La Geria

CASAS ITER
BIOCLIMÁTICAS

HOW DOES THE IDEA COME ABOUT?

The idea of the house **La Geria** arises from the traditional method of growing the vine on the island of Lanzarote, planted in a semi-walled hole that protects it from the wind, preserving moisture and environmental balance.

The walls of the house collect and protect those who live it. The ubiquitous Tosca stone and the wood give warmth to the house. The living room is connected to the front and back gardens, which embrace the dining room. The house is perfect to accommodate a family or group of friends who wish to enjoy both the common spaces to meet and intimate. A relaxing bath overlooking the garden will be a hard-to-forget experience.

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.

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BIOCLIMATIC STRATEGIES

The main bioclimatic strategies used in the **La Geria** are:
- Basic rectangular typology with long north and south facades enclosed by a circular wall that creates two separate courtyards with different climatic characteristics.
- Air chamber between the ground and the floor of the house, this provides isolation and cools the air that is introduced into the rooms through air vents.
- Cavity between the concrete roof slab and the wooden ceiling. This cavity opens through air vents to the north and the south courtyards.
- Inverted U- beams that set up horizontal air shots that drag the hot air from the rooms thanks to the gratings.
- Green roof that improves thermal inertia giving stable climatic conditions to the interior.
- Pergolas on the south facade with adjustable louvers for the control of solar gains.
- The east and west facades openings represent less than 18% of the total wall surface and has great thermal inertia.
- Cross ventilation in all rooms.

HOW IS THIS BIOCLIMATIC HOUSE USED?

If it's warm

- Abre las puertas para propiciar la ventilación cruzada
- Baja los estores para impedir la entrada directa del sol
- Abre las rejillas en las esquinas del suelo
- Coloca las lamas de protección solar en posición cerrada

If it's cold

- Sube los estores para que entre el calor del sol
- Cierra las puertas para que no se escape el calor acumulado
- Cierra las rejillas en las esquinas del suelo
- Coloca las lamas de protección solar en posición abierta