

Ask Jon Eakes

HOW MUCH MOISTURE DAMAGE CAN A LITTLE CRACK CAUSE?

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Little cracks in the bottom of the house let cold air in, and can raise your heating costs by as much as \$600 a year. They also dry out the air in the house, resulting in dry throats and the needless purchase of humidifiers. Nothing too serious -- unless you don't like wasting money!

Let's start by looking at the cracks in the top of the house. A crack between the partition walls and the ceiling (which you can hardly see), can deposit over 1,100 kilograms (2,400 pounds) of water in the attic during the course of each winter. A 1/16 by 1/2 inch crack beside a vent or wire that goes through the ceiling can deposit a full pound of frost in the insulation. Every unsealed electrical box will let a ton of air through during the course of the winter -- and if the neutral plane is low that could mean 10 pounds of frost in the wall behind each electrical outlet or switch. (search keyword "neutral plane" for the title "WHY SHOULD I CARE ABOUT THE NEUTRAL PLANE?") The cracks around door and window frames can produce so much condensation that you'll think the window itself is leaking.

In our cold climate, and with even minimal insulation in the walls, the outer section of the wall or upper regions of the attic are so cold that during the winter -- even with ventilation -- very little of this accumulated moisture can escape. The result: spring floods if a through sealing job is not undertaken.

Keywords:

Air Barriers, Air Leakage, Air Sealing, Condensation, Frost, Humidity, Ice, Moisture

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