

# Passive House Windows & Doors

A Higher Standard  
of Energy Efficiency



Passive House, also known as Passivhaus from its German origins, is a very rigorous standard for energy efficiency in a building.

Passive House Certified windows are available in our Supreme series with Casement, Awning, Tilt & Turn, Double Hung, and Wide or Narrow Picture profile.

Our Certified door options include Inswing Single Doors, Transoms and Sidelites.

For glass option, both of our Triple Energlass Plus LSG and Triple Energlass Plus HSG windows qualify.

## Kohltech Offers Passive House Certified Windows & Doors

Kohltech Windows & Entrance Systems is one of very few in North America to receive this certification. Creating windows and doors with this certification provide numerous benefits to your home.

### Energy Efficiency

The triple glazing technology insulates the home far more effectively than regular windows. Passive solar gains and energy produced by electricity and people are able to create most of the necessary heating.

### Comfort

Consistent and comfortable temperatures are maintained all year round since the windows and doors minimize heat loss in the winter and maximize heat gain in the winter.

### Affordability

Increased insulation and consistent temperatures mean lower energy bills throughout the year, including those cold outdoor winters.

### Performance

Acquiring the Passive House certification is a rigorous process and only windows of the highest quality achieve this standard.



Passive House Institute US



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Credit - Haynes & Garthwaite Architects



## Passive House (Passivhaus) Certified Building

The term passive house refers to a rigorous standard for energy efficiency in buildings. The standard first originated in Germany in 1988 and has now spread across many countries worldwide. Estimates in 2008 of the number of Passive House certified buildings ranged from 15000 to 20000.

There are three rigorous standards that a building must follow to be eligible for Passive House Certification, along with several recommendations. The standards are as follows:

- The building must be designed to have an annual heating and cooling demand as calculated with the Passivhaus Planning Package of not more than 15 kWh/m<sup>2</sup> (4,755 BTU/sq. ft.; 5.017 MJ/sq. ft.) per year in heating or cooling energy OR be designed with a peak heat load of 10 W/m<sup>2</sup> (1.2 hp/1000 sq ft).
- The total primary energy (source energy for electricity, etc.) consumption (primary energy for heating, hot water and electricity) must not be more than 120 kWh/m<sup>2</sup> (38,040 BTU/sq ft; 40.13 MJ/sq ft) per year.
- The building must not leak more air than 0.6 times the house volume per hour ( $n_{50} \leq 0.6$  / hour) at 50 Pa (0.0073 psi) as tested by a blower door, OR alternatively when looked at the surface area of the enclosure, the leakage rate must be less than 0.05 cubic feet per minute.

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