Zehnder Campus

by Pierre DUCLUSAUD / 2015-06-17 18:44:11 / France / 14945 / FR

Primary energy need :

25 kWhep/m^2.an

(Calculation method : RT 2012)

ENERGY CONSUMPTION

Economical 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 **A**

Building Type : Office building < 28m
Construction Year : 2014
Delivery year : 2015
Address 1 - street : 3, Rue du Bois Briard 91021 COURCOURONNES, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 3 500 m^2
Construction/refurbishment cost : 8 500 000 €
Number of Work station : 160 Work station
Cost/m2 : 2428.57 €/m^2

Certifications :

breeam MINERGIE® LEED MINERGIE-P®

General information

Building three functions: Offices, Showroom and Training Center. French headquarters of Zehnder Group.

Triple Certified Building:

- MINERGIE P
- LEED Silver
- BREEAM Very Good

Sustainable development approach of the project owner

The objectives of Zehnder Group through this building are:
- The quality of indoor environments and comfort of workingspaces for employees (it is the headquarters of Zehnder Group in France)
- The construction of a training center for products testing and training of customers and partners
- The implementation and demonstration of Zehnder Group solutions performance on energy efficiency and indoor comfort
- Building certifications (international label)

Architectural description

This building is triple function:
- 2400 m2 of offices and social rooms, partly ERP
- 300 m2 of exhibition space
- 800 m2 dedicated to the training center. For more detail, please refer to plans and photos.

Building users opinion

Too soon for a return - from the occupation 29/06/2015

Stakeholders

Stakeholders

Function : Contractor

ZEHNDER GROUP FRANCE

P. WENDLING, patricia.wendling@zehndergroup.com

http://www.zehndergroup.com/fr/home

Function : Assistance to the Contracting Authority

AMSYCOM

JF Couec, jfcouec@amsycom.com

http://www.amsycom.com/

Function : Construction Manager

BOUYGUES Construction privée

Philippe Dabretteau, P.DABRETEAU@bouygues-construction.com

http://www.bouygues-construction.com/implantation/bouygues-batiment-ile-de-france-construction-privee

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Function : Designer

SERAU

sylvain DESON, sdeson@serau.com

http://www.serau.com/

Contracting method

General Contractor

Type of market

Realization

Energy

Energy consumption

Primary energy need : 25,00 kWhep/m^2.an

Primary energy need for standard building : 50,00 kWhep/m^2.an

Calculation method : RT 2012

Envelope performance

Envelope U-Value : 0,20 $W.m^{-2}.K^{-1}$

Indicator : EN 13829 - n50 » (en 1/h-1)

Air Tightness Value : 0,46

Renewables & systems

Systems

Heating system :

- Geothermal heat pump
- Radiant ceiling

Hot water system :

- Individual electric boiler

Cooling system :

- Geothermal heat pump
- Radiant ceiling

Ventilation system :

- Double flow heat exchanger

Renewable systems :

- Heat pump (geothermal)

Smart Building

BMS :
GTB Delta Dore - Web Interface

Users' opinion on the Smart Building functions : too early

Environment

Urban environment

Land plot area : 10 000,00 m^2

Built-up area : 1 300,00 %

Green space : 5 000,00

Downtown Courcouronnes, near tramway (300 m) and bus (foot)

Products

Product

Radiant panel heating and cooled ceilings ceiling systems

Zehnder

Zehnder Group France

http://www.zehnder.fr

Product category : HVAC, électricité / heating, hot water

see manufacturer documentation

Aesthetic and energy efficiency, heating + refresh Comfort of radiant heating and cooling: no air mixing and convection

Ventilation central piece dual flow heat recovery

Zehnder

Zehnder Group France

http://www.zehnder.fr

Product category : HVAC, électricité / ventilation, cooling

See manufacturer instructions

Energetic Efficiency

Air distribution ducts integrated slab - ComfoTube

Zehnder

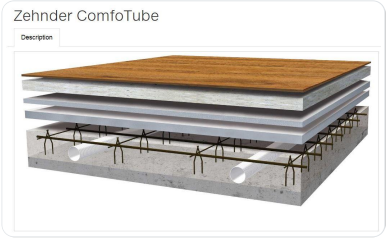
ZEHNDER GROUP FRANCE

http://www.zehnder.fr

Product category : HVAC, électricité / ventilation, cooling

view manufacturer website

Space saving: integration slab. Hygiene: distribution ducts with patented principle of "double-skiN"; for easy maintenance and limiting the deposition of dust.



Costs

Construction and exploitation costs

Total cost of the building : 8 500 000 €

Health and comfort

Indoor Air quality

IAQ measurements made at the end of construction phase, before occupation and renewed after occupation. Results not yet available. Collaboration Médiéco - Suzanne DEOUX very early in the design phase and during the construction phase to validate the components used.

Comfort

Health & comfort : Regarding comfort, our ambition is to create a comfortable indoor amabiance for our employees and visitors. The principles key are: - Radiant heating, soft and uniform heat, immediately perceptible in all areas - Totally silent operation in summer and winter - no uplift displacement and dust in space. no perceptible air movement by the occupants - The air filtered by a double flow ventilation is blown at room temperature - Management of different components by

an intelligent BMS concerning health. Our ambition is to contribute to a perfect in-door quality for the health of occupants. We focus on the quality of air circulation, ambient temperature, decrease odor, dust, pollen and parasites, the humidity and sound level - Daylight brought by exposure of the building and the glass partition to use in interior design - sunscreens - landscaping, choose plants and non-allergenic esssences tratement internal acoustic - Heating and raffraîchissment - internal materials selection - Custom IAQ
We brought along throughout the project, from the design by the Cabinet MEDIECO Suzanne DEOUX, recognized expert in IAQ.

Calculated thermal comfort : Simulation thermique dynamique faite - voir notice energie - logiciel Virtual Environment v 6.4.0.5

Contest

Reasons for participating in the competition(s)

L'objectif de Zehnder group en construisant ce bâtiment est la réalisation d'un bâtiment exemplaire qui intègre ses savoir-faire pour **créer des solutions d'ambiances intérieures confortables, saines et économes en énergie.**

Zehnder Group a ainsi utilisé toute la palette de ses savoir-faire et solutions en matière de chauffage, ventilation, rafraîchissement et traitement de l'air, et s'est entouré d'experts reconnus tels que S. DEOUX (Médiéco) dans le domaine de la Qualité d'air intérieur.

Le confort des collaborateurs Zehnder Group France SAS a été au centre de la conception du bâtiment.

L'architecture du batiment privilégie la lumière naturelle. La triple labelisation Minergie / breeam / LEED est venue naturellement appuyer la demarche.

Building candidate in the category

Santé et confort

Green Building Solutions Awards 2015
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