

# Building Specifications

Development

# SIRIO

La Nucía, Alicante.  
España.

An ideal place  
to live as a family

 **Domoética**  
SUSTAINABLE HOMES

These images are digital representations of our future project and may undergo adjustments during the development process.

# Building Specifications

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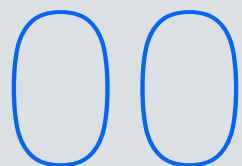
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Building Specifications

# Foundation, Vertical and Horizontal Structure.

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## **Foundation.**

### **Reinforced concrete with Caviti-type suspended floor**

Waterproofing sheet and anti-radon sheet between foundation and floor to prevent damp and toxic gas entering the home

## **Sanitation Network**

### **Horizontal:**

Variable-diameter PVC pipes embedded in the foundation with joints and elbows to a manhole outside the foundation. PVC pipe to the main line.

### **Rainwater collection on flat roofs:**

Inside the home, fitted with 90mm-diameter PVC drainpipes for exterior surface drainage, which can be connected to the sanitation manhole.

## **Vertical and Horizontal Structure**

Vertical structures are 12cm or 16cm-thick reinforced concrete walls, depending on structural calculations, with a white polished cement finish.

Horizontal structures are formed by 20cm-deep hollow-core slab flooring.

## **Cladding and partition walls.**

Interior dry partition walls include a 70mm substructure with channel-thick mineral wool and a 15mm panel on each side, optimising the net floor area of the home and achieving high levels of thermal and acoustic insulation.

False ceilings will be placed 20cm from the underside of the slab in all rooms (2.50m indoor clear height). They will be made up of 13mm laminated plasterboard

## **Indoor covering.**

Porcelain covering in kitchen work areas and bathroom shower areas according to the sample book.  
Smooth white emulsion paint on walls and ceilings.

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**Building Specifications**

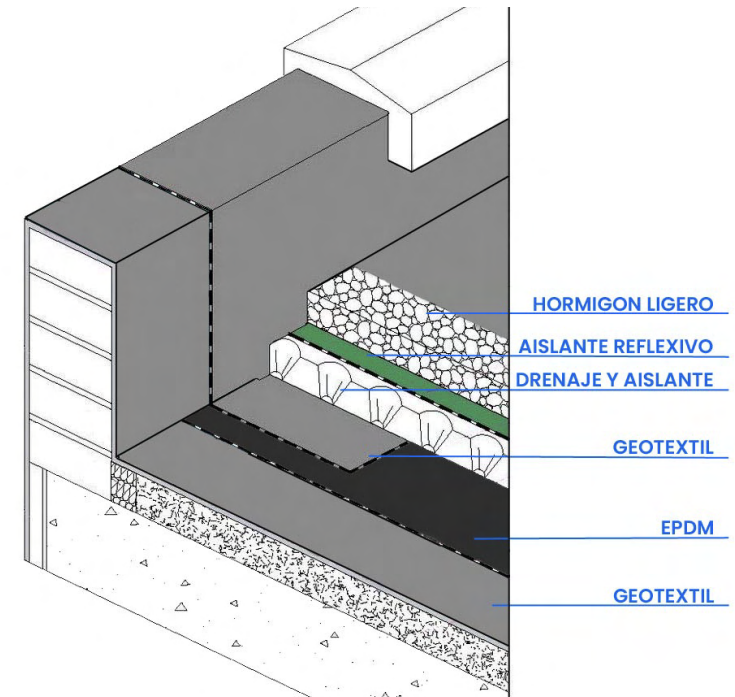
## Vertical and Horizontal Structure

### Roof structure

Made up of hollow-core slabs up to 20cm deep resting on reinforced concrete walls. Includes two 1m chimney stacks over the roof finish and black metallic pot.

Comprised of one or more skirts to drain water, the exterior will be covered with these materials:

- Geotextile over hollow-core slab.
- Waterproofing with EPDM sheet under another geotextile sheet, 6cm EPX thermal insulation and drainage.
- 30cm parapet walls over the hollow-core slab.
- Finish for wall coping with anthracite grey metal flashings.
- Rainwater collection towards the outside of the façade.
- The inner part of the roof will be insulated with 12.6cm insulation consisting of 80mm mineral wool plus 46m rock wool. A total of 18cm interior and exterior insulation.
- Reflexive thermal insulator covered with lightened concrete or river stones to settle and hold all the material. The goal is also to cover everything with EPDM, leaving no area exposed to the sun.



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Building Specifications



## Building Specifications

# Foundation, Vertical and Horizontal Structure.

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### Accessories

Porches and terraces have been studied in detail to make the most of environmental energy to benefit the home, with an overhang on the façade of around 1.8m (this will change depending on the location of the building) to provide shade in order to protect the SOUTH-FACING façade from the sun during summer, and allow sun to enter the home when the sun is lower in the sky, such as autumn, winter and spring. These porches or terraces will be equivalent to the full width of the building, on the SOUTH-FACING façade.

Orientation of the home is one of the key factors for making the most of solar energy.

### Thermal and acoustic insulation.

According to the technical specifications of homes designed by Domoética, thermal insulation around all vertical and horizontal interior walls of the home is 12.6cm thick such that an 80mm thick layer of mineral wool will be placed on the inside of the concrete slab, a vapour barrier sheet and cladding with 46mm profiles, with another layer of rock wool over the thickness of the channel. In total, 12.6cm of thermal insulation forms a complete thermal envelope for the home. Extruded polystyrene panels form a 40mm thermal insulation layer in flooring.

We will pay special attention to waterproofing underground walls and floor slabs to prevent damp.

### Stairs.

#### Stairs from ground level to the first floor:

Cantilevered steps with a maximum width of 0.95m, useful for two-section stairs with a 5+5 laminated glass railing, supported by stainless steel posts anchored on the steps.

#### Access to garden and fencing.

Fencing around the perimeter of the home and access doors will comply with urban planning standards.

### Pool

Saltwater pool (with salt chlorination) measuring 2.5 x 5.6m.

# Carpentry

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## Exterior carpentry and glass.

PVC windows with air chamber and thermal bridge break, depth of 70mm, flush on the inside of the concrete slab and finished on the outer façade with ceramic flashing.

Triple-glazed low-emission laminated windows comprised of three glass sheets and two air chambers. All windows will be airtight and open inwards, except SOUTH-FACING windows, which will be parallel slide and tilt or sliding with airtight seal.

On the NORTH-FACING façade, all rooms will have double tilt and turn windows that open inwards. The SOUTH-FACING façade of the home will be completely made of glass on both floors. On the first floor, the three bedrooms will have a window that opens inwards to access the terrace.

The main door will be on the north-facing façade. For security, the door will be fitted with a "DORMA KABA EXPERT PLUS EXTREME" cylinder.

## Blinds.

All windows have blinds filled with injected polyurethane to help insulate the home at night. Moreover, all blinds must be motorised and connected to a blind management system actionable from both a control next to the blind and home automation control compatible with Alexa or Google as the GIRA Switch.

## Interior carpentry.

### Main door to the home.

- White PVC door with 3-point security lock for a 2.20x1m space.
- Vertical stainless steel tubular handle, 50cm long.

### Interior doors.

All rooms and bathrooms have white wooden hinged interior doors 2.5cm high, with a smooth finish, stainless steel handle, and lock on bathrooms and master bedroom.

All bedrooms and bathrooms have swing doors, except for the toilet, which has a sliding door.

### Wardrobes.

All rooms will have built-in wardrobes with interior fittings such as:

- 3-drawer unit.
- Deep drawer in the long clothes section.
- Hanging rods.

## Flooring



### Flooring 1.

**Terraces and porches:** ceramic or porcelain floors, non-slip and frost-proof with measurements recommended for forming slopes. Skirting board in the same material.

### Flooring 2.

**Inside the home:** porcelain floors with grout in a similar color. Lacquered 9cm MDF skirting boards around the perimeter of all indoor areas, except in bathrooms and basements, where there will be no skirting boards.

The idea is to use the same design inside and out to add continuity and give the appearance of an infinity terrace.



## Bathrooms

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### **Ground floor bathroom.**

The bathroom will be equipped with a floating sink unit and mirror with socket, shower plate of at least 120cm long at ground level and at least 90cm safety glass screen with limescale treatment. Floating WC. All Roca brand.

### **First floor bathroom.**

The bathroom will be equipped with a floating sink unit and mirror with socket, shower plate of at least 120cm long at ground level and at least 90cm safety glass screen with limescale treatment. Floating WC. All Roca brand.

### **Master en suite.**

The bathroom will be equipped with a floating double sink unit and mirror with socket, and a free-standing tub between 140cm and 160cm long. Low 150cm long shower plate and at least 90cm safety glass screen with limescale treatment. Floating WC. All Roca brand.

### **Fittings.**

- Roca brand taps on sinks.
- Roca thermostatic control shower taps, telescopic shower arm adjustable in height, anti-limescale metal head and flexible handle.



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## Kitchen

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The kitchen will be fitted with 1.2cm Cosentino Dekton model worktops in white tones. All units will be white and water-repellent, drawers will also be soft close.

The microwave and oven will be built into a tall kitchen unit. It will also be equipped with a panel-ready refrigerator and dishwasher.

The kitchen will have an island area where the induction cooktop and an overhead extraction hood will be located. All appliances will be Siemens.

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# Electrical installation and Grounding

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## Grounding

- Bare copper spike in the inner ring of the foundation connecting the building perimeter.

## Electrical installation

- GIRA mechanisms connected to a home automation system controlled by Alexa, Google or Siri to control lights from the switches or a mobile.
- GIRA Blind Switches.
- Socket, light point and LED spotlight installation. Power to TV sockets in the dining room and master bedroom will be controlled with a GIRA (or similar).
- GIRA thermostats.
- USB and RJ45 sockets.
- Electrical installation for appliances: induction hob, oven, microwave and extractor hood.
- Electrical installation in garage for tools and other uses, and pre-installation of an electric vehicle charging point.
- Outdoor lighting with 4 lights on the façade.
- Control panel and electrical protection according to standards.
- Automatic video intercom of GIRA at exterior door.

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## Climate control

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Climate control system with ceiling cooling/heating powered by aérothermal energy, calculated according to the square metres in the home and number of rooms, for an optimised system and energy efficiency.

Temperature control in each room using a GIRA sensor.

### **Cold and hot water.**

- Plumbing installation with polyethylene pipes according to standards.
- Aérothermal hot water supply.
- Installation of water supply and drainage for bathrooms, sink, washing machine and dishwasher. Includes one outdoor tap in each garden (to the south and north).
- Stopcocks in each water area.

### **Mechanical ventilation with dual-flow enthalpy heat recovery.**

- Installation of dual-flow enthalpy heat recovery unit with humidity control.

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Building Specifications

## Power supply

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Power supply from the mains grid supported by a 7KW photovoltaic installation on the flat roof of the home. With an estimated annual production for the La Nucía area of 11,789 kWh.

\*The average consumption of a typical home with an A certificate in Spain is 5,746 kWh per year.

\*Data extracted from OCU and PVGIS.



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Contact



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SUSTAINABLE HOMES

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