



## Industrial building Bonatti irrigations

by Nicola Preti / 2016-07-07 16:52:34 / Italie / 11624 / IT

**New Construction**

**Primary energy need :**

**150** kWhpe/m<sup>2</sup>.anno

(Calculation method : )

**ENERGY CONSUMPTION**

*Economical building* *Building*

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

*Energy-intensive building*

**Building Type** : Logistics warehouse  
**Construction Year** : 2010  
**Delivery year** : 2012  
**Address 1 - street** : 37060 VIA PAPA GIOVANNI PAOLO II, 8 - BUTTAPIETRA, Italia  
**Climate zone** : [Csa] Interior Mediterranean - Mild with dry, hot summer.

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**Net Floor Area** : 3 000 m<sup>2</sup> SHON  
**Construction/refurbishment cost** : 3 150 000 €  
**Number of Installed Kw** : 400 Installed Kw  
**Cost/m2** : 1050 €/m<sup>2</sup>

### General information

Industrial building working as a nearly energy building through passive construction system and active energy producer

### See more details about this project

- <http://www.nicolapreti.it/#fuori-dalle-righe/>
- <http://www.nicolapreti.it/#fuori-dalle-righe/>

### Data reliability

Self-declared

### Stakeholders

## Stakeholders

Function : Designer

Nicola Preti, Fabio Faoro

arch.nicolapreti@gmail.com

<http://www.nicolapreti.com>

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Function : Investor

Bonatti Irrigazioni

<http://www.bonattirrigazioni.it/>

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Function : Structures calculist

Ing. Davide Caiani

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Function : Construction company

<http://www.progress.cc/>

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Function : Other consultancy agency

Ing. Alberto Spellini

## Contracting method

Lump-sum turnkey

## Owner approach of sustainability

Sustainability is a continuous work of innovation. Each of my project is the experimentation of a new approach with technology. In this case the scope of the project and the objectives of the client were: - create a nearly zero energy building - create a natural interior atmosphere thanks to natural lighting - make the building work as a thermal mass.

## Architectural description

Sustainability is a continuous work of innovation. Each of my project is the experimentation of a new approach with technology. In this case the scope of the project and the objectives of the client were: - create a nearly zero energy building - create a natural interior atmosphere thanks to natural lighting - make the building work as a thermal mass.

## If you had to do it again?

I think the project had a good outcome due to the successful communication and collaboration between the stakeholders involved. The architecture the materials, and the energy choices were deeply discussed before the implementation. I wouldn't change anything.

## Building users opinion

The users are the worker of the warehouse and the employees of the offices. They are both very satisfied with the thermal comfort inside the building, both in winter and in summer. In particular the employees of the office are satisfied with the temperature with a very low power heating system.

## Energy

### Energy consumption

Primary energy need : 150,00 kWhpe/m<sup>2</sup>.anno

Primary energy need for standard building : 400,00 kWhpe/m<sup>2</sup>.anno

Calculation method :

CEEB : 0.0001

Final Energy : 105,00 kWhfe/m<sup>2</sup>.anno

### Envelope performance

Envelope U-Value : 0,32 W/m<sup>2</sup>K

More information :

Wall: two-slab walls with thermal insulation  
Windows: polycarbonate Thermoclick thickness 40 mm  
Roof:

## Renewables & systems

### Systems

#### Heating system :

- Condensing gas boiler
- Water radiator

#### Hot water system :

- Condensing gas boiler

#### Cooling system :

- No cooling system

#### Ventilation system :

- Natural ventilation

#### Renewable systems :

- Solar photovoltaic

## Products

### Product

Progress Thermowand

Progress

info@progress.cc

<http://www.progress.cc/it>

Product category :

Double prefabricated concrete wall with internal insulation

The product had a great success between the stakeholders thanks to the thermal comfort and the very low cost of other heating systems.



Lexan Thermoclick

Ampelite

vicorders@ampelite.com.au

<http://www.ampelite.com.au/products/lexan-multiwall-polycarbonate/lexan-thermoclick/>

Product category :

Polycarbonate panels used as screens for sunlight

Great acceptance thanks to the diffuse light it creates in the interior of the building.



## Costs

## Construction and exploitation costs

Renewable energy systems cost : 1 500 000,00 €

Total cost of the building : 1 650 000 €

## Urban environment

The building is close to other industrial buildings. The surroundings are countryside areas.

## Land plot area

Land plot area : 6 000,00 m<sup>2</sup>

## Built-up area

Built-up area : 50,00 %

## Green space

Green space : 406,00

## Parking spaces

322 mq

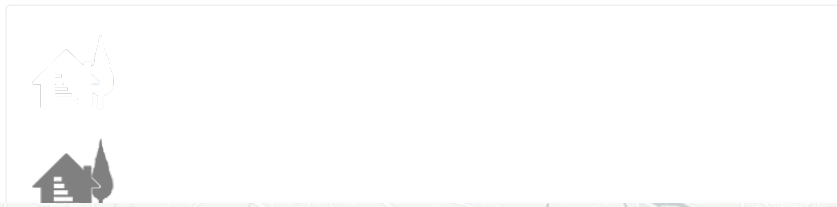
## Building Environmental Quality

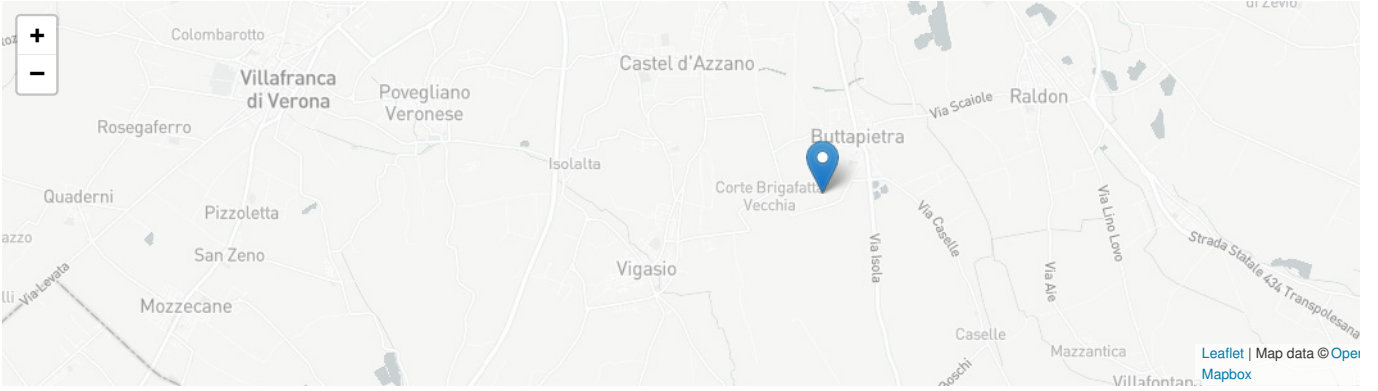
### Building Environmental Quality

- comfort (visual, olfactive, thermal)
- renewable energies
- building process

## Contest

### Building candidate in the category





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