

WHOLE HOUSE VENTILATION SYSTEMS

Air sealing the house will often lead to inadequate ventilation if the heating system is old, leading to sick building syndrome, and inadequate fresh air in the house.

ADVANTAGES

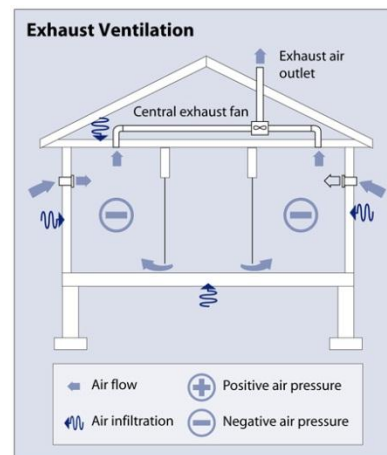
Whole house ventilation systems provide controlled, uniform ventilation throughout a house, improving occupant comfort and preventing sickness due to bad indoor air quality.

TYPES

There are 4 types of whole house ventilation systems:

Exhaust Ventilation Systems

Exhaust ventilation systems work by depressurizing the building; they reduce the indoor air pressure to below the outdoor air pressure and extract indoor air from inside a building while fresh air infiltrates through the cracks and strategically placed passive vents. Some concerns with the exhaust ventilation system are that they might draw in pollutants if the infiltration is not controlled and it might lead to higher heating and cooling costs, since the incoming air is not conditioned.



Recommended for cold climates
More information [here](#).

Energy Recovery Ventilation Systems

Energy recovery ventilation systems provide controlled ventilation while minimizing energy loss. In such a system the supply air is heated / cooled by the exhaust air. About 70 – 80 % of the energy is recovered from the exhaust air and transferred to the incoming air.

Recommended for climates with extreme heat or cold. In milder climates, the additional electricity consumed by the system might be higher than the energy saved to condition the air.

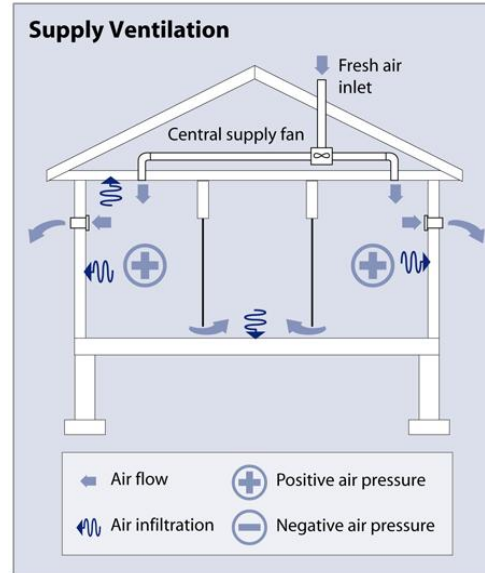
These systems are expensive and highly technical and must be installed by qualified contractors only.
More information [here](#).

Supply Ventilation Systems

Supply ventilation systems work by pressurizing the building. They use a fan to force air into the building while air leaks out through cracks and strategically placed vents.

They discourage the entry of pollutants and prevent back-drafting of combustion gases. They also allow outside air to be filtered before entering the house. However, they do not allow outside air to be conditioned or dehumidified before entering and do not work well in cold climates. They could also contribute to higher cooling costs.

Recommended for warm climates
More information [here](#).



Balanced Ventilation Systems

Balanced ventilation systems do not pressurize or depressurize the building, instead they just allow equal amounts of air into and out of the building. They allow outside air to be filtered before entering. They, however, do not allow the air to be conditioned, and may lead to increased heating and cooling costs. Outside air might have to be mixed with indoor air before it enters the living spaces to prevent cold air drafts in the winter.

Recommended for all climate types
More information [here](#).

