An HRV vs. An ERV: How Do I Choose?

Adding a ventilation system to your home can be beneficial for a number of reasons: It keeps the air in your home fresh, it can diminish allergens or pollutants in the air, and it can help retain relative humidity while preventing too much moisture to remain in your home.

Two of the most popular choices are the heat recovery ventilation (HRV) or energy recovery ventilation (ERV) systems.

An HRV removes stagnant air from rooms with higher humidity, such as the laundry room or the bathrooms. At the same time, it delivers fresh air into rooms where people tend to congregate most, like their bedrooms or common living areas. Air entering the home in the summer is cooled, while air that enters in the winter is heated.

ERVs work the same way HRVs do, but an ERV allows some of the air's moisture to remain in the home. To keep moisture in the home, it typically pulls in outdoor air during the summer months, and it retains some of the indoor air during the winter months.

How to Decide Between an HRV and an ERV

When determining what ventilation system is right for you, there are several factors to consider:

1. Your climate. If you live in an area where your winters are long and dry, you might opt for an ERV system. Because the ERV allows some humid air to remain in the home, your home might not feel as dry, which may reduce issues like dry skin and static electricity.

But an ERV is not only ideal for states with dry winters. It may actually be a better choice for areas that experience hot, humid summers as well. On the surface, an HRV appears to be the ideal choice for these climates because it eliminates excess humidity in the air. It may seem counterproductive to install a system that allows humidity to remain in the house, especially if you are battling humidity all season long.

However, an ERV can actually reduce the amount of humidity in your home better than an HRV can during the summer months. It can also lower your energy consumption because it requires the air conditioning unit to run less than if it were battling a higher percentage of moisture output from the HRV. Homeowners who are looking for less humidity in the air could benefit from running a dehumidifier in conjunction with their ventilation system.

2. Your family size. The size of your home and family should be another consideration when choosing your ventilation system. Generally speaking, a smaller home with a larger number of inhabitants creates more moisture in the air than a larger home or a home with fewer people living in it. More people are taking showers or using warm water at the sink.

Also, families who cook at home often generate more heat and moisture in the kitchen. Finally, having more people in the house means there is more CO2 being released into the air.

3. Your personal needs. Don't just choose a system based on your climate. Consider your personal needs and the needs of your family as well. Do you have family members with allergies or asthma? Does extremely dry air cause your loved one to suffer from nosebleeds or exacerbate a skin condition? Putting your needs first when deciding on your ventilation system can ensure your overall satisfaction with your choice.