HUMIDITY & CONDENSATION

You've replaced your old, leaky windows and doors, and now are experiencing condensation on your windows. Condensation is usually not an issue with our windows or doors. It is typically a result of issues and environments inside or outside of the home. You might notice more condensation with your new windows because they are a much tighter seal than your old windows. This equals less air entering and escaping your home. The air leaking from older windows evaporated the moisture before it could collect. Here is more information so you can troubleshoot condensation if it gets to be a problem at your house.

IS YOUR GLASS "SWEATING?"

Is water beading or ice forming on the inside surface of your windows? This is a sign that there is excess humidity in your home. Humidity –water vapor mixed with air— is drawn to the coolest surfaces, such as your windows. Cool air cannot hold as much moisture as warm air, so windows and doors often collect this moisture and make it visible. A surface that is cooler than room temperature is more likely to show condensation.

WHAT CAUSES CONDENSATION?

Indoor moisture is caused by a variety of factors, including cooking, showering, running dishwashers, air conditioning or heat, pets, fish tanks, plants, clothes dryers that are not vented properly, even breathing. While some humidity is necessary for health and comfort, chronic and excessive condensation should be tipping you off to take some action before serious, costly damage occurs.

WHAT ABOUT CONDENSATION IN BETWEEN THE PANES OF GLASS?

This may indicate a seal failure, and you should contact us right away as this is covered under your warranty.

WHY IS CONDENSATION FORMING AT THE BOTTOM OF THE WINDOW?

Each insulated unit is a sealed atmosphere, and the air in this atmosphere becomes layered, just as in any closed space. Warm air rises and since humidity is attracted to cooler air, condensation will often show near the bottom of the glass.

IS CONDENSATION A TEMPORARY ISSUE?

There are several ways to tell if the condensation on your windows is temporary. Does condensation usually form:

*During baths and showers, cooking, dishwashing, laundry, or other steam producing occasions?

*During the start of each heating season?

Houses absorb moisture during humid summers. This will dry out after a few weeks of heating.

*During sharp temperature changes?

Sudden drops in temperature, especially during the heating season, can create temporary condensation.

*During new construction or remodeling?

Building materials contain a great deal of moisture. When the heat is turned on, this moisture will flow into the air inside the home. It usually will disappear after the first heating season.

WHEN IS CONDENSATION A BIGGER PROBLEM?

Excess moisture in your home may eventually cause problems. It may be time to take action if you notice the following signs in your home:

*Condensation remains on windows throughout the day, even when the outside temperature has warmed up.

*Condensation is forming and running down the walls. It may also be causing discoloration, staining, peeling wallpaper and blistering paint.

*The air smells musty—this could indicate mold, mildew, or in the worst cases, rot—or odors from everyday household activities that linger too long. Odors increase in intensity with high relative humidity.

INTERIOR CONDENSATION: WHAT MOST HOMEOWNERS NOTICE FIRST

Interior condensation forms on the inside pane of the glass within your home. It usually forms in the winter, especially at the beginning of the heating season. As the outside temperature drops, the inside surface will also get cooler; therefore, condensation will form at lower relative humidity on cold days. The colder the air outside, the more likely condensation is to occur.

EXTERIOR CONDENSATION: YOUR WINDOWS ARE WORKING!

Conversely, exterior condensation, which forms on the outside pane of the window, typically occurs in the summer. This type of condensation can occur for several reasons: the glass temperature drops below the dew point temperature of the outside air, the air is still, there is a high relative humidity, there is a clear night sky, or there are plants located near your window.

Exterior condensation usually evaporates as the day wears on and will not affect the interior of your home. Since you cannot control the relative humidity outside your home, the only step you can take to combat exterior condensation is to warm the inside surface of the window, as this is a way to warm the outside surface. Seeing exterior condensation on those rare days should be reassurance that your windows are doing their job: keeping your heating and cooling in your home where it belongs and saving you money.

DOORS

Condensation can also be an issue with both patio and entry doors. Things that may occur if your humidity is not within the criteria of the below chart are: condensation on glass, condensation on patio door tracks, hinges, hardware, peep sites, and door knockers can begin to rust

CONDENSATION & YOUR HEALTH

Improper temperature and humidity can cause comfort and health concerns. Warm, humid environments encourage the growth of molds and fungi, which can lead to allergic reactions. Dry environments can irritate sinus linings and can progress to a sinus infection. The best way to combat this is to achieve the appropriate balance of temperature and moisture in your home. See the table below for guidance.

ACCEPTABLE RANGES OF TEMPERATURE & RELATIVE HUMIDITY DURING WINTER (IN °F)

The humidity level that should be maintained in your home during the winter varies with the outside temperature. The colder it is outside, the lower the humidity level must be inside your home. All major manufactures of humidifiers list the recommended humidity settings based on outside temperatures. The following guideline is recommended by every major manufacturer of windows and humidifiers.

Outside Temperature	Relative Humidity
-20° F	15% or less
-10° F	15% to 20%
0° F	20% to 25%
+10° F	25% to 30%
+20° F	30% to 35%

CLIMATE AND OTHER FACTORS

Northern and Midwest Regions of the U.S., or those places where the average January temperature is 35° F or colder, tend to have more occurrences of condensation. The greater the extremes between outdoor and indoor temperatures, the more likely moisture will become visible on your windows.

Bay, bow, and garden windows often create opportunities for condensation to show because air circulation is frequently limited and their protrusion from the insulated house wall generally makes them a few degrees cooler. Heavy window treatments also limit airflow and increase the likelihood of condensation.

REDUCING CONDENSATION

Now that you know the what and why of condensation, it's time to learn how to reduce the conditions that cause it, especially if you are concerned about the effects of that excess moisture on your home and health.

1. Reduce Moisture Sources
2. Increase Ventilation
3. Increase Air Temperature

The Window & Door Store warranty does not cover issues that arise when the relative humidity is not within the above criteria chart.