

Ask Jon Eakes

HOW DO WINDOWS ACT AS A HUMIDITY ALARM?

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Much of this book has been concerned with controlling humidity in the house. A double-glazed window is a perfect alarm system to warn us of dangerous humidity conditions. A double-glazed window has just enough thermal insulation to allow comfort in the house without producing condensation on the window. But it is also the coldest element of the entire house shell. Therefore, if we keep the humidity low enough to avoid condensation on a double-glazed window, there will be little or no condensation on any of the walls. If condensation starts to form on the windows, the wall will be next. (Don't be fooled into thinking that no condensation on the windows means no hidden condensation in the walls or attic -- air barriers and ventilation must not be side-stepped.) A single-pane window is not a humidity alarm -- it's fogged up all the time, so you tend to ignore it. A triple glazed window is not a good humidity alarm either, as its thermal resistance is high enough that some thermally weak wall areas (behind cupboards, in closets) can get wet before this window will. A well insulated house, full of triple and quadruple-glazed windows, should still have one little double-glazed window somewhere to serve as an alarm, just in case the fancy automatic humidity controls fail.

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