

The Platinum System is the culmination of many years of research and development. All Speed Frame products are constructed to the highest standards specified in terms of weather performance, security and thermal performance.

## Reinforcement Arguments

**Static Strength** Steel reinforcement in windows provides increased structural strength to a window member. According to the British Standards, a window member must not deflect more than 1/125 of its span or 1/175 over the length of a double glazed unit when subjected to the most powerful gust of wind a window will experience once every 50 years.

Under actual test conditions, the Platinum System proved so strong that it was deemed unnecessary to reinforce transom and mullion spans below 1250mm in length to withstand hurricane strength winds of up to 100mph.

**Security** Traditionally it has been necessary to fix security hardware to steel reinforcement in order to meet the enhanced security requirements of BS 7950. Due to the unique design of the Platinum System and the high security hardware used by Speed Frame, the unreinforced Platinum System matches the performance of reinforced windows. During the extensive testing programme undertaken by Speed Frame, locking points achieved results well in excess of the required standard.

**Thermal Expansion** Steel is fixed into coloured frame members in order to limit the amount of distortion caused due to thermal expansion. Due to the higher rate of UV radiation absorption of coloured profiles against white profiles, the surface temperature of coloured windows and therefore the amount of thermal expansion is greater on coloured windows against white windows. Speed Frame will continue to fully reinforce coloured windows.

## Benefits of Reduced Steel Content

**Thermal Conductivity** Steel is an excellent conductor of heat. The removal of steel from windows will greatly decrease the heat loss due to conduction across the steel reinforcement. This leads to the benefit of lower heating costs for home owners.

**Installation Benefits** Steel in outer frames, which are fixed to masonry is unnecessary in white windows. By fitting steel into such members makes drilling more time consuming with the time needed to change from HSS bits to masonry bits.

Drilling steel leads to the scattering of steel swarf. Unless this is cleaned away, which can be difficult to achieve completely, the shards will rust and stain the PVC.

Removal of excess steel reinforcement reduces the overall weight of window frames. Heavier frames can be a health and safety risk or require more hands to manoeuvre.