

Window Energy Rating (WER)

The Window Energy Rating (WER) is a classification system that assesses the energy efficiency of windows. It operates on a scale from 'A' (most efficient) to 'G' (least efficient), similar to the energy rating labels found on domestic appliances. This rating evaluates multiple factors, including thermal heat loss, solar gain transparency, and air leakage.

The WER system provides homeowners, builders, and architects with a clear understanding of how well a window performs in terms of energy efficiency. The rating is calculated based on the following criteria:

1. **Thermal Heat Loss (U-Value):** This measures how much heat escapes through the window. A lower U-value indicates better insulation performance, meaning less heat loss and reduced energy bills.
2. **Solar Gains (G-Value):** This assesses how much solar energy is transmitted through the window. A higher G-value means more solar heat is allowed in, which can be beneficial for passive solar heating in colder months.
3. **Air Leakage (A-Value):** This measures the amount of air that can pass through the window frame and seals. Lower air leakage results in better energy performance, reducing drafts and heat loss.

Consider a new build in London that uses triple-glazed windows with a WER of 'A'. This means that the windows are highly effective at insulating the home, allowing minimal heat loss while maximising solar gain. As a result, the homeowner benefits from lower heating costs during winter months, while also enjoying a more comfortable indoor environment. In contrast, older properties with single-glazed windows rated 'G' may face higher energy bills and discomfort due to poor insulation and drafts.