B at just under 45m², Type C at just over 67m², and Type D at just under 90m².



TYPE B

44.42m²
2 rooms



TYPE C

67.12m²
3 rooms



TYPE D

89.26m²
4 rooms

Production in Austria

Mischek Systembau manufactures the components for TETRIQX in Gerasdorf near Vienna, where the company has more than 30,000 m² of production halls available for the production of precast reinforced-concrete elements. Automated processes are used for activities including formwork, reinforcement and the integration of building services.

The production capacities enable the system's high degree of prefabrication. Digital planning, industrial production, coordinated transport and on-site assembly are all closely integrated.



2 Based in Gerasdorf, Mischek Systembau produces intelligent prefabricated concrete modules. © Rudi Froese/STRABAG

Features and applications

TETRIQX combines standardisation with scope for customisation within a modular system. Different building types and apartment sizes allow its use in a variety of architectural and site contexts. Features include timber-aluminium windows, optional timber façades and loggias.

Serial construction with TETRIQX at a glance:

- Competitive construction costs starting from € 1,950 per m² (for a seven-storey TETRIQX building).
- Overall project duration reduced by up to 40% compared with conventional construction methods.
- Lower greenhouse gas emissions over the building's life cycle compared with conventional construction. Key contributors to these savings include fully prefabricated factory-produced elements, the use of low-carbon concrete, and an energy-efficient design during operation.
- At least 22% lower energy demand for heating and cooling during operation thanks to concrete core activation.

Energy and emissions

Compared with conventional construction methods, prefabrication combined with sustainable materials can reduce a building's greenhouse gas emissions over its entire life cycle by up to 50%. One important reason is the precise, weather-independent production at the factory. This allows concrete and reinforcement to be used more efficiently, reduces offcuts and waste, and cuts the amount of work required on site. The use of low-carbon concrete and an energy-efficient design during the building's operating phase further improve its environmental performance.

Concrete core activation is incorporated for building operation. For this purpose, water-carrying pipework is integrated into the precast floor slabs. The thermal mass of the concrete absorbs heat in winter and releases it evenly into the rooms; in summer it can help regulate temperatures and provide cooling. The result is a more balanced indoor climate that reduces the energy demand for heating and cooling by 22% or more. The system can also be implemented without adding to construction costs.

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Affordable housing is possible – but not with yesterday's solutions. We have to build faster, more sustainably and more standardised, without compromising on quality.”

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Markus Engerth,
Member of the Management Board
STRABAG AG Austria

3 A welcoming atmosphere inside
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