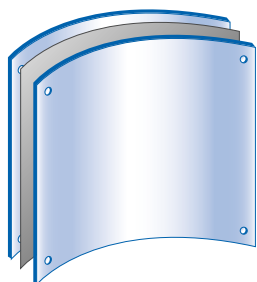
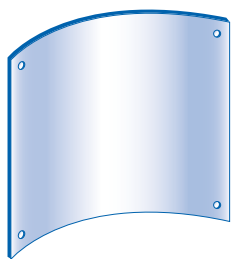


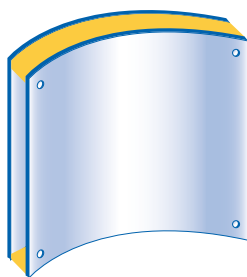
Curved tempered architectural glass

Curved tempered glass is achieved through a process of heating, bending and a fast cooling stage.

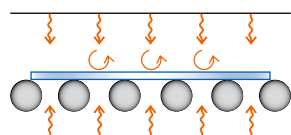
The result is the formation of high compressive stresses on the glass surfaces. This effect produces a greater resistance to any mechanical and thermal stress.



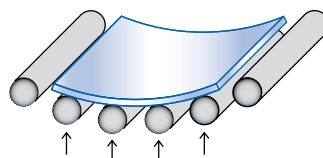
Curved tempered laminated glass.



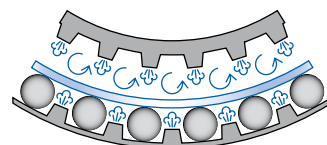
Curved tempered double glazing.



1-Heating



2-Bending



3-Fast cooling

Types and compositions

Types

- Clear and tinted float.
- Extra-clear.
- Reflective solar control glass (pyrolytic glass only).
- Low-E (pyrolytic glass only).
- Screen printed.
- Rolled glass.

Possible compositions

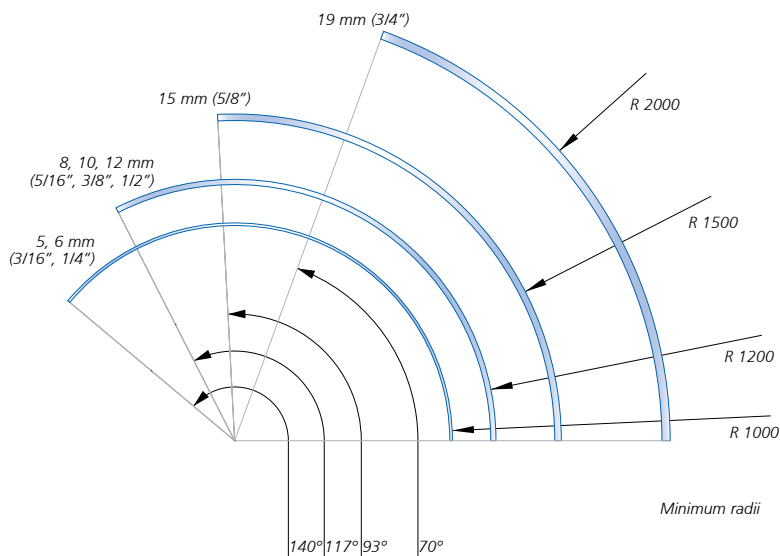
- Curved tempered monolithic glass.
- Curved tempered laminated glass.
- Double glazing.
- Combinations of laminated and double glazing.
- Heat strengthened laminated glass.
- Combinations of heat strengthened laminated and double glazing.

Heat Soak Test (HST)

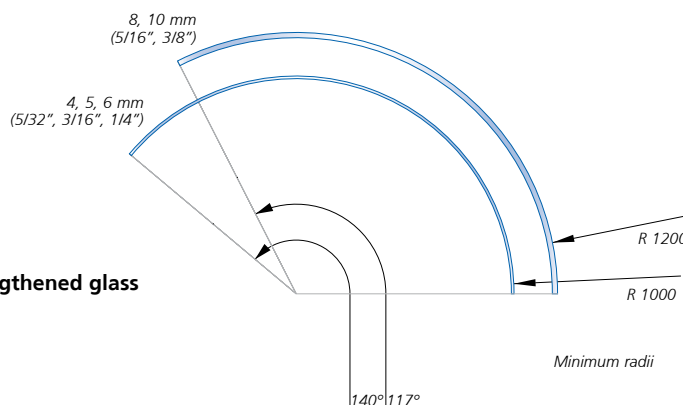
- Optional.

Technical data

Curved tempered glass



Curved heat strengthened glass



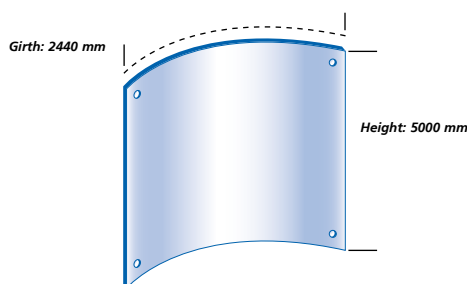
CRISTALES CURVADOS S.A.
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Fax +34 93 840 14 60
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Maximum dimensions



British Petroleum, Madrid



Manufacturings

Glass edges

- Always polished.

Tolerance

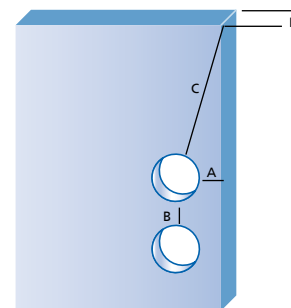
- Standards EN 12150 and EN 1863

Slots

- Always polished.
- Discuss with the technical department for the correct position.

Holes

- Diameter $\geq$ glass nominal thickness.
- Both sides of the hole $\rightarrow$ well grounded.
- The distance between the hole edge and the glass edge $\geq$ twice the glass nominal thickness.
- The distance between the edges of 2 holes $\geq$ twice the glass nominal thickness.
- The distance between a hole edge and the nearest corner $\geq$ 6 times the glass nominal thickness.



$$A \geq 2E \quad B \geq 2E \quad C \geq 6E$$

E = glass thickness
 A = distance between the hole edge and the glass edge
 B = distance between the edges of 2 holes
 C = distance between a hole edge and the nearest corner

Characteristics

- Smaller risk of breakages due to thermal shock.
- Greater resistance to any mechanical stress (wind, snow loads, etc.)
- Suitable for planar system.
- It is considered safety glass because it breaks into small pieces.
- Top-optical quality glass in reflection and refraction.
- Glasses don't have tong marks.
- Tempered glass physical properties (Young modulus, optical properties, thermal conductivity, specific heat, linear coefficient of thermal expansion, etc.) remain the same.

Mechanical resistance (annealed glass=1)

Annealed glass=1
 Heat-strengthened glass=2
 Tempered glass=4-5

Thermal shock resistance (°C)

Annealed glass=40-50
 Heat-strengthened glass=100
 Tempered glass=200

Typical values of surface compression (MPa)

Annealed glass=0
 Heat-strengthened glass=24-69
 Tempered glass=100

Applications

- Façades,
- skylights,
- doors,
- spandrels,
- shopfronts,
- partitions,
- balustrades.



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