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WALIA GLOBAL VENTURES

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Laminated Glass



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Laminated Glass

Description

Laminated (layered) glass is comprised of two or more sheets of glass with reinforcing layers between two sheets. The most common inter layers are very thin polymeric papers made of Polyvinyl Butyral (PVB) with the thickness of which is multiplied by 0.38mm (0.38, 0.76, 1.14, 1.52). Inter layers are bound firmly to the glass sheets under a high pressure and temperature controlled process. These layers are resistant to impacts and can absorb the causing tension so that after breakage they are able to hold the pieces of glass tightly together to avoid them scattering around.

Features

Depending on the specifications of inter layers, laminated glass has several features. Besides a variety of mechanical specifications, there are a lot of variations in color and figure of the layers. Some of these features are as follows:

- **Safety:** Prevents injury of people due to breakage and falling of glass because of destructive incidents such as earthquake.
- **Security:** An excellent protection for houses, offices, banks and shops against robbery and sabotage actions.
- **Bullet proof:** It is possible to produce bullet proof glass by using several numbers of glass sheets with proper layers.
- **Control of harmful sunlight emissions (UV):** This filtration is achievable due to the applied layers in laminated glass or using reflective glass in combination with clear glass.
- **Sound proof insulation:** Using laminated glass in double-glazed windows has the best performance in reducing the sound intensity.
- **Decoration:** Applying tinted and figured layers either in transparent or opaque type for the building façades or interior spaces creates a pleasant environment besides providing safety and security.

Installation

Laminated glass is able to be used as single-glazed, but it is also possible to use it as double-glazed on the both sides of the frame if it is required to achieve the highest level of sound insulation and safety. In case of installation as double-glazed in the ceiling, it is necessary that the laminated pane to be faced inside.

Combinations

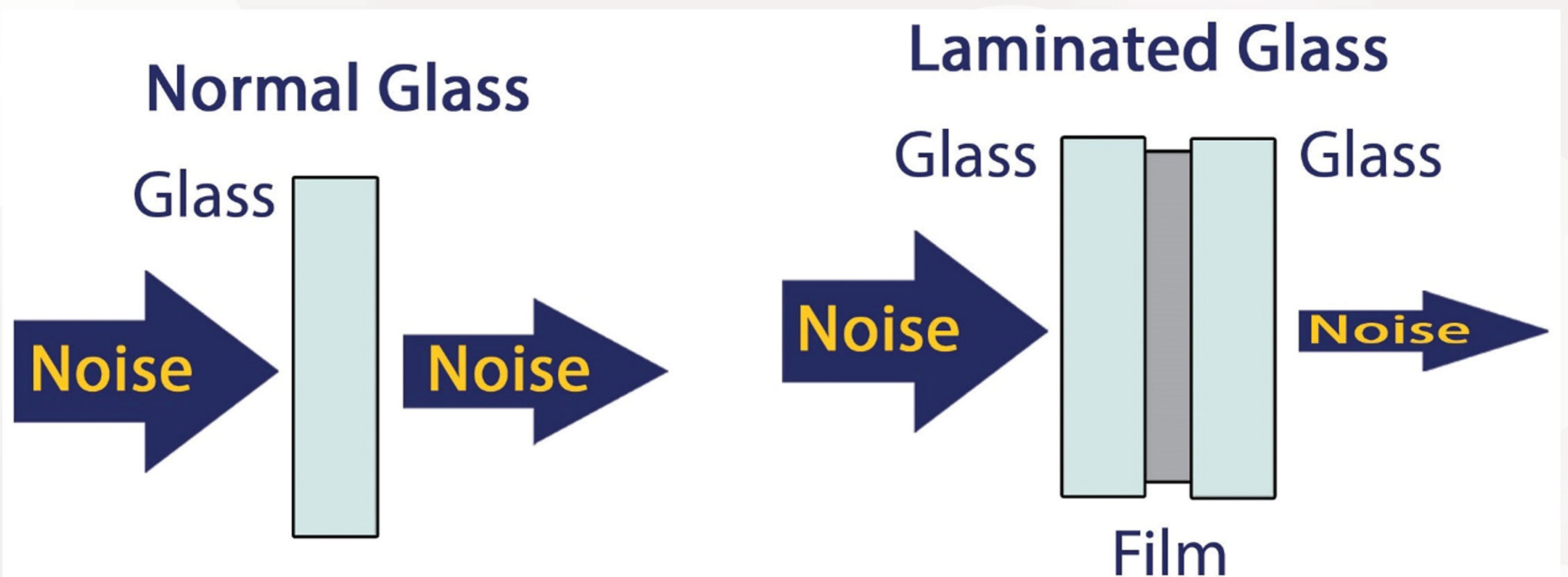
Using a varied combinations in laminated layers satisfies several needs including solar control or different appearances for the glass. It is allowed to use tempered, silk printed, curved or bent, patterned, sand blast and acid-etched glass as a part of laminated glass but it is not possible to apply painted, glazed glass and back painted mirrors for this purpose.

Sound Control

Single glass sheet is not a proper insulation against sound in comparison with other construction materials. Laminated glass with at least one layer of PVB can relatively reduce the sound intensity.

Sound proofing ability can be increased by some changes such as:

- Increasing glass thickness
- Double glazing in different thicknesses
- Laminating



Double Glazed Unit	Sound Reduction Rw(C,Ctr)dB	Sound Inside
<p>Outside 70db</p>	<p>Absorbs 30db(0,-3)</p>	<p>Inside Reduced To 40db</p>
<p>Outside 70db</p>	<p>Absorbs 30db(0,-4)</p>	<p>Inside Reduced To 33db</p>
<p>Outside 70db</p>	<p>Absorbs 30db(-1,-5)</p>	<p>Inside Reduced To 31db</p>
<p>Outside 70db</p>	<p>Absorbs 30db(-1,-4)</p>	<p>Inside Reduced To 29db</p>

Every Reduction of 3db reduces the Sound's power by Half

Single Glazed Unit	Sound Reduction Rw(C,Ctr)dB	Sound Inside
<p>Outside 70db</p>	<p>Absorbs 30db(-1,-3)</p>	<p>Inside Reduced To 35db</p>
<p>Outside 70db</p>	<p>Absorbs 30db(-1,-4)</p>	<p>Inside Reduced To 33db</p>
<p>Outside 70db</p>	<p>Absorbs 30db(-1,-2)</p>	<p>Inside Reduced To 32db</p>

Every Reduction of 3db reduces the Sound's power by Half

Quality Standards

Top quality glass complies with ISO 9001:2015, and ISI mark as per indian standard.

Preventions

To minimize risk of accidents caused by impacts, laminated glass with at least one layer of PVB is used but in case of possible falling of people on the glass surface, two layers of PVB should be used. Absolutely, the more number of layers the more safety of glass.

Dimensions

Laminated glass is produced in different dimensions according to the customer needs from 55x25cm to 260x510cm.