

Summary

About the ventilation of dwellings in very low-energy houses in the Czech Republic

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Low-energy buildings up to the passive house level slowly become generally accepted also in Tschechien, which is naturally connected with suitable ventilation strategies. The contribution presents the most frequently used technical systems and discusses those properties and acceptance. The number of built very low-energy houses in Tschechien tends to rise, the absolute numbers are still very low. Still several barriers are to be overcome, whereby the technical questions represent only one part.

Ventilation systems and ventilation strategies for detached houses and dwellings

Principle

The duplex system was developed with the idea (and for the first time realized in the year 2001), to offer a combination of hot air heating and mechanical ventilation with heat recovery. The condition of first priority is that the entire solution is hygienically perfect. In addition it is also important that the handling remains understandable and comfortable. The solution is patent-protected. Figure 1 shows a typical arrangement of the energy system in simple detached houses. The ventilation appliance with heat recovery serves two circles for air distribution:

- A. absolutely separated exhaust from sanitary range and the kitchen (if operating)
- B. fresh air supply and air circulation for ventilation and heating of the other rooms e.g. living room.

Finally

The presented combined ventilation systems with heating function are accepted with Czech building authorities. The air circulation is conceivable naturally only in the context of a housing unit. The tendency in application is rising, parallel to this also the use of other mechanical ventilation systems with heat recovery rises.