

1. Glass Components

Glass Industry Acceptable Imperfections

- Glass does have inherent dimensional, colour and quality variations.
- Glass can vary slightly in colour from manufacturer to manufacturer and even in different batches from the same supplier.
- Glass can have small inclusions and surface imperfections and even small surface scratches.
- Toughening glass is up to six times stronger than annealed glass. When, broken it shatters into many tiny relatively harmless fragments which can prevent major injuries. Toughened glass is used in many applications because of its safety characteristics.
- It is toughened to BS6206.
- The toughening process rarely introduces imperfections into glass. The basic glass may contain bubbles, vents, chips and inclusions which, if accepted or not revealed by inspection before tempering can cause breakage in the initial heating or final quench operations. If inclusions are not eliminated by self destruction during the toughening process, in rare cases they may lead to failure at a later time.
- Toughened glass which is then heat soaked is less likely to explode for no explained reason.
- The glass makers association has set down standards and limits for radiused and curved glass. These limits are quite liberal regarding edges being parallel and straightness of the edges especially when the radius nears the limit to which it can be formed. For radiused glass, the nearer the minimum radius the more likely the flatten edges and slight twist will inhibit the perfect alignment of the glass balustrade panels. we mention these details to pre-empt possible client observations.

Edge Finishes and Corners:

- The edges and faces will always be polished unless otherwise requested.
- The corners will always be radiused to the minimum requirement unless otherwise stated.

Low Iron Glass:

- This is a "Whiter" glass and extremely clear that does not have the green hue particularly when viewed on edge.
- It is 50% more expensive than normal glass.

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- Excellent clarity ensures true colours are seen and optimum vision quality is achieved when looking through the glass.
- It offers a high level of light transmittance.
- It creates maximum light inside rooms due to the products high level of transparency.

Laminated Glass:

- Laminated glass can be formed to a tighter radii than toughened glass but it should be supported continuously on two sides although using thicker sections is more than adequate.
- Laminated glass cannot be drilled therefore it is unsuitable for use with glass buttons.
- you will always see the interlayer between the layers of glass, becoming more apparent as the radius becomes tighter and the panels more triangular. This is because of the hand polishing rather than machine polishing on flat panels.
- Laminated Glass is a type of safety glass that holds together when shattered.

Perspex/ Polycarbonate:

- Perspex/ Polycarbonate sheet is used as an alternative material for glass, it rolls very well and is exceptionally strong and resistant to fracture.
- It can also be machined and requires no hardening process.
- Errors can be corrected unlike toughened glass.
- There is a huge range of thicknesses, colours and finishes available.
- Cost and turnaround times are comparable to glass.
- This material will scratch more easily than glass and are mainly used in commercial situations, although they are suitable for domestic use.
- In time the material can take on an opaque appearance due to age or the use of abrasive cleaners.
- Lightweight, impact resistant, cost effective, flexible and versatile.

Handrails for Radiused Glass:

Grooved Stainless Steel cannot be rolled to a radius of less than 2 meters, which eliminates it from most domestic spiral stairs and inners strings of radiused staircases.

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- Tubular handrails can be supported off toughened glass, either on the top of the glass or on the face by brackets. (neither of these methods are suitable when using laminated glass as the top fixed bracket could fracture the edge of the glass. Remember laminated glass cannot be drilled to receive handrail brackets).
- Hand carved timber handrails are in our opinion superior as they are individually made including the associated corners and bends creating soft flowing lines. The finish can be natural wood or finished in a range of metallic or painted finishes.
- Finally handrails can be omitted providing British Standards are satisfied.

Protection on site:

- Once site fixed glass as with all site fixed materials becomes the responsibility of others.
- Under no circumstances will Demax be held responsible for damage to fixed materials.
- It is the responsibility of the client or main contractor to check for damage and at the end of each working day, if no damage is reported Demax cannot be held responsible.



Picture 1
Above (Left) Standard Glass, (Right)
Low Iron Glass



Picture 2
Laminated Glass



Picture 3
Perspex/Polycarbonate