# Casa Mattia

by raffaella mazzoli / 2017-05-11 14:33:27 / Italie / 6595 / IT

*


**Primary energy need :**

**21.7** **kWhpe/m$^2$.anno**

**(Calculation method : )**

**ENERGY CONSUMPTION**

*Economical building* *Building*

- *< 50* **A**
- *51 à 90* **B**
- *91 à 150* **C**
- *151 à 230* **D**
- *231 à 330* **E**
- *331 à 450* **F**
- *> 450* **G**

*Energy-intensive building*

**Building Type** : Hotel, boarding house
**Construction Year** : 2017
**Delivery year** : 2017
**Address 1 - street** : 04012 CISTERNA DI LATINA, Italia
**Climate zone** : [Cfb] Marine Mild Winter, warm summer, no dry season.

---

**Net Floor Area** : 100 m$^2$
**Construction/refurbishment cost** : 200 000 €

**Cost/m2** : 2000 €/$m^2$

**Proposed by :**

## General information

The Bed and Breakfast Casa Mattia has a structure made of straw and wood entirely made by Rama Energy. It's the combination of tradition and innovation and its aim is to meet the growing need of humankind to improve the comfort and the performance of our houses.During the design phase we studied the optimal building orientation to maximize solar energy in winter and reduce thermal radiation in summer. To ensure greater isolation, the foundations of the building were realized with cellular glass filling. The supporting structure is made of wood and the curtain wall is made with straw bales. The walls are plastered with plasters earthen and the paints are eco-friendly. The choice of these materials has given the walls maximum breathability, making the house able to intervene in the surrounding environment becoming a true natural moisture regulator: the building absorbs excessive vapors and releases them in case of air Too dry for unmatched wellness.Part of the property has a garden roof which has thermal and aesthetic function. The whole structure is connected to a home automation system that connects all devices to the building system.

### See more details about this project

http://www.ramaenergy.it/casamattia.html

### Data reliability

Self-declared

## Stakeholders

### Stakeholders

Function : Company

Rama Energy

Marco Mazzoli

http://www.ramaenergy.it/index.html

## Owner approach of sustainability

With this project Rama Energy has built a house compatible with the concept of circular economy. Straw, raw earth and pesto are all waste materials found at zero mile. Rama Energy has decided to design and build this straw and wood Bed and Breakfast in order to enter a totally ecological environment on the tourist market. The aim is to give potential costumers the chance to experience this kind of house. Thanks to the visibility we can achieve through this facility we hope to reach more potential customers interested in buying a straw home. Casa Mattia is the first bio-building construction designed and built by Rama Energy.

## Architectural description

During the design phase a study was conducted to optimize the structure orientation in order to appropriately distribute the indoor environments to best utilize daytime irradiation. To ensure greater isolation, the foundations of the building were realized with cellular glass filling. The supporting structure is made of wood while the curtain wall is made with pressed ballet. The walls are plastered with raw earth plaster and the dyes are eco-friendly. The choice of these materials has given the maximum breathability, making the house able to intervene in the surrounding environment becoming a true natural moisture regulator: the building absorbs excess vapors and releases them in the case of too dry air for unequal well-being. Part of the property also has a garden roof which also has a thermal and aesthetic function. The whole structure is connected to a home automation system that connects all devices to the building system. Thanks to the high thermal insulation, the B & B does not need a high production / heating / cooling output. In addition, the installation of the photovoltaic system has contributed to further reducing house management costs. This is an energy class structure A +. The bale of straw thanks to the pressing contains a low oxygen content inside it and therefore it is resistant to fire for more time than the buildings built in reinforced concrete. The acoustic welfare, which is almost never taken into consideration for traditionally built buildings, is just one of the exclusive features of the straw house. In addition, the specific weight of straw bales, as opposed to the most common construction materials, causes the mass to undergo less acceleration, making the anti-seismic structure. Last but not least, the design and finishes are no less sought-after: the frescoes are personalized, the tadelakt is used for the plaster and the furniture is a creative recovery.

## Energy

## Energy consumption

Primary energy need : 21,70 kWhpe/$m^2$.anno

Primary energy need for standard building : 30,00 kWhpe/$m^2$.anno

Calculation method :

More information :
The property is used for less than 60 days.

## Envelope performance

Envelope U-Value : 0,20 W/$m^2$K

More information :
Insulating in pressed ballet balls external lime plastering and interior plastering in rough ground.

Building Compactness Coefficient : 1,00

Indicator :

# Renewables & systems

## Systems

Heating system :

- No heating system

Hot water system :

- Heat pump

Cooling system :

- No cooling system

Ventilation system :

- Natural ventilation

Renewable systems :

- Solar photovoltaic

# Environment

## GHG emissions

Building lifetime : 50,00 anno/i

## Life Cycle Analysis

Eco-design material : 98%

# Products

## Product

Pressed straw ballet

produttore locale

non disponibile

http://www.ramaenergy.it/bioedilizia.html

Product category :

Stubble in pressed straw ballets

-

---

Plaster on raw ground

Product category :

-

-

# Costs

## Construction and exploitation costs

Reference global cost : 200 000,00 €

Reference global cost/Bedroom : 200000

Cost of studies : 20 000 €

Total cost of the building : 200 000 €

## Built-up area

Built-up area : 100,00 %

## Building Environnemental Quality

## Building Environmental Quality

- Building flexibility
- indoor air quality and health
- consultation - cooperation
- acoustics
- comfort (visual, olfactive, thermal)
- energy efficiency
- renewable energies
- maintenance
- building process
- products and materials

## Contest

## Building candidate in the category

Energia e Climi Temperati

Bassa Emissione di Carbonio

Salute e Comfort

Edifici Intelligenti

Utenti Preferito

Date Export : 20230414055549