

PASSIVHAUS

Designed for you to enjoy
maximum comfort with minimum energy.



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WHAT IS **PASSIVHAUS?**

The Passivhaus (Passive House) standard is the most stringent international energy efficiency standard in building. It started out as a construction concept for residential buildings in central Europe.

Today the standard can be implemented for all types of buildings all over the world providing energy savings of up to 90% compared to existing building stock and 75% compared to new builds.

Source: Passivhaus Institute

PASSIVHAUS

Passivhaus 75%-90% savings

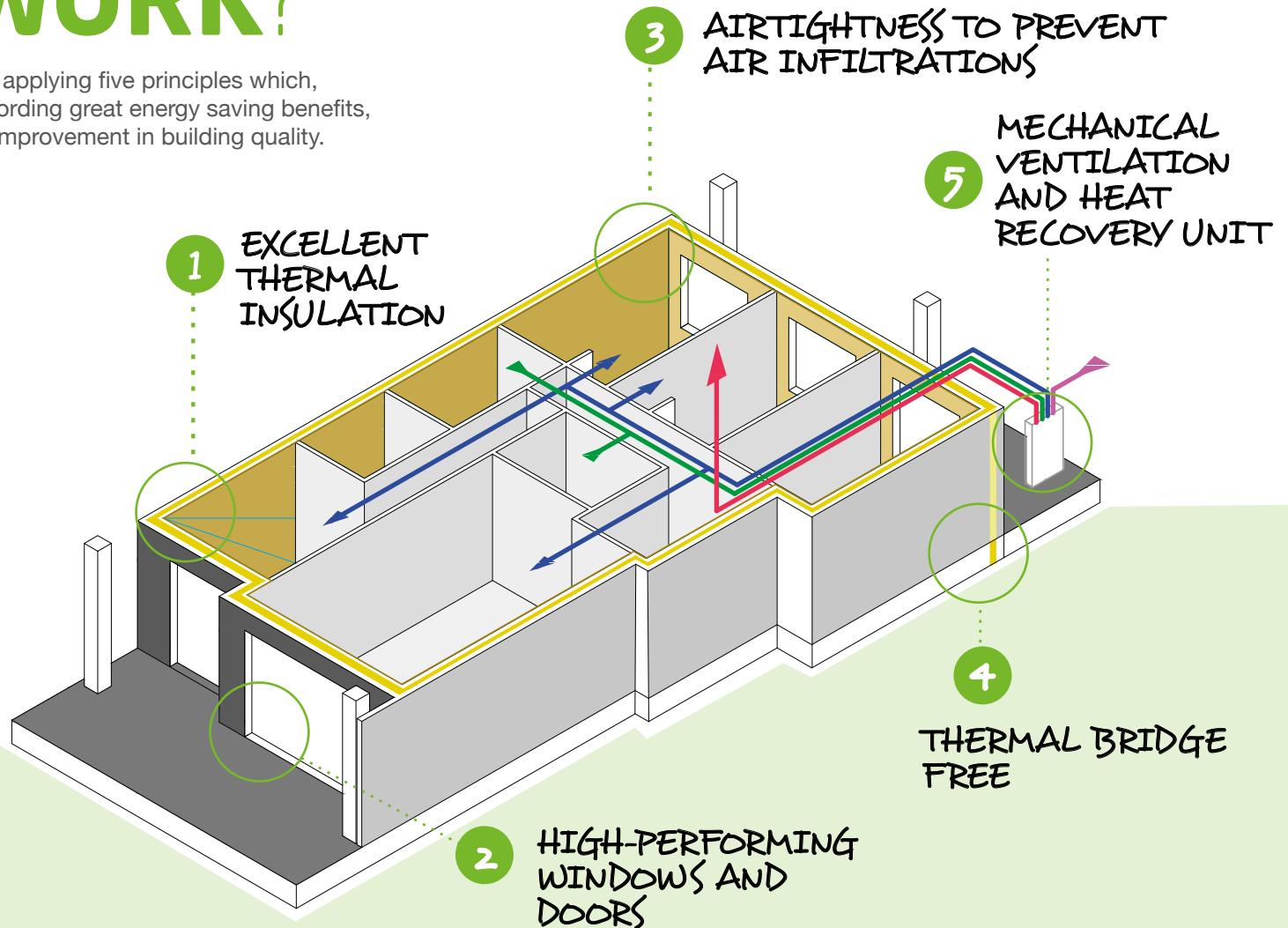


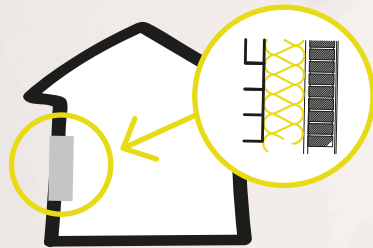
Energy Efficiency Scale

The requirements to obtain **PASSIVHAUS Certification** far exceed those for Class A Certification.

HOW DOES IT WORK?

It is based on applying five principles which, apart from affording great energy saving benefits, represent an improvement in building quality.

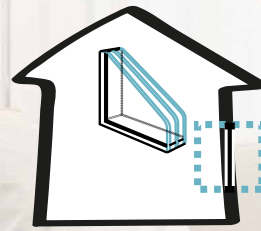




1 EXCELLENT THERMAL INSULATION

The excellent thermal insulation of the building envelope is beneficial both in winter and summer. The outer walls, roof and floor must have a **low thermal transmittance**.

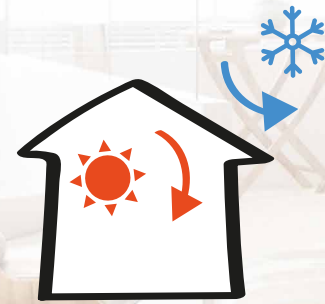
12-14 cm thick insulation is installed in outer walls and 18-20 cm for floors and roofs.



2 HIGH-PERFORMING WINDOWS AND DOORS

Windows and doors are the “weak points” in building envelopes so that great care must go into their design and correct installation during construction.

All windows and doors used are PHI-certified; they have a very low thermal transmittance and are **triple glazed** and filled with an inert gas. The glass provides **low emissivity** which means that heat is reflected inside the house in winter and kept outside during the summer.



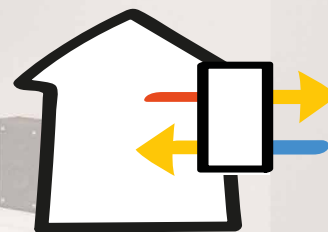
3 AIRTIGHTNESS TO PREVENT AIR INFILTRATIONS

In conventional buildings the draughts through windows, gaps or cracks cause user discomfort and the insulating effect of the envelope is lost. In a Passivhaus building the envelope is as airtight as possible. This is achieved by **paying maximum attention to seals** on windows and doors during installation and carrying out a pressure or **Blower Door** test during execution to guarantee the **building's airtightness**.

**4**

THERMAL BRIDGE FREE

Where materials come together, at corners, seals etc... undesirable losses or gains occur and the surface temperatures in these zones tend to be lower than those of the rest of the envelope, which may lead to mould appearing and to significant energy loss. This is prevented by continuing the insulating sheet.

**5**

MECHANICAL VENTILATION WITH HEAT RECOVERY UNIT

Dual circuit mechanical ventilation system with a heat recovery unit. The unit fitted enables part of the conditioned air to be recovered from inside a room via a mechanical ventilation system by means of an **exchanger** that connects inside air in contact with outside air without the mixing the air from both circuits. In buildings **PHI-certified ventilation units** are installed, guaranteeing maximum energy efficiency of the units, **filter quality and low noise level.**

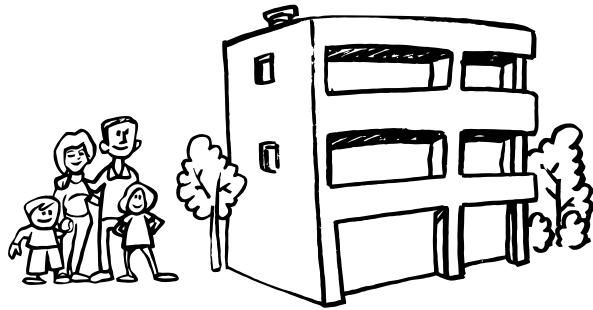
A **PASSIVHAUS** BUILDING IS...

...**COMFORT**, Health,
Energy Efficiency,
Quality of life.

"A Passive House is a building, in which thermal comfort can be provided solely by post-heating or post-cooling of the fresh airflow which is required for good indoor air quality"

Dr. Wolfgang Feist. Founder of Passive

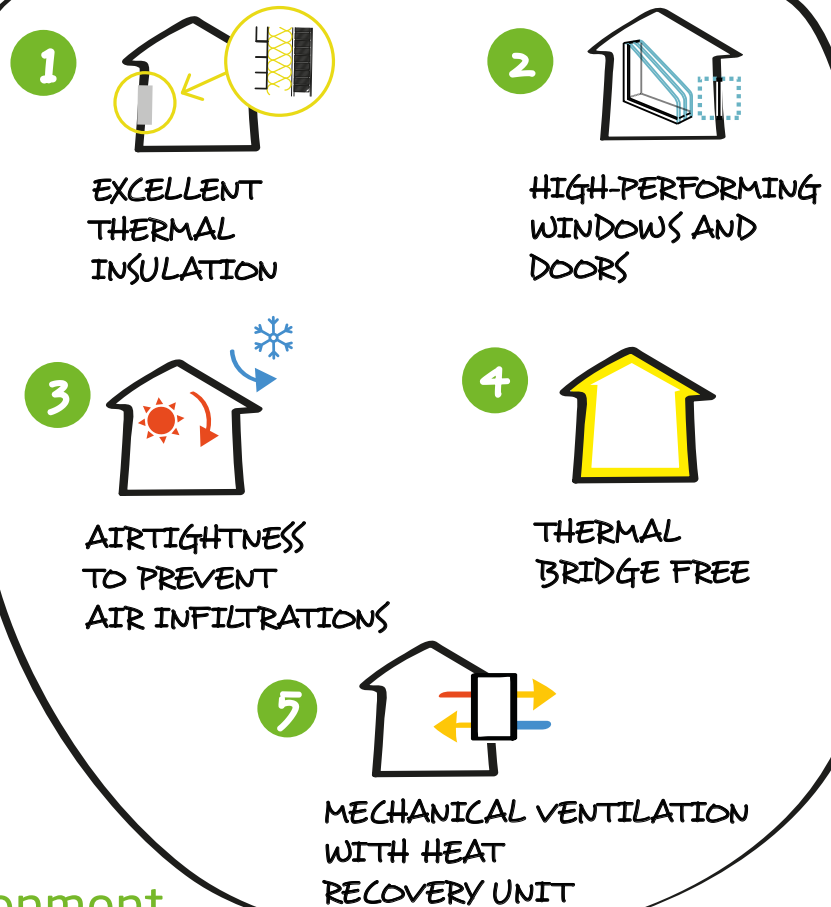




+Saving



+Respect
for the environment



GENERAL UNITS AT OUR INSTALLATIONS

In addition to the passive design of the building we have active systems for the production of heat, cold and DHW in order to guarantee maximum comfort in periods of peak demand.

The production of cold, heat and DHW is carried out by means of high-efficiency aérothermal equipment (renewable energy) connected to under-floor heating/cooling units for use in winter/summer.

The cold-producing system is supplemented by a cooling coil installed in the ventilation system, post-cooling the flow of air in rooms.

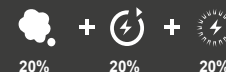


Come and visit our
**PASSIVHAUS-certified
showroom**

nZEB 
Nearly zero-energy building

European Target

20 20 20



20% 20% 20%



Impreso en papel reciclado



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