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## Why is Ventilation Necessary?

### ***Ventilation is necessary for several reasons, including:***

#### **Airtight Homes**

Homes designed and built in recent years are more airtight and energy efficient than in the past. The benefit of an airtight home is fewer drafts, which lowers the cost to heat and air-condition the home. However, pollutants retained in airtight buildings can be hazardous to occupants and jeopardize structural integrity. That's why Panasonic emphasizes a "build tight...ventilate right" platform. Proper mechanical ventilation design can address poor indoor air quality, while retaining energy efficiency.

#### **Biological Pollutants**

Good ventilation in the home is suggested to avoid moisture and excess build-up from biological pollutants such as mold and mildew. Excess pollutants are not only detrimental to your health, but can also lead to the deterioration of structure supports and walls.

#### **Volatile Organic Compounds (VOCs)**

VOCs are gases released from building materials, carpets, furniture and other household items as a result of aging, decomposition, or curing. A good ventilation system will prevent prolonged exposure to VOCs and keep the air in your home fresh and well circulated.

### ***Ventilation fans can be used in two ways:***

#### **Continuous Ventilation**

Also referred to as general, central, whole-house or primary ventilation, continuous ventilation removes stale air, and provides fresh air to all rooms on a slow, continuous basis. Well-designed, airtight homes should generally use low volume continuous ventilation.

#### **Intermittent Ventilation**

Sometimes called spot, local or secondary ventilation, intermittent ventilation is used to capture and remove pollutants quickly at the source. The purpose is to exhaust excessive moisture or pollutants before they can spread to other parts of the house. Areas that might require this type of ventilation include the bathroom, kitchen, utility room, exercise room, workshop, garage and home office. Ideally, both continuous and intermittent ventilation will be used to create a healthy and comfortable living environment for the entire family.

### **Before ventilation**

Other ways to improve indoor air quality before ventilation include:

- Reducing or removing the source of pollutants (paint, solvents, chemicals)
- Using building materials with a low level of toxicity
- Making sure there is an airtight seal between the garage and living quarters if your garage is attached to your house