

Building structures

Business residential building R5

Project type

reinforced concrete construction

Location

Ljubljana, Slovenia

Surface

20.500 m² - total gross surface

Investment value

23.000.000,00 €

Year(s)

2004 - 2008

Services

Structural design:

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

Architecture

Andrej Černigoj, BSc Architecture,
Genius Loci d.o.o.

Investor

SCT, stanovanjski inženiring d.o.o.



R5 is a series of three residential-business buildings which are dilatational separated. The highest building has two basements and 18 above ground floors, while the smaller ones have 7 or 3 above ground floors with two basements. All buildings are made of reinforced concrete wall constructions with AB panels between floors. The highest building is especially interesting, as it is vertically constructed in a triangular shape, which is strained or leaned upon two stiff wall cores. The building's above ground height reaches 61 m, ground plan width is 17 m, the max. length on lower floor is 65 m, on highest floor only 7m. The floors on the south side become smaller in terrace form while the building gets a triangular shape. The building has two main supporting reinforced concrete cores. Both cores ensure main stiffness of the building during seismic burdening.

On the ground floor, mezzanine and 1st floor the walls of both cores are the only walls in the construction, in upper floors additional reinforced concrete walls are added, which ensure vertical support of upper panels between floors, and connect the two cores into one unit. This causes architectural soft floor of the building from the ground floor up to the 2nd floor.

The basement is common to all buildings. Between the buildings above ground floors, intervention lines, children playgrounds and other areas, partly paved partly covered in grass. The foundation of the building is connected by the pointed and striped foundations. Under main seismic cores of the higher building the foundation is executed on the base pavement 140 cm thick. Altogether gross surface of entire building is 20.500 m², out of which above ground floors (residential and business part) 11.000 m², basement floors (parking place) 9.500 m².