

Technical design standard

Structural system of the building

The building has 6 floors above ground and 2 underground floors with a maximum plan dimension of 19x43 m. In terms of use, there are garages on the lower two floors (1st underground floor and 2nd underground floor). The first floor above ground is multifunctional. The second floor above ground combines polyfunctional areas and flats/suites, and on the remaining floors (3rd - 6th above ground) there are only flats. The shapes of the 1st and 2nd floors above ground follow the shape of the plot with a slight offset from the south-eastern boundary. The 1st and 2nd floors above ground fill the area of the northern half of the plot, while about a quarter of this area on the floors intended for housing is shortened from the eastern side, thus creating an L-shaped floor plan. There is a green roof in the shortened area above the second floor. Similarly, a green roof is also located above the 6th floor and also on the roof of the garage. Above the 6th floor there is an extensive green roof; above the garage there is an intensive green roof. In both cases, an irrigation system is incorporated. The street façade is continuous up to and including the 4th floor, gradually receding on the last two floors (5th and 6th floors), creating terrace spaces along the entire northwestern street facade.

Foundations

A reinforced concrete foundation slab of a constant thickness of 500 mm, monolithically connected to the walls and columns of the underground floors. At the location of the point load, centrally under the columns, the slab thickness is locally increased to 800 mm in an area of 2x2 m.

Vertical support system

Vertical load-bearing elements are formed by reinforced concrete monolithic walls with a thickness of 200 mm, perimeter walls of underground floors with a thickness of 300 mm with the addition of reinforced concrete columns where the layout requires it. The columns on the underground floors (1st and 2nd) are oval in shape and 300/450 mm, while the columns on the above-ground floors are circular: on the 1st and 2nd floors with a diameter of 350 mm and on the 3rd - 6th floors with a diameter of 300 mm.

Horizontal support system

The ceiling of all floors is made of monolithic reinforced concrete ceiling slabs with a thickness of 200 mm or 220 mm, and in some locations 250 mm. The ceilings include 160 mm thick balcony slabs, monolithically connected to the ceiling slabs through thermowells. The same solution is used also in the part of the ceiling slab above the 3rd floor, in the range of the loggia. Due to the wall system of a different spatial orientation on

the wall-column bearing system of the underground floors, the ceiling above the 1st floor contains bridging through reinforced concrete beams with a cross-section of 300/450 mm and above the 2nd floor with a cross-section of 300/250 mm below the slab. From the area of the 1st and 2nd floors to the garden part there is a one-flight straight prefabricated staircase.

Vertical communications

There is one elevator and two staircases in the building. A three-flight monolithic staircase with a 160 mm thick slab leads from the garage area. The staircase leading to the upper floors is part of the communication core together with the lift and is also three-flight and monolithic, but with a slab thickness of 180 mm. The elevator shaft is designed as a separate tube in the foundation slab. The walls of the shaft are reinforced concrete with a thickness of 200 mm.

Heating technology

Reinforced concrete perimeter structures are insulated from the exterior side with thermal insulation boards made of mineral wool with a thickness of, mainly, 200 mm. The ceiling structures above the unheated areas of the building are insulated with mineral wool thermal insulation boards in different thicknesses, depending on the location of the space.

Partitions

The walls between flats, as well as between non-residential premises, are of reinforced concrete with a thickness of 200 mm and brick with increased acoustic resistance with a thickness of 300 mm. The interior partitions are made of bricks with a thickness of 150 mm, as well as in non-residential premises.

Full height

The full height in living rooms varies from 2400 mm to 3300 mm; in corridors, bathrooms and toilets it is lowered by plasterboard ceiling.

Finishing of the ceilings, walls, floors

Reinforced concrete ceilings with ceiling cooling ducts are finished with gypsum plaster. In places where ceiling cooling is not located, the ceiling is finished with a plasterboard ceiling. The walls in the living areas are finished with plasterboard structures or plaster. The floors are finished with an anhydrite or cement screed with impact sound isolation. On the balconies and terraces there are non-slip tiles.

Sanitary installations

In some apartments the bathroom and toilet are separate, while in others they are connected. There is a pre-fitting for a hanging system for a toilet and a hanging sink with a mixer tap. Most bathrooms are equipped with a bathtub, while others have a shower. There is also a pre-prepared place for a ladder radiator and in most bathrooms/toilets also for a washing machine.

Doors

The entrance doors to the flats are fire-proof, safety class 3, with sound insulation up to 39 dB. Flanges are steel with an LED strip at the top. An electric lock is integrated. The colour of the door frame and the door leaf on the outside and inside is white RAL 9003.

Windows and balcony doors

The windows and balcony doors are aluminium, with an interrupted thermal bridge and external aluminium sill cladding. Powder coated white RAL 9003. Glazing with triple glazing.

Shading

The shading of all filling structures on the 2nd floor to the 6th floor is secured by external perforated shutters in a material design matched with the facade cladding, white colour RAL 9003. Controlled electrically.

High-current wiring

Each apartment/suite is equipped with sockets, switches and outlets for lighting. The electrical switchboard is located directly in the apartment, usually in the corridor area. Electricity consumption of individual apartments is measured by meters located in the entrance lee of the building on the 1st floor.

Low-current wiring

Passive structured cabling is installed in the building with the termination of the wiring in the respective installed data sockets.

Ventilation

Ventilation is provided by small recuperation units installed in the entrance corridor to the apartment. Air will be supplied to the living rooms; exhaust air will be extracted from the sanitary facilities and kitchens.

Heating

In the apartments and suites there is water-based underfloor heating; the bathrooms have been prepared for electric ladder radiators. Temperatures in individual rooms are regulated by wall thermostats. Remote metering of consumption is provided by the metering and control system. Condensing natural gas boilers are the sources of heat.

Cooling

In the living areas there is ceiling cooling, which is provided by ducted and cassette two- and four-pipe fan coils fed from a central cooling source. Air inlet through the air outlet to the space, air extraction through the air outlet under the fan coil.

Regulation/control

In each apartment there is a SAUTER control mechanism through which each living room can be controlled separately. Heating, cooling, shading and ventilation can be controlled. Each apartment can also be controlled via a smart app.

Entry

The entry to the building is from Banskobystrická Street; there is a pedestrian entrance and an underground garage. A smart entry system to residential and non-residential premises is controlled physically by means of an entry chip. At the main entrance to the building, a video door phone with a reader is installed. Also, there is a reader at the entrance to the garage.

Common areas

The clear height in non-residential spaces and corridors varies from 2300 mm to 3000 mm. The ceilings here are finished with plasterboard soffit or plaster. They are fitted with sensor-controlled lights. The walls of the common areas, corridors and staircases are finished with decorative plaster with imitation concrete in combination with wood panelling. On the floor of the entrance hall on the 1st floor above ground, and also on the staircase leading to the underground garages and at the lifts in the underground floors, there are porcelain tiles. The staircase leading to the floors with apartments, as well as the corridors, have low-pile carpet laid.

Elevator

The KONE passenger lift has a through-cab with a load capacity of 1150 kg and is designed for max. 15 persons. The smart entry system works in conjunction with the elevator.

Parking system

Parking is provided in the underground garage on two underground floors (1st and 2nd) with a capacity of 34 places. The surface layer consists of a non-slip industrial polished floor.

Waste management

The waste management room is located on the ground floor and is accessible through a separate entrance from Banskobystrická Street.