

K-Iturbi

A home that brings family life and a professional office together under the Passivhaus standard. A 170 m² certified house in Bellaterra, built with the Eskimohaus system.

Home and office in one Passivhaus

K-Iturbi is a 170 m² certified Passivhaus house in Bellaterra that holds a family home and a professional office within a single building. It handles both uses without either getting in the way of the other, protecting the family's privacy while keeping energy use to a minimum.

It is a piece of flexible architecture, made for the new ways of living that come with remote work and the professions, where the home doubles as a place of work.

Technical data

- **Location:** Bellaterra
- **Year:** 2022
- **Built area:** 170 m²
- **Type:** detached single-family, new build
- **Construction system:** Eskimohaus, light timber frame
- **Insulation:** blown cellulose
- **Certification:** Passivhaus
- **Climate control:** aerothermal
- **Ventilation:** Zehnder with heat recovery

Energy performance

- **Blower Door test:** 0.60 h⁻¹
- **Heating demand:** 10.3 kWh/m²|yr
- **Cooling demand:** 18 kWh/m²|yr
- **Primary energy:** 45 kWh/m²|yr

These figures meet the Passivhaus standard, with a very low energy demand and a high level of indoor comfort.

The site

The house sits in Bellaterra, one of the finest residential settings in the Barcelona metropolitan area. The lie of the plot shapes the project and, at the same time, gives us the chance to spread the building across different levels.

Rather than reshaping the ground, the design works with the slope to naturally separate the home entrance, the office, the private areas and the family living spaces, treading more lightly on the site and sitting better in the landscape.

Architectural concept

The architecture follows a clear principle: energy efficiency should never hold back how the building works. Large openings across the façade let in plenty of daylight and give the house a contemporary, elegant character.

The massing is restrained, with clean lines, where form answers directly to what the building needs to do and how it performs. The result is a discreet, bright and beautifully proportioned home.

A flexible brief

What sets K-Iturbi apart is its brief: the building houses both a home and a professional office, kept apart through the layout itself. The different ground levels let the spaces fall into place naturally, so the work areas stay independent from the home.

This protects the family's privacy, lets clients be received without stepping into the domestic side, makes working from home easy and keeps circulation inside clear.

Construction system

K-Iturbi is built with the industrialised Eskimohaus system: a light timber frame structure, high-density blown cellulose insulation and an envelope built to meet the demanding requirements of the Passivhaus standard.

Much of the structure is made up in the workshop, which improves accuracy, build quality, assembly speed and control over airtightness.

Energy strategy and comfort

The aerothermal heat pump provides heating, cooling and hot water on very little energy, while the Zehnder dual-flow ventilation constantly refreshes the air and recovers most of the heat from the air it extracts.

Together they bring the heating demand down to just 10.3 kWh/m²/yr, with steady comfort year-round and excellent indoor air quality.

A home that blends living and working with the highest comfort and remarkably low energy use.