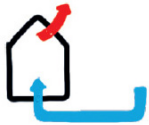


Efficient and healthy ventilation

In recent years, efficient and proper ventilation in homes has been the focus of much attention. Users generally prefer a combination of mechanical extraction and natural inflow. Hybrid systems are a possible solution for passive houses and zero-energy houses.

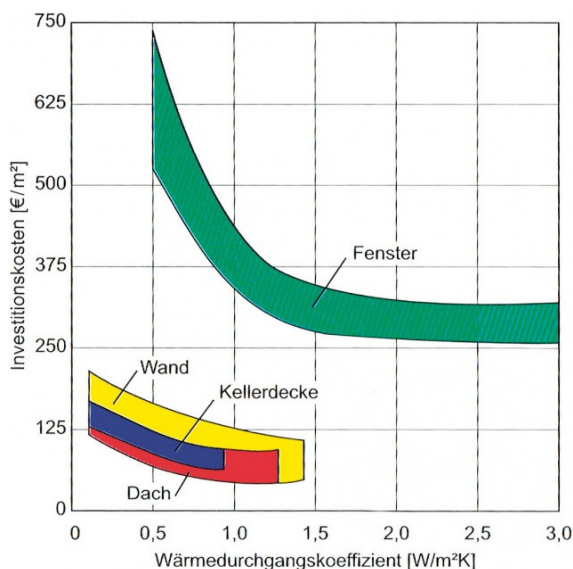
The Fraunhofer Institute's Energetische Quartiersplanung presents the conclusion that the forced ventilation concepts that have been becoming more and more common in residential construction in recent years as a means to save energy generally do not yield the presumed levels of savings. The reason is the lower efficiency of air-based heating concepts, as a result of the unavoidable loss of pressure in the distribution system and the higher demand for energy for transporting the energy through the building. The larger the building is or the higher the demand for ventilation is, the less efficient the system becomes.



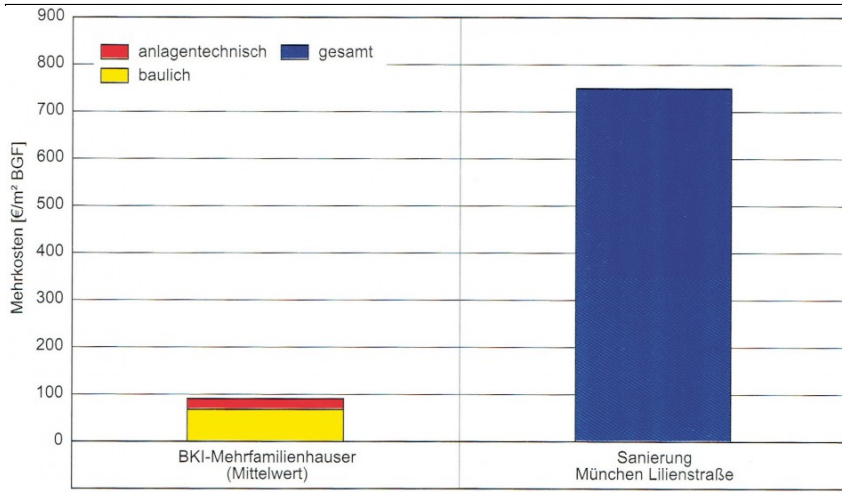
Combined with the psychological resistance among users against forced ventilation systems, this has led to the use of hybrid ventilation systems, in which the balanced ventilation is switched on only on extreme days when it makes sense energy-wise. On other days, the buildings are ventilated naturally.

Ventilation systems that are controlled according to use or by pollution meters are used to make the ventilation more efficient [Erhorn-Kluttig et al., 2011].

Using underground pipes for ventilation allows the ventilation air to be preheated or cooled.



Urban green-blue grids



Gebäudemehrkosten durch höhere energetische Qualität

