


## Cholet Motorcycles

by Tugdual ALLAIN / 2014-04-22 20:14:12 / France / 7966 / FR



**Primary energy need :**

59 kWh<sub>ep</sub>/m<sup>2</sup>.an

(Calculation method : Other )

**ENERGY CONSUMPTION**

Consumption Range (kWh <sub>ep</sub> /m <sup>2</sup> .an)	Grade
< 50	A
51 à 90	B
91 à 150	C
151 à 230	D
231 à 330	E
331 à 450	F
> 450	G

*Economical building* (A, B, C) | *Building* (A) | *Energy-intensive building* (F, G)

**Building Type** : Store in a shopping mall  
**Construction Year** : 2013  
**Delivery year** : 2014  
**Address 1 - street** : 49300 CHOLET, France  
**Climate zone** : [Cfb] Marine Mild Winter, warm summer, no dry season.

**Net Floor Area** : 750 m<sup>2</sup> Other  
**Construction/refurbishment cost** : 403 000 €  
**Number of Visitor** : 100 Visitor  
**Cost/m<sup>2</sup>** : 537.33 €/m<sup>2</sup>

**Certifications :**



### General information

Construction of a motorcycle passive store with a construction cost of 570 € HT/m<sup>2</sup>.

Since the delivery in mid-January 2014 the heating has not been put into operation for an internal temperature never lower than 16 ° C.

### Sustainable development approach of the project owner

The goal was to build a passive building at the same price as a RT2012 (French thermal regulation for buildings) building. The construction budget is 570 € HT per m<sup>2</sup>. It should be noted that the client did not know what a passive building was when the prime contractor was chosen.

## Architectural description

Metal structure, sandwich panels in front, joinery type stabalux triple glazing, waterproofing cover, n50 = 0.15

## Building users opinion

Perfect thermal comfort due to the absence of cold walls and the absence of parasitic air currents. A very pleasant acoustic comfort due to the very good air tightness and triple glazing.

## If you had to do it again?

Particular attention should be paid to summer comfort. The customer found the installation of external blinds superfluous, which will certainly be realized before the summer

## See more details about this project

<http://www.equipe-ingenierie.fr/nos-realisations/>

## Stakeholders

### Stakeholders

Function : Construction Manager

EQUIPE INGENIERIE

M Tugdual ALLAIN 02 41 55 35 21

<http://www.equipe-ingenierie.fr>

Function : Designer

INSO ARCHITECTURE

Mme Marie CHAPPAT 06 83 26 55 02

<http://www.inso.pro>

Function : Contractor

SCI YAPA CHOLET MOTO

M Patrick BOSSARD 02 41 62 24 19

<http://kawasaki.cholet-motos.fr/>

## Contracting method

Separate batches

## Type of market

Global performance contract

## Energy

### Energy consumption

Primary energy need : 59,00 kWhep/m<sup>2</sup>.an

Primary energy need for standard building : 110,00 kWhep/m<sup>2</sup>.an

Calculation method : Other

CEEB : 0.0001

Breakdown for energy consumption : According to PHPP calculation: - Heating: 18% - DHW: 25% - Lighting and technical equipment: 48% - Auxiliary: 9%

### Real final energy consumption

Final Energy : 110,00 kWh<sub>ef</sub>/m<sup>2</sup>.an

Real final energy consumption/m2 : 25,60 kWh/m<sup>2</sup>.an

Year of the real energy consumption : 2 014

Real final energy consumption/m2 : 21,00 kWh/m<sup>2</sup>.an

Year of the real energy consumption : 2 015

Real final energy consumption/m2 : 21,70 kWh/m<sup>2</sup>.an

Year of the real energy consumption : 2 016

## Envelope performance

More information :

Outer walls: U = 0.103 W.m<sup>2</sup>.K<sup>-1</sup>

Roofs: U = 0.143 W.m<sup>2</sup>.K<sup>-1</sup>

Floors: U = 0.172 W.m<sup>2</sup>.K<sup>-1</sup>

Aluminum joinery: Uw = 0.76 W.m<sup>2</sup>.K<sup>-1</sup>

Building Compactness Coefficient : 0,55

Indicator : n50

Air Tightness Value : 0,15

## More information

Calculation of energy Primary calculated according to the certified PHPP sheet (passive construction). Actual measured consumption The building at the time of the building permit was submitted only to RT2005.

## Renewables & systems

### Systems

Heating system :

- Electric radiator

Hot water system :

- Individual electric boiler

Cooling system :

- No cooling system

Ventilation system :

- Double flow heat exchanger

Renewable systems :

- No renewable energy systems

Solutions enhancing nature free gains :

Les façades sud et Ouest ont été très vitrées pour l'exposition client et bénéficier des apports solaires

### Smart Building

BMS :

none

## Environment

### Urban environment

Built-up area : 725,00 %

Downtown Construction

## Products

## Product

Dual flow ventilation KWL EC 1400 D

HELIOS

01 48 65 75 61

<https://www.helios-fr.com/>

Product category : HVAC, électricité / ventilation, cooling

High efficiency dual flow ventilation

The unit is certified by Passivhaus Institute, 82% efficiency



## Costs

### Construction and exploitation costs

Cost of studies : 35 000 €

Total cost of the building : 403 000 €

### Energy bill

Forecasted energy bill/year : 1 600,00 €

Real energy cost/m2 : 2.13

Real energy cost/Visitor : 16

## Health and comfort

### Indoor Air quality

Dual-flow central unit controlled by the CO2 rate of the sales area: CO2 content less than 650ppm / m3

## Contest

### Building candidate in the category



Energie & Climats Tempérés





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