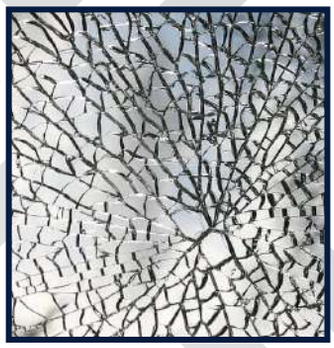
Hatimee Glass

TOUGHENED GLASS

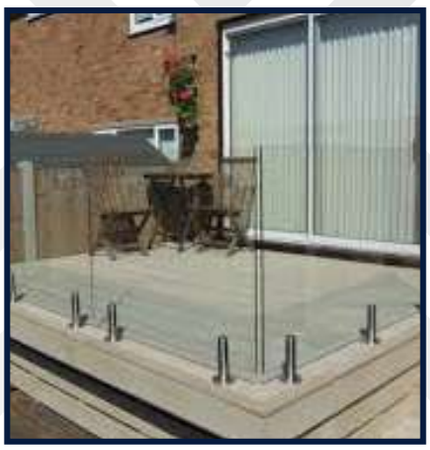
In modern architecture, glass is an essential material as it provides flexibility and aesthetics to the structure. Glass is a versatile material which is used in building industry since ancient times. Ordinary float glass has excellent durability in normal conditions. But it fails when high wind loads or thermal stresses are applied. In such cases, toughened or tempered glass is used. Toughened glass is a processed glass, which has more strength than float glass. Due to its strength, it is used for safety purposes; hence it is also called safety glass or tempered safety glass. It is used as structural glass to make glass floors, canopies, safety glazing, balustrades, staircase, etc.

The normal glass or float is cut in required size and is heated in the furnace to a uniform temperature of 620-650 0C and then rapidly cooled. As a result of rapid change in temperature, the strength of glass increases to about 4-5 times. The toughening process does not alter any other property of glass. Hence toughened glass has the same visible light transmission as float glass but has high strength also. It can withstand temperature changes up to 250°C, unlike float glass which can handle temperature differential up to 40°C only. Toughened glass is difficult to break and even if it breaks due to impact, it will shatter into small pieces which are blunt and do not cause fatal injuries (as shown). Thus it is widely used as safety glass. Toughened glass has high resistance to electric and thermal shock, has high durability and does not have to be replaced throughout the life of the structure. It cannot be cut or re-sized. Thus before the process of toughening, the glass should be cut to the desired size.



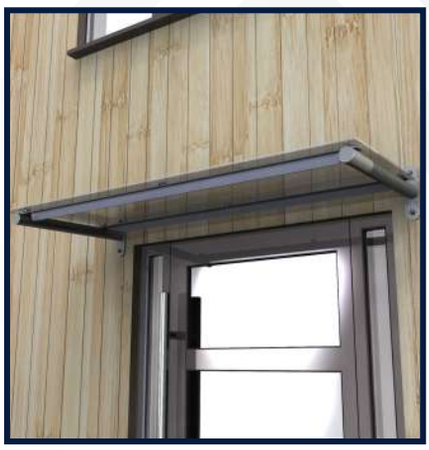
Application

Glass Partition

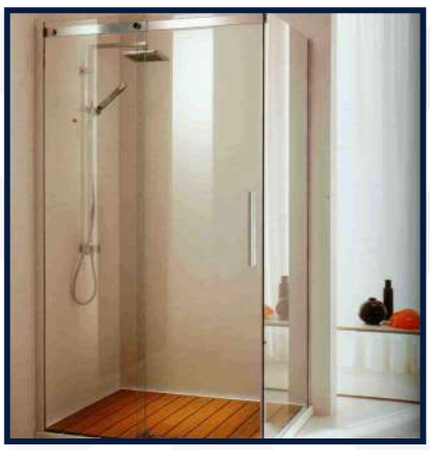


Glass Railing

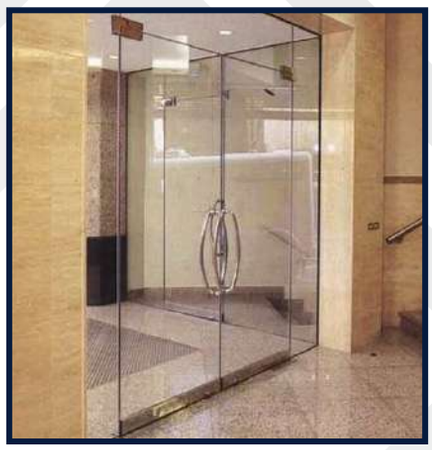
Glass Glazing



Glass Canopy



Shower Cubical



Glass Door