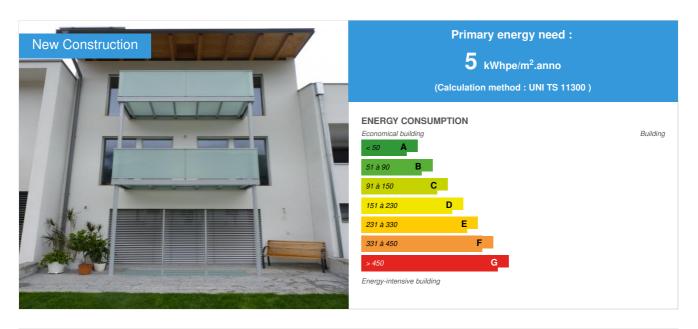


Building EnergyPlus Orru

by Paolo Orru / (1) 2013-02-12 19:27:57 / Italia / ⊚ 6696 / | IT



Building Type: Isolated or semi-detached house

Construction Year : 2010 Delivery year : 2010

Address 1 - street : 39028 SILANDRO, Italia

Climate zone : [Dwa] Humid Continental Hot Summer, severe, dry winter

Net Floor Area: 170 m² Other

Construction/refurbishment cost : 310 000 €

Cost/m2: 1823.53 €/m²

Certifications :



General information

Passive House and Klimahaus Gold Plus, Passive House and CasaClima Oro Più, annual energy requirement of 3 kWh / m2a, 170m2 net, infrared electric heating system (1.5kW), 5.6kW photovoltaic system, solar thermal system, thermal coat 20cm rockwool, triple glazing fixtures.

See more details about this project

Data reliability

Stakeholders

Contractor

Name : Ing. Paolo Orru

Contact : info@energyconsulting.eu

☐ www.energyconsulting.eu

Construction Manager

Name : Ing. Paolo Orru

Contact: info@energyconsulting.eu

www.energyconsulting.eu

Stakeholders

Function: Designer Ing. Paolo Orru

info@energyconsulting.eu

☑ www.energyconsulting.eu

Contracting method

Build and sell construction

Owner approach of sustainability

self-sufficient building with almost zero environmental impact

Architectural description

3-storey single-storey terraced building, sustainable materials on the outside and inside, free of thermal bridges. 1,5kW infrared electric heating system, photovoltaic system, thermal soles plant, controlled mechanical ventilation system with heat recovery, clay plaster

If you had to do it again?

Anything

Building users opinion

very comfortable, nothing management expense

Energy

Energy consumption

Primary energy need: 5,00 kWhpe/m².anno

Primary energy need for standard building : 30,00 kWhpe/m².anno

Calculation method: UNI TS 11300

Envelope performance

Envelope U-Value: 0,25 W/m²K

More information :

coat walls 20cm rockwool U 0.17 roof 32cm wood fiber U 0.14 Slab towards cellar 15cm perlite U 0.24 Building Compactness Coefficient: 0,43

Indicator: DIN 4108-7
Air Tightness Value: 0,60

Real final energy consumption

Year of the real energy consumption: 2 017

Renewables & systems

Systems

Heating system:

Electric heater

Hot water system :

Individual electric boiler

Cooling system:

No cooling system

Ventilation system:

Double flow heat exchanger

Renewable systems:

- Solar photovoltaic
- Solar Thermal

Renewable energy production: 100,00 %

Environment

GHG emissions

GHG in use: -9,00 KgCO₂/m²/anno

Products

Product

Self-sufficient electric heating system

Paolo Orru

info@energyconsulting.eu

www.energyconsulting.eu

Product category: HVAC / Riscaldamento, Acqua calda sanitaria

Self-sufficient residential building

Excellent comfort, zero operating costs

Tipo Strada Luogo	Edificio residenziale Nuova costruzione Via dei Campi 20 39028 Silandro (BZ)	Sup.utile PHPP Volume lordo Costruzione Unità abitative	170 m² 649 m³ Struttura massiccia 1
U-tetto U-parete esterna U-pavimento Tenuta all'aria n50 IE riscaldamento Carico invernale FPrim	0,13 W/m²K 0,15 W/m²K 0,31 W/m²K 0,8 3 KWh/m²a 9 W/m² 81 KWh/m²a	Ug-vetro Uf-telaio g Ud-porta IE raffrescamento Carico estivo Ore surriscaldate	0,60 W/m²K 0,97 W/m²K 52% 0,80 W/m²K 0,00 kWh/m² 4 W/m²
Impianto di ventilazione Riscaldamento Impianto solare termico	Meccanica con recupero di calore Elettrico a infrarossi Collettori sclorif Sm² + Impianto PV 5,6kW		

Costs

Construction and exploitation costs

Total cost of the building : 310 000 €

Urban environment

Inserted in a complex of terraced buildings

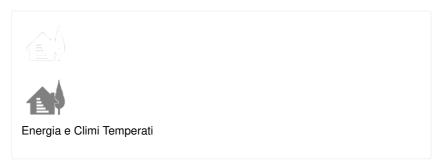
Building Environnemental Quality

Building Environmental Quality

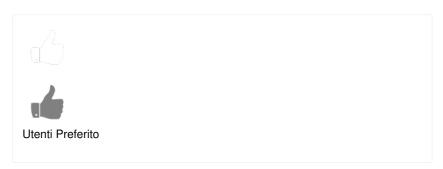
- indoor air quality and health
- biodiversity
- acoustics
- comfort (visual, olfactive, thermal)
- energy efficiency
- renewable energies

Contest

Building candidate in the category









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