



**WEISS HOMES**  
A Tradition Of Building Excellence

## Condensation

Condensation in houses is a controversial and complicated issue. Over the last decade, it has taken on new dimensions, due to the changes in building practices. Houses today are more airtight, which often results in higher humidity levels. This, in turn, may lead to increased surface condensation, particularly on windows due to increased indoor humidity levels.

In cold weather you will not only experience condensation but also circulation of cold air around the windows. The cold air currents are due to the difference of inside and outside temperature. As cold air by the window and warm air from the home meet, there is natural convective movement as the warm air rises and the cold air falls. This is often mistaken for poor quality windows.

Window condensation during the first year is a result of high concentrations of water used during the building process (lumber, paint, adhesives, etc). Generally speaking, the amount of condensation in a normal home should be significantly reduced after the second summer following the home's completion.

## The Where's and Why's?

Condensation often forms at the meeting rail and at the bottom of the lower sash on the interior of the glass. This is because when warm air cools, it falls down across the interior surface of the window at the same time the air's temperature is falling. The air contacts the horizontal surface of the meeting rail which acts like a dam, slowing the air's rate of fall and creating the perfect opportunity for the trapped water vapor to escape and form on the meeting rails surface. The air then rolls over the edge of the meeting rail and again gains speed until it encounters the lower

handle of the sash. At this point, the water vapor again makes it's exit and lies at the bottom of the sash.

## Reducing Condensation

In order to reduce condensation, humidity must be controlled and air movement must be generated. As the exterior temperature drops, the humidity level must be decreased in order to control condensation.

## Humidity/Air Flow Control

- Use exhaust fans in kitchen and baths and laundry room.
- Vent gas burners, clothes dryers, etc. outdoors.
- Shut off/Lower furnace humidifiers and other humidifying devices
- Open fireplace dampers to allow escape route for moisture-laden air.
- Air-out house a few minutes per day.
- Turn fan "on" at Thermostat in severe cold weather.
- Raise blinds 1"-3" during the day to facilitate airflow.
- Set Thermostat a few degrees cooler in severe cold weather (reducing the temperature variance between the interior and exterior of the home).

