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John Wick Homes Ventilation Information

John Wick Homes takes pride in building tightly sealed, energy efficient homes for all of our customers. While an air tight home has many advantages in how it uses energy, attention needs to be paid to the whole house as a working unit to guarantee good indoor air quality and moisture levels in an air tight home.

Houses constructed in the past that did not have the advantages of today's building technologies were built very "drafty", so air quality never became much of an issue. Moisture, gases, and cooking odors simply made their way out of the home through cracks in the building envelope and leaky windows. Because of these building practices of the past, many homes did not need any way to exhaust these things from the home, but they also used much more energy to heat or cool the home than a tightly built home will use today. With a tightly built home, moisture, gases and odors have nowhere to go and can build up to unacceptable levels unless you supply some way to exhaust these from the home, namely, a mechanical ventilation system.

If providing good indoor air quality and moisture control is not enough of a selling point for you and your homeowners, there are some building code changes that are starting to be adopted throughout the country that also take this into effect. As of now, the standards set forth by ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineers) in ASHRAE 62.2 address the ventilation issue for single family dwelling units. Also, as of January 1, 2008, the Wisconsin Energy Star Homes program has implemented the standards in ASHRAE 62.2 as their standard to have a home certified as an Energy Star home in Wisconsin.

Taking these things into account, John Wick Home has engineered our homes to be very airtight and at the same time be able to exhaust these undesirable effects of everyday living from our homes and maintain good indoor air quality. All John Wick Homes have been equipped with a continuous ventilation system to address this. The Panasonic Whisper Green bath fans that we install are continuously exhausting the moist and stale air from your home at a rate determined by the size and number of people residing in it. They will be set to continuously vent 30 CFM from each of the 2 main bathrooms. Each fan has a motion sensor which will ramp up the fan to 80 CFM when someone enters the bathroom, and will stay at this full exhaust level for a period of 20 minutes after someone leaves the bathroom. While they are in continuous venting mode, these fans are barely even able to be heard, and run at 0.3 sones. For comparison, fans that we have used in the past have been rated at 4.0 sones. Panasonic has also taken into account the energy consumption concern by using DC motors in these fans which only use 11 watts of electricity. All bath fans installed by John Wick Homes will now have earned the Energy Star rating. In addition to these bath fans, there will now be ducting to the outside in all kitchens for a range hood or microwave over the range. Cooking produces smells, moisture and gases that need to be exhausted from the home, not just filtered and re-circulated.



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At this point we've taken care of exhausting the stale air, but we also understand the importance of providing fresh, outside air and controlling the way that it enters the home. Mechanical means have been engineered into your HVAC system to bring in fresh air from the outside using the air handler (furnace) fan. We have installed an Air cycler, which can periodically start the air handler fan to draw in and distribute fresh air throughout your home, regardless of whether or not the thermostat is calling for a heating or cooling cycle. The thermostat will always take precedence over the Air Cyclor, so normal use of the thermostat is all that is required of the homeowner. The Air Cyclor will initially be set in the off position, but can be easily activated by pressing a few simple buttons (see Air-Cyclor spec sheet in the Product Manual). This will help significantly in the winter months when homeowners with programmable thermostats set them back at night, and circulate almost no air throughout their home for a period of 4-6 hours before the thermostat calls for a heating cycle. This will ensure that fresh air is being circulated throughout the home, all through the night instead of a period of time that typically shows rising levels of CO₂ and other VOCs.

These two items used in conjunction, as they have been designed, will give your customers good indoor air quality and moisture control while at the same time being able to keep the home sealed to the outside as much as possible to help reduce energy usage through heating and/or cooling losses.

We have also made a carbon monoxide detector a standard in all John Wick Homes. This is currently a requirement for Energy Star certification and has also been included in some building codes. We will use a combination smoke/CO detector to be installed within 6' of all bedrooms areas. This will increase safety and give all of our homeowners better peace of mind.