

El Bernegal



CASAS ITER
BIOCLIMÁTICAS

HOW DOES THE IDEA ARISE?

El Bernegal house is designed as an exchanger of experiences with the environment. The sun, heat and light are the natural energy flows incorporated in the project.

The large curved roof, is opened at midday to favour the house with the best sun, covers the central space that is opened to two patios. The entrance patio is buried in the ground with a cistern and another one in the front that rises to the sky and fades with the landscape. A wall encloses the house on its northeast facade and a vegetable pergola covers the front patio. The materials used are one of its main charms: exposed concrete, volcanic stone, recycled wood panels worked in collage and recycled chip panels.

This house has been designed to achieve optimal indoor climatic conditions of temperature and relative humidity with the help of the user. Comfort conditions for temperature are assumed between 21oC and 26oC and between 20% and 80% for relative humidity. All the strategies proposed will be aimed to maintain the house within these parameters, especially thermal, without using energy consuming appliances, only through bioclimatic techniques. The climatic data of the house can be accessed through a screen in the interior.

BIOCLIMATIC STRATEGIES

The main bioclimatic strategies used in the **El Bernegal** are:

- Direct solar capture in bedrooms to improve thermal comfort
- Courtyards that let natural light in and favour air renewal in the different rooms.
- 40 cm walls to increase thermal inertia by insulating the housing from unwanted energy flows.

HOW IS THIS BIOCLIMATIC DWELLING USED?

If it's warm

- Open doors for cross ventilation.
- Lower blinds to prevent direct sunlight entry.
- Shut the louvers.

If it's cold

- Raise the blinds so that the heat of the sun may enter
- Close the doors to prevent the accumulated heat from escaping the space
- Open the louvers.

