

Las Bóvedas



CASAS ITER
BIOCLIMÁTICAS

HOW DOES THE IDEA COME ABOUT?

Las Bóvedas house is the result of a cave transformed into a house, formalized by 3 vaults of volcanic stone. It is a partially buried dwelling, with two patios to the North and a large garden terrace to the South, which is protected from the direct sun by fixed and regulated wooden louvers. The vaults that constitute the axis of the construction and the burial create calm and relaxing and sanctuary like atmosphere. The sea views from the garden terrace evoke a relaxing mood throughout the dwelling.

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 **Las Bóvedas** house are:

- Semi underground construction allows softer temperature fluctuations and acoustically protects the house from the incident wind.
- Patios that allow the entrance of natural light and the renovation of the air in the different rooms.
- Green roof that improves its thermal inertia.
- Walls of light volcanic stone with a thickness ranging from 80 cm in the lower parts to 50 cm in the encounters with the vaults.

HOW IS THIS BIOCLIMATIC HOUSE USED?

If it's warm

- Open the doors to help cross-ventilation.
- Lower the blinds to prevent direct sunlight.
- Open the steel vertical ventilation tube to evacuate heat and/or heated air from each room.
- Shut the louvers.

If it's cold

- Raise the blinds to let the sun heat in.
- Close the doors to prevent the accumulated heat from escaping the space.
- Close the steel vertical ventilation tube to impede the evacuation of warm of heated air from each room.
- Open the louvers.

