

1) Address of the home.

C/Mistral, 32.
Cortijo del Aire.
Albolote.
Granada – 18,820.

2) Design parameters.

The house was designed in order to achieve these four objectives:

- 2.1) **Security** and **privacy** for the inhabitants.
- 2.2) **Independence** of external supplies, especially related to energy and water.
- 2.3) Presence of all services for absolute comfort.
- 2.4) Energy efficiency, integrating solar energy as an alternative or main source (according to user settings and season of the year).

3) Location and services.

The house is located north of Granada capital, in the municipality of Albolote. The main roads are the A44 motorway (direct access from the urbanization) and the A92 (access 7 minutes from the exit of the urbanization).

Albolote is a reference town, equipped with all the necessary services in terms of schools, institutes and commerce. The Juncaril industrial estate, next to Albolote, and the Asegra industrial estate, next to Peligros, ensure the supply of spare parts and industrial parts for various services.

The times measured at reference points are:

- 3.1) Time to Granada airport: 23 minutes.
- 3.2) Time to A44: 3 minutes.
- 3.3) Time to Jaén capital and northern area of olive trees: 30 minutes.
- 3.4) Time to A92: 7 minutes.
- 3.5) Time to Granada city: 15 minutes (variable depending on traffic).
- 3.6) Time to the ski resort: 45 minutes + 15 minutes for parking and ski pass.



View of Sierra Nevada at the exit of the Cortijo del Aire urbanization on course to the A44 motorway. Time: 3 minutes.



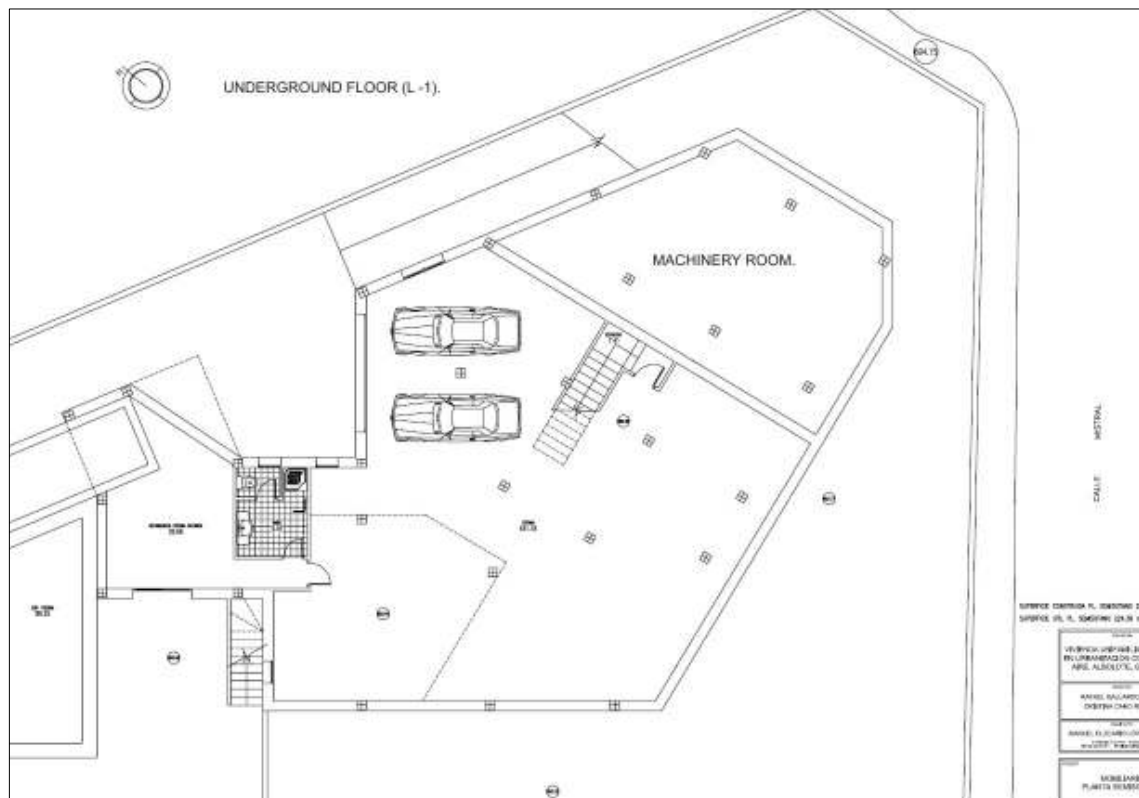
View of El Veleta and Borreguiles area (Sol y Nieve station) in Sierra Nevada from chairlift. Time: 45 minutes to the station, 15 minutes for parking and ski pass, 10 minutes to the chairlift with normal public.

4) Surface and general distribution.

Parcel:	1,100 m2.	
Surfaces:	Semi-ground plant:	250.44 m2.
	Low level:	282.39 m2.
	Upper floor:	174.61 m2.
	Keep:	12.16 m2.
	Total:	719.60 m2.

Distribution:

- Semi-basement (P-1): basement (area for cinema, gym, general warehouse, machine room and secondary garage - workshop), bathroom, indoor pool distributor, access to elevator and access staircase to upper floors.





Machine room. Front: boiler and solar exchanger for drinking water, smoke evacuation chimney, temperature probe, pipes and valves. Behind (not visible), solar panel circulator for heating and expansion tanks. Background: isolated three-phase generator (30KVA), smoke evacuation and automatic control panel.



Machine room. Front: double bucket diesel tanks (Dehoust ®), total capacity up to 5,000 liters. Bottom right: diesel feed for the three-phase group and the boiler. Bottom left: solar exchanger for underfloor heating (winter), circuit, valves, temperature probe and circulator.



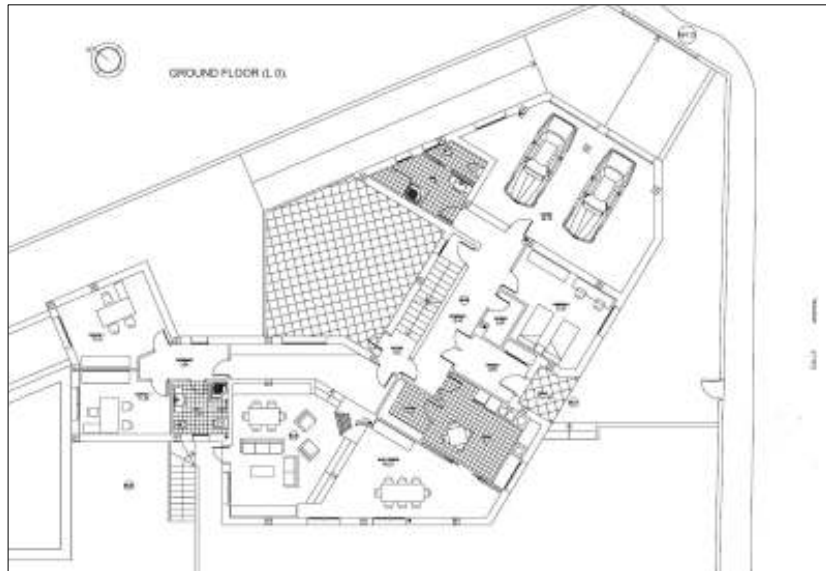
Machine room. Main drinking water supply area, showing storage tank (1 Ton), softener (dry brine), booster pump with pressure stabilizer, pipes and valves for use and distribution of well water.



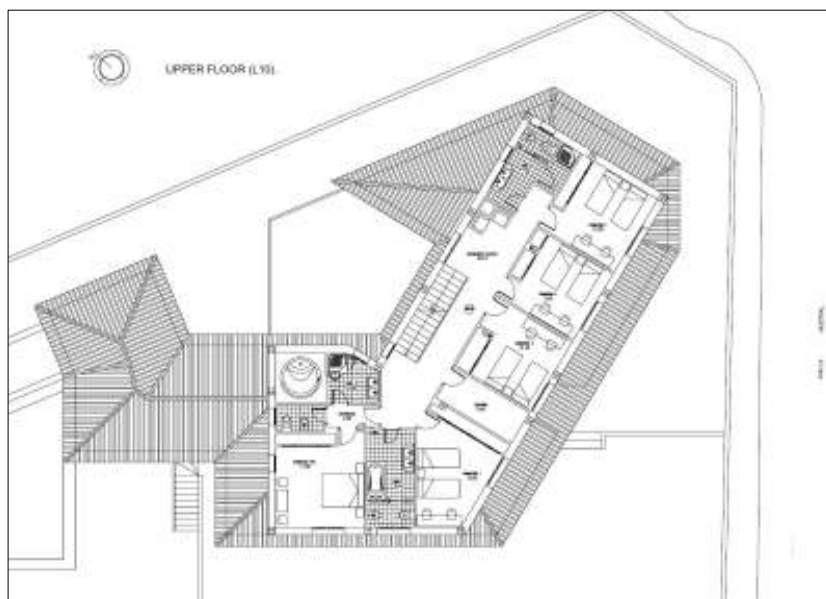
Machine room. Front: 3 of the 8 control panels. Left to right: well panel, main engine room panel and solar automaton panel. All mechanisms have top brand qualification (Schneider Electric ®).

- Ground floor (P0):

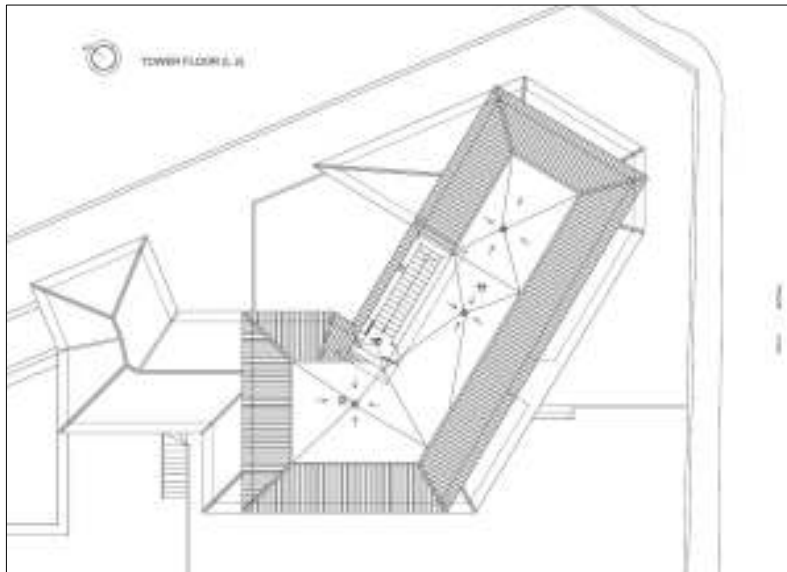
- East wing: main garage (two large vehicles), elevator access, bathroom, bedroom/office, hallway for access to floors, porch, hallway, cleaning office and kitchen. Bedroom without built-in wardrobe.
- West wing: hallway, living room on two levels, bathroom, two bedrooms/offices. Bedrooms with built-in wardrobe.



- Upper floor (P1): master bedroom with en-suite bathroom, four bedrooms, cleaning office, two bathrooms, elevator access, hallway and access stairs to floors. All bedrooms have a built-in wardrobe.



- Tower floor (P2): lobby and access to machinery and facilities.



5) Exterior:

North boundary: boundary with adjacent property, contains access ramp to secondary garage at P-1 and direct connection to pool area.

East boundary: limit with Mistral street and roundabout; It contains overhead access doors to the main garage, a pedestrian access door/wheelchair ramp, and a sliding door to enter the south terrace.

South boundary: border with the adjacent property, contains a south terrace with capacity for 4 to 6 vehicles depending on size, as well as access to swimming pools and the living-dining room area of the house (second level of P0).

Western boundary: boundary with an area of natural non-buildable land according to the NNSS of the Albolote town council; It contains a swimming pool area, purification machinery and an underground room for compensation tanks.



Northwest view of the house. Low closeup: swimming pool. Right background: play pool, access to the 0 floor, transition to the south terrace and gate for outdoor parking for 4 to 6 vehicles. Left background: north ramp for access at Mistral Street level with automatic overhead vehicle door. Middle center: west face of floor -1 (intermediate hallway for swimming pool) and floor 0 (west wing bedroom offices). Perimeter: Terrano-color block factory wall (Granada ® Blocks), on a double decorative side.



North ramp. Close-up on the lower right: ramp lighting for nighttime vehicle access, with simultaneous ignition to the opening of overhead doors at Mistral Street level. Bottom left: tilting door No. 2 semi-open.

6) General characteristics.

6.1) Interior ceilings: False ceiling throughout the entire home (offset about 40 cm from each slab), allowing quick and easy access to the facilities that run throughout the entire building. Composed of T profiles (silver gray color) and 60x60 double-sided cherry-beech imitation wood plate (P0, 1 and 2 floors). Likewise, there is a suspended ceiling in garages and P -1, with white aluminum profiles and 60x60 plasterboard in white gotelé imitation.



Close-up of false ceiling, facing cherry tree, showing profile aluminum decorated in silver. Sideways, the roofs present pitted perimeter for better coupling to the plaster projected.

6.2) Windows: Aluminum carpentry in double reinforced profile and interior thermal break bridge, finished in oak imitation. Climalit double glass. Oak-look PVC blinds, motorized and domotizable for remote control.

<http://www.grupolaminex.com/> <http://www.grupolaminex.com/productos.php?ids=1&idc=16&idsubc=92&idprod=34>

6.3) Bathrooms: All but one are equipped with an isolated toilet and bidet, shower with single/double screen depending on location, sinks with single/double bowl. Number of normal bathtubs: 1. Number of hydromassage cabins: 1. Number of jacuzzis: 1. Color: pergamon (Color according to RAL chart: RAL 1013; <http://www.ralcolor.com/>).



Bathroom located on the P1 floor with double sinks and suspended furniture to the background zone reserved for lavatory and bidet. Carpentry in cherry tree combined with tones metallic.

6.4) Interior carpentry: in combined tones of beech and cherry.

6.5) Soils: Porcelain stoneware in various finishes, with cherry wood imitation predominating.

6.6) Interior walls: projected plaster with primer and washable paint. Color: light cream (Color according to RAL chart: RAL 1013; <http://www.ralcolor.com/>).

6.7) Ceilings: Finished in Borja brand tiles. TB-4 Quattro ® model, black.

(<http://www.tejasborja.es/>). http://www.tejasborja.es/en/catalog/formats/tejas/tb_4_quattro_roof_tile-1

6.8) Exterior walls (enclosures): double facing, with exterior sheet in exposed water-repellent brick (Malpesa brand, salmon tone, sealed with sprayed polyurethane), air chamber and interior sheet in double-hole brick.

<http://www.malpesa.es/>
http://www.malpesa.es/detalle_producto_nivel_1.php?idc=1&ids=3

http://www.paredondeladrillo.com/reportaje.asp?id_rep=14

6.9) Lighting: integrated into a false ceiling, mostly based on adjustable halogen spotlights (floors P0, 1 and 2) and 60x60 Vilaplana brand fluorescent screens (floor P-1 and garages).

Distributor hallway in west wing. Center bottom: branch of access to offices / bedrooms. Bottom left: access to full bathroom. Upper: false ceiling in 60x60 plate on cherry wood face, showing low voltage halogen spotlights stabilized by its own transformer. Middle right: windows facing north terrace. Bottom: stoneware floor.



6.10) Swimming pools: There are two independent pools, each with its own slab and waterproof reinforced concrete walls.

The play pool is trapezoidal in shape, with dimensions 8.8 m (length) x 7.5 m (width) x 1.8 m (maximum depth).

The swimming pool is elongated in shape, with dimensions 22 m (length) x 2.3 m (width) x 1.4 m (depth).

Both are covered with specific tiles for swimming pools, Exagrés brand, and incorporate specific anti-slip regulations and underwater lighting.

<http://www.exagres.es/catalogo-piscinas.html>



Trapezoidal play pool, during the late spring season, in preparation for the bathing season. At the bottom left west boundary and at the bottom right north boundary. Uncovered perimeter overflow gutter for maintenance and cleaning.

7) Facilities and services.

7.1) Electricity: three-phase power supply from the supply company (the domestic type is normally two-phase or single-phase. See "7.16 Autonomous supplies".

7.2) Water: from supply company. See "7.16 Autonomous Supplies".

7.3) Solar panels: They capture solar energy to heat exchangers in various services. Number of panels: 20. Ariston brand (previously Merloni), Top model. Regarding engineering design, there is 87% solar coverage for domestic hot water, 58% for pool heating and 30% for underfloor heating. The latter system has been improved with the addition of an additional Grundfoss circulator for the spring, as a transition station.

7.4) Elevator: Elevator for people with reduced mobility, with access to floors P-1, 0 and 1. Elessor brand, model EHE30-2.

7.5) Air conditioning: underfloor heating (main) and air fan coils (secondary). It allows the delivery of cold or heat in a user-selectable way, according to the local thermostat of each room.

7.6) Heat production: using Tifell brand mixed boiler, Eurofell model with 120 liter internal accumulator. Supported by solar panels according to user regulation.

7.7) Cold production: through a mixed three-phase Carrier chiller/heat pump plant model 30RH, managed by remote or local control.

7.8) O'Bio heat exchanger: capacity 1,000 liters, for transporting solar heat to the underfloor heating.

7.9) Chaffoteaux BS1S heat exchanger: capacity 400 liters, for transporting solar heat to domestic hot water.

7.10) Mecalia heat exchangers model Tecmi 23-7: for transporting solar heat to swimming pools, in order to prolong the bathing season and/or eliminate excess heat.

7.11) Reyde brand 1,000 liter tank: for accumulation of drinking water in the housing circuit, to prevent external supply cuts.

7.12) Robosoft RBS-24ED Descaler: in dry resin to eliminate excess calcium carbonate.

7.13) Drinking water drive group: It consists of an Alsina Niza 100/4M suction pump and a Wilo Fluidcontrol pressure group.

7.14) Karcher three-phase pressure washer, model H9/19M: connected to double outdoor circuit in swimming pools and terraces, for maintenance and pressure cleaning.



Maintenance tasks prior to the bathing season. Empty play pool. Cleaning using a Karcher pressure washer connected to the external circuit (on the surface).

7.15) Pool maintenance: through salt chlorination by electrolytic dissociation. Purification through overflow channel. The water is collected and recirculated through underground compensation tanks. Visual effect: endless overflow.

7.16) Autonomous supplies:

7.16.1) Water well: integrated into the general installation of the home for private exploitation. Built in 230 mm² pipe and total depth of 83 meters.

7.16.2) Himoina 30 KVA three-phase generating set, aimed at the total maintenance of the home in all its needs independently of the external supply. Equipped with smoke evacuation and sound insulation.

7.16.3) 5 Diesel tanks in series, Dehoust brand, with double approved bucket, for supply to the diesel boiler and Himoina group. Capacity: 5,000 liters of C diesel.

7.16.4) 7 pre-installed diesel tanks, Dehoust brand, for A/C diesel supply, depending on user selection.

7.17) Management programmable automaton (DVP 1455 model):adjustable by the user, with six positions and three temperature settings (AKO 14716 programming thermostat), which allows you to optimize the energy balance of the home at all times depending on the needs and the time of year.

7.18) Independent solar heating using Grundfoss recirculating pump: which allows not to use diesel in the January – April season, until the definitive arrival of spring heat (end of May).

7.19) Telecommunications.

All rooms have an access point (RJ45 category 6) to a wired network (double in the offices and living room), avoiding the need for a wireless network (WiFi), even in the machine room for eventual domotizable remote management. Additionally, there is telephone access and satellite TV.

Satellite dish for satellite reception, as well as DTT, located on the roof of the 2nd floor.

7.20) False ceiling.

Although it is not an installation in itself, it is mentioned in this chapter, given that all of the installations run inside the false ceiling of wooden plates, allowing immediate access to any duct or cavity. Preventive/reparative maintenance is much easier and cheaper this way, as well as eventual extensions. Manholes, pipes and empty boxes have been provided for this specific purpose, covering the entire home.

8) Security.

Home security systems are of two types, active and passive, and are made up of three integrated subsystems.

8.1) Passive protection:

- Armored doors, 10 in number, certified by an international manufacturer to withstand 7.62x51 caliber assault rifles, non-carbonizable due to having a steel structure covered in a sheet of wood.
- Grille on all windows, with a quadrangular section and oak-look finish, with internal anti-cut device, fixed to the marble frame using inviolable blind bolts. Certified by international manufacturer.
- Wired data network throughout the home, avoiding wireless access points (not WiFi) that could be intercepted from the outside and used for electronic intrusion, deactivating active protections.

8.2) Active protection:

- Peripheral early intrusion detection system, so that the user is notified before the assailant contacts the passive systems, allowing various types of defensive response.
- Television camera system, in continuous recording, with surveillance of all angles of the property and home (four cameras facing the outside of the east and west boundaries).

- Camera server with remote access, so that it is possible to verify the status of the home from outside the plot before accessing, using PDA or smartphone type devices (compatible Microsoft system, Windows Mobile type or similar, is essential).
- 24-hour alarm center, with permanent pulse transmission (anti-tamper effect) and transmission redundancy.
- Fire station with detection in sensitive areas.
- Confidential stays accessible only to the definitive owner. Important: NOT included in eventual visit for the **potential** buyer.
- Absence of external cleaning personnel, so that the entry and exit of personnel from outside the home is avoided, with knowledge of schedules, trips, stays, personnel and other confidential data.

No further technical details are offered as they are confidential, available only to the definitive owner. INTENTIONALLY avoids detailing the brand and model of devices of any of the mentioned systems.

9) Exterior.

Divided into two levels, following the slope of the natural terrain.

First level: Mistral street on the east edge, with vehicle access to the south terrace, main garage and north ramp for access to the second level.

Second level: property on the northern edge, with the presence of two swimming pools, distribution hallway to the pools and stairs.

There is no consolidated vegetation. The existing one was in flower beds and flower pots with platforms that were removed.

Surface pressure cleaning circuit, made of half-inch steel pipe, certified to 200 atmospheres and with elastic sections for water hammer, connected to a Karcher HD9/19M three-phase pressure washer located in the engine room. Divided into two zones for better pressure concentration. It has 6 quick anchor points for connecting the steel hose and lance, so that cleaning floors, vehicles and others is carried out effortlessly and taking advantage of all the available space.

Water points for irrigation distributed perimeter.

10) Access for vehicles.

First level: Mistral street. Two overhead doors and two interior sectional doors for access to the main garage. A sliding door without an upper lintel, so as not to block access for trucks and other high-rise vehicles that had to enter the property, maintaining privacy at all times.

Second level: a sectional door for access to the secondary garage/workshop.

All doors are motorized and operated remotely.