

TRIPLE GLAZED WINDOWS EFFICIENCY IN COLDER CLIMATE'S COUNTRIES

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Abstract

In the cold season we sense a cold air flow in the proximity of windows. We get colder in areas around windows and turn up the heating more than needed. The sense of well-being is not only a function of the room temperature and air flows; it is also influenced by the temperatures of the floor and wall surfaces and also of the windows. Triple glazing has a substantial impact on both the air flow and the surface temperature. Colder climates are benefited the most with these high performance windows, due to their improvement of interior comfort climate. Triple glazed windows are the best option when retrofitting in colder climates. In a triple-glazed window the intermediate spaces between the glass sheets are filled with rare gases that have low thermal conductivity. Triple glazed windows have three layers of glass, or two layers with a low-emissivity film suspended between them. The three layers of glass do a better job of stopping heat from leaving the building, with fully insulated window frames further contributing. In most double-glazed windows, the gas argon is injected between each layer of glass to aid insulation, but in these super-efficient windows, krypton – a better, but more expensive insulator – is used. In addition to this, low-emissivity coatings are applied to the glass, further preventing heat from escaping. The pros of triple glazed windows are: offer a more rigid and strength window, resistance to condensation problems, helps reduce sound transmission, better energy saver than regular and double glazed windows, triple glazed windows can decrease relative heat loss, increases thermal comfort inside the building, a combination of double glazed windows and triple glazed windows can be used with the building orientation to obtain excellent results, insulated hollow frames can increase triple glazed windows performance. The cons of Triple Glazed Windows are: the weight of triple glazed windows can be a problem with weaker sash materials, triple glazed casements have width limitations, slightly higher prices than double glazed window and some casement type windows could have a restriction when opened, if an existing structure has little or no wall insulation, triple glazed windows are not recommended. People who are planning a new building or renovation work should seriously consider triple glazing and ask for quotes to compare prices.

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