



National Federation of Glaziers

Excellence and Integrity in Glazing

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TRIPLE GLAZING?

Some suppliers in the glazing industry offer triple glazed windows and doors. What benefits can triple glazing offer over double glazing?

Opting for triple glazed instead of double glazed windows and doors might seem to offer better insulation and noise reduction at first glance. However, several factors must be considered when choosing between triple and double glazed windows, such as:

1. Triple glazed sealed units can enhance the energy-saving properties of windows, but they typically require 44mm width sealed units to achieve this. These are challenging to install in standard 70mm width frames, which are designed for 24 – 28mm width units and have a more aesthetically pleasing appearance. Larger sealed units necessitate specially designed glazing beads that may not look as elegant.
2. Triple glazed units with a 28mm width are also available, but to achieve energy savings comparable to double glazing, two of the panes must have low-e coatings. This reduces the amount of light entering and necessitates increased use of internal lighting, thus raising energy consumption. According to the British Research Establishment*, the middle pane can become hotter than the outer panes, potentially leading to cracking. The optimal solution is to toughen the center pane, which adds to the cost.
3. Quality windows provide "solar gain," the measure of heat a glass sealed unit allows from outside. Triple glazing is at least 10% less efficient in this regard compared to double glazing.
4. **Be cautious of offers promoting "TRIPLE GLAZING at DOUBLE GLAZING PRICES"**. The current market prices, including increased installation costs you may be expected to pay around 20% more for triple glazed windows.
5. Environmentally, triple glazing uses 50% more glass than double glazing and requires 90% more embodied energy for production.

6. While some assert that triple glazing is superior to double glazing for noise reduction, it's not essential; sound-absorbing glass options provided by all major glass manufacturers are often the best solution.

7. Triple glazed sealed units are 50% heavier than double glazed ones, necessitating more robust hardware such as hinges. A conscientious company will also employ additional labor, further increasing costs.

Summary: Triple glazed units consume more resources and are costlier to produce than double glazed units, offering minimal, if any, benefits over the latter unless they are significantly wider than standard double glazing (24 or 28mm) and are coupled with broader (over 70mm width) and better-insulated frames. In terms of value for money, double glazing is, in our opinion, much more advantageous than triple glazing.

* <https://bregroup.com/insights/how-to-avoid-glass-cracking-insulated-glazing-units>

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