

Building structures

Business residential building Trnovska vrata

Location

Ljubljana, Slovenia

Surface

38.000 m²

Year(s)

2002 - 2004

Services

Construction design:
preliminary design,
building permit design,
detailed project,
completed works design.

Architecture

Genius Loci d.o.o.

Investor

Gradbeno podjetje Grosuplje d.o.o.



The business-residential building Trnovska vrata is composed of six mutually dilatated buildings. All buildings have one basement floor in which are situated garages and stores, the ground floor and mezzanine in which is situated the business programme and three, partly four, residential floors. The basement floor is in its ground plan wider than the upper building and is 240 m long, 36 m wide at the narrowest (south) point and 69 m at the widest (north) point. Dilatations in the residential part follow the arrangement of individual houses, in the business part the individual business units. In constructional sense is each of six buildings a 6-floor (partly 3 and partly one) wall construction. In the business part and basement besides walls there are supporting elements as columns, which in raster 7,5 × 8,0 m support the concrete plates. Main supporting construction for horizontal and vertical burdening represent the walls in longitudinal and transversal direction, throughout the height of building or in the business part of core and columns (taking over vertical burdening only). The constructions between floors are reinforced concrete pannels. Because of extremely bad base foundadtions the building is founded deeply into drilled Benoto pilots of Φ 60– Φ 100 cm dimensions. Pilots' lenght are 25m. The basement is executed into impermeable caisson design (ground AB panel 40 in 60 cm thick and peripheral walls 30 cm thick). Altogether net surface of the new building is 36.000 m².