

# CE Certificate 12mm Clear Toughened Glass Factory

## About Toughened Glass

Toughened glass, also Tempered Glass is fabricated by heating annealed glass to over 600°C and cooling it rapidly, which locks the outer surfaces of the glass in a state of high compression, and the core or center of the glass in compensating tension. It is a safety glass which is used when strength, thermal resistance and safety are important considerations.

## Characteristic

### High Strength

The tempered glass performs well in resisting bending and hitting owing to its high strength which is 3-5times that of normal annealed glass. It is able to withstand a surface pressure of 95Mpa.

### High Safety

When the tempered glass is broken, it turns into alveolate granules with obtuse angles, which guarantee safety to make sure human harmless, and the toughening process greatly reduces the risk of thermal breakage to ensure less loss.

### Heat Stability

The tempered glass is capable of withstanding a temperature change of 250 to 320°C while normal annealed glass can only bear 20 to 100°C.

## Performance Comparison

Items	Tempered Glass	Semi-tempered Glass	Normal annealed glass
Safety	Best	General	None
Intensity	152Mpa	/	30-90Mpa
Thermal Stability	250-320°C	100°C	20-100°C
Surface Stress	95Mpa	24-69Mpa	/
Broken State	Obtuse-angle grain	Shooting-broken	Sharp

## Specification

12mm clear toughened glass available size: Maximum 3000\*8000mm, Minimum 150\*300mm

All the processing done on the 12mm clear toughened glass like beveling, cutting, drilling, etc. must be done before tempering.

### **Edge work**

Any edges could be done perfectly on 12mm clear toughened glass, like flat polished edge (T edge), pencil edge (C edge), beveled edge, ogee edge, matt edge, corner round edge.

### **Holes and notches**

Tempered glass can be supplied with drilled holes (no matter straight or conical) and cut notches. We will consider hole and notch locations and size according to your drawings. Please kindly check below details:

Glass edge to nearest point of hole	12mm clear toughened glass should not have holes located any closer than 2 times the thickness of the glass.
Glass corner to nearest point of hole	Holes should not be located any closer than 6.5 times the thickness of the 12mm clear toughened glass.
Dimension of holes	The minimum dimension of a hole should not be less than the thickness of the glass. The maximum dimension of the hole should not be more than 1/3 the narrowest dimension of the piece.
Notches and cutouts	All must have a fillet with radius equal to, or greater than the thickness of the glass.

### **Shapes**

Except rectangle 12mm clear toughened glass, Jimmy Glass also could do shape 12mm clear toughened glass, like round, Trapezoid, parallel, etc.

### **Application**

- Glass Balustrades
- Glass skylight
- Glass canopy
- Shower Screens
- Furniture like table tops
- Many Others.

## Quality Standard

In accordance with EN12150 European tempered glass standard

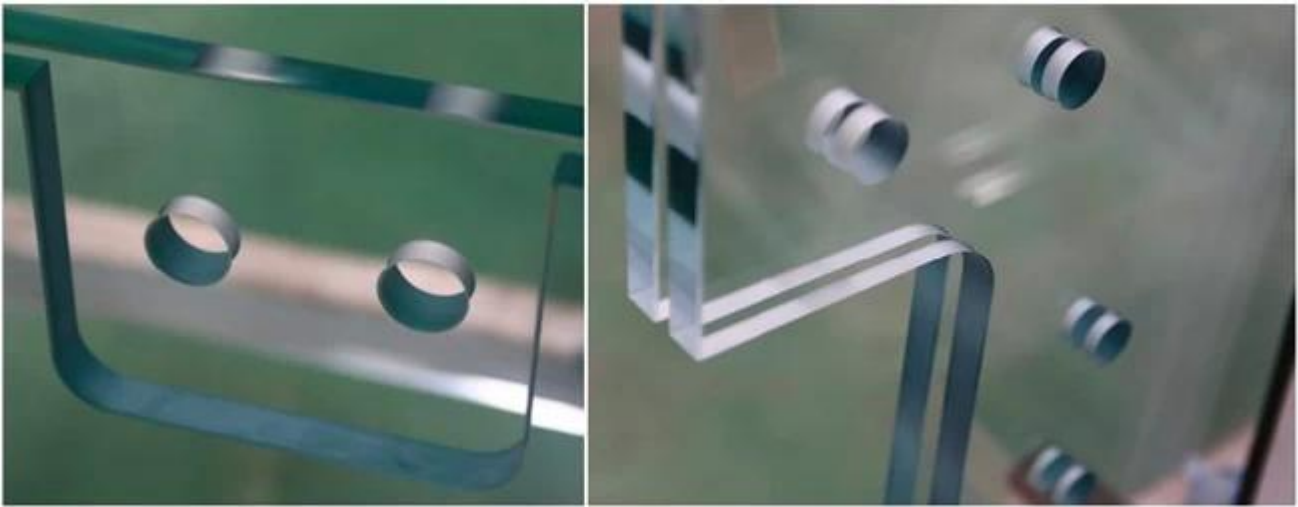
In accordance with ASTM1048 American Standard

In accordance with GB 9963-1998 Tempered Glass Standard

In accordance with GB 17981-1999 Chinese Standard Tempered and Heat-Strengthened Glass

Pass Chinese Safety Glass Compulsory Certification (CCC), IGCC, CSI.

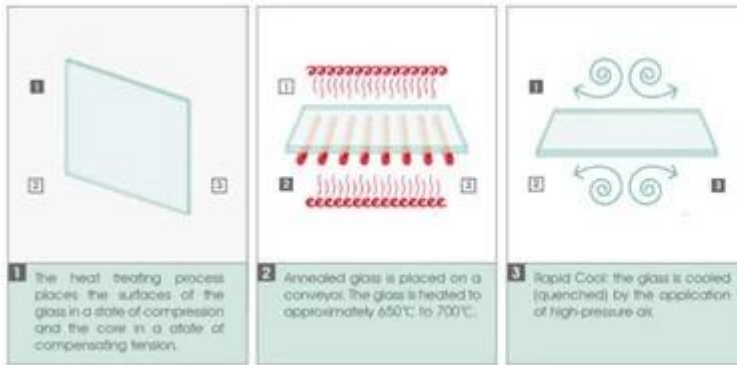
## Toughened Glass with Holes and Notches



## Difference when annealed glass and toughened glass broken



## Toughened Glass Furnace and production process



## Toughened Glass Strong Wooden Crate Packing and Safety Loading

