

Press Release

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Italy's first Passive House School receives certificate near Verona

Integrated façade ventilation makes for classrooms flooded with light and fresh air

Darmstadt, Germany/Verona, Italy. Energy efficiency and climate protection are a learning process for everyone. Consequently, a school building is always an ideal object of study in the context of building construction. An excellent example of this was inaugurated in September near Verona: the “Scuola Passiva Raldon” – Italy's first Certified Passive House School. This new build combines high quality architecture with sophisticated building systems, featuring a ventilation system integrated into its façade.



The primary school in Raldon opened its doors in September. The Passive House certificate is a guarantee of its superior efficiency. *Photos: Passive House Institute*



Detailed view showing shading elements.

The new primary school has a treated floor area of 1475 square metres spreading across ten classrooms, an auditorium and other special-use rooms and offices. The building envelope consists of a double-skinned reinforced concrete wall with polyurethane cavity and external insulation, as well as a timber exterior wall fitted with mineral wool insulation. A condensing gas boiler takes care of hot water generation and heating for a resulting heating demand of 14 kWh/(m²a).

The façade integrated ventilation system of the “Scuola Passiva Raldon” was developed by architect Michael Tribus and product manufacturer Helmut Moratelli of Wolf Artec. In this design, decentralised devices are directly built into the façade. The air intakes and outlets are hardly visible from the outside thanks to their slit form. The ventilation system is also

integrated as much as possible into the interior design of the building. The units provide for excellent indoor air quality, a fact belying their quiet operation and inconspicuous design.



Ventilation units are inconspicuous in the rooms (white door).



The air intakes and outlets seen from the outside.



Ventilation slit for fresh air from outside at the windowsill.



Air outlet situated in the corner of one of the new classrooms.

The principle of a façade-integrated ventilation system, designated “LILU” from the German “Licht/Luft” or “light/air” by its developers, isn’t only of interest for new builds. Especially in refurbishments, this system could facilitate achievement of the Passive House Standard or the EnerPHit Standard for retrofits particularly when space is a critical factor, as the system makes planning for plant rooms and ducting inside a building unnecessary. As the system is installed directly in the façades, it can also prove advantageous for retrofits whose façades require renovation anyway. The exact functional and energy-relevant requirements for such devices and concepts are currently being elaborated in the EU-funded [EuroPHit](#) project.



Presentation of the Passive House certificate, with Federico Vantini (Mayor of San Giovanni Lupatoto), Laszlo Lepp (Passive House Institute), Michael Tribus (architect) and Roberto Reggi (Education Ministry).
Photo: Passive House Institute

Representing the Italian Ministry of Education, Universities and Research, Undersecretary of State Roberto Reggi commended the innovative concept of this building during its inauguration in Raldon. The majority of the partners involved in the construction of this building also attended the formal event on 13 September. In addition to the school director and architects, the Mayor of the municipality of San Giovanni Lupatoto, to which the village of Raldon belongs, as well as a representative of the Education Authority of the Region of Veneto were also present. “In such projects, it is not only the technical solutions that

matter; dedicated decision-makers play just as important a role in addition to committed designers, architects and product manufacturers”, emphasised Laszlo Lepp of the Passive House Institute during the presentation of the Passive House certificate.

Press contact: Passive House Institute | Benjamin Wunsch | +49 (0)6151-82699-25 | presse@passiv.de