

Residential block of flats in Plaza Gaudí

The blocks of flats in Plaza Gaudí are composed of two, practically symmetric, 24-storey towers, dominated A and B, where Tower A has a slightly larger surface area than Tower B, measuring 24.8 x 17.6m. All storeys are constructed above ground level with no existent basements. Between the two towers there is a three-storey intermediate area.

Each tower consists of the following levels:

- “Pavimentos” 1 (ground) and 2 (first floor), destined to car parking. These are common areas to both towers and to the intermediate area.
- Lázer: This is an open-air area with gardens, swimming-pool and leisure areas. Again, this is a common area to both towers and to the intermediate area.
- 18-storeys for housing. .
- Machine room, where all the building’s machinery is housed.
- “Respiro” (Breather level), where all the ventilation conducts are to be found.
- Heliport

All storeys are composed of 25cm thick solid slabs with spans varying from 3.0m to 8.50m. Both towers have a central core and two smaller shafts which offer vertical stiffness and stability against wind loads. The building’s main staircase runs down the central core whilst the lifts are housed in the smaller cores.

All the columns are reinforced concrete with a slender rectangular cross-section.

The “Lázer” storey acts as transition for the transversal displacement and 90 ° twist of the central columns in each tower. To aid these transitions, a mesh of suspended beams has been foreseen so as to absorb the horizontal and vertical forces and transmit them to the concrete central core. On this same said floor, a swimming-pool has been foreseen for the intermediate area which will be supported by an arrangement of perimeter and intermediate beams set between columns.

The definition of the foundations is not included in the scope of the works.



Brazil /2012 Project data

Structural Typology:

Solid slab concrete structure on slender columns and central core

Location:

Rúa Camboriu, 673. Fazenda Itajaí / SC Brazil

Date:

August 2012

Owner:

Ap Real Estate Investments
Brasil Construtora Ltda.

Client:

Aransa

Scope of Works:

Execution Project