



# Sound Insulation

## Sound Qualities:

The glass bricks we stock have a rating of 39dB (decibels) up to 50dB. This means that they effectively reduce the noise by 40 to 50dB coming through the wall. This makes them ideal for night clubs, homes on busy roads or train lines, noisy neighbours or young rock stars in the making.

## As an approximate guide:

190x190x80mm thick blocks - 39-40dB

240x240x80mm thick blocks - 42dB

240x115x80mm thick blocks - 45dB

300x300x100mm thick blocks 35dB

190x190x100mm thick blocks - 42dB

190x190x100mm double thickness blocks - 45dB

190x190x150mm triple thickness blocks - 50dB

Double Skin wall of 190x190x100mm blocks - 50dB

This is a guide for glass brick panels when laid in mortar, silicone systems aren't as effective at reducing sound transference through the panel although they are still pretty good (data on this not available)

If you have specific requirements and need more accurate data please make contact with us.



# What Do Glass Bricks Weigh?

The weight of our standard sized glass bricks being 190x190x80mm with an 8mm nominal wall thickness is approximately 2.4kg.

The bullet resistant security glass bricks 190x190x80mm with a 25mm nominal wall thickness weigh approximately 5.1kg.

Other glass brick sizes have a nominal wall thickness of 8mm and approximately weigh as follows:

190x190x80 - 2.4kg (Classic Size Glass Brick)

190x190x50 - 1.7kg

190x90x80 - 1.5kg

190x190x95 - 2.6kg

190x190x100 - 2.7kg

300x300x100 - 6.9kg

240x240x80 - 3.8kg

240x115x80 - 2.2kg

115x115x80 - 1.0kg

Specially Engineered glass bricks

190x190x80 - 5.1kg (bullet resistant\*, +90min fire rated security block)

190x190x160 - 10.2kg (double thickness block FRL - /90/60 (90 min flame resistant, 60 min heat transfer resistant))

190x190x100 TF30 La Rochere double thickness 4.0kg

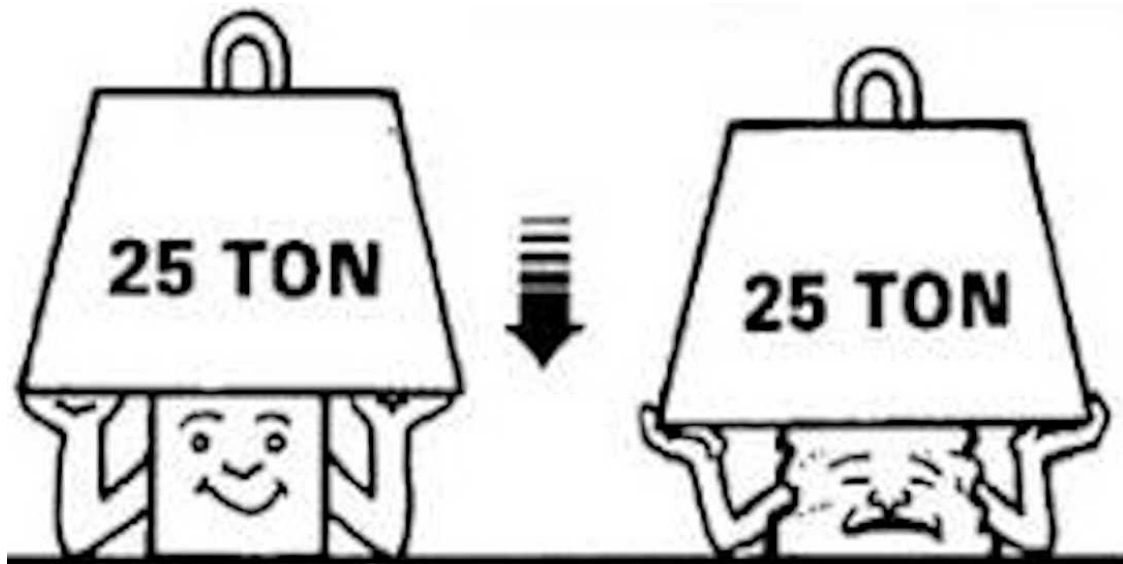
190x190x150 TF60 La Rochere triple thickness 6.0kg

190x190x80 30F Seves single thickness 4.15kg

190x190x160 60F Seves double thickness 8kg

190x190x160 90F Seves double thickness 8.3kg

\*Tests have been done where a .22 pistol fired at the face of the glass brick has only penetrated one side giving a high degree of security for person and property.



# Compressive Strength

Compressive Strength Qualities:

Greater than 600 PSI or 100kg/cm<sup>2</sup>

Please Note: The purpose of these figures is for calculating the bearing weight of the glass brick wall's own structure and not other elements intended to be supported by the glass brick wall as they are deemed not to be a load bearing element.

The bearing surface of an individual glass brick will withstand 15,000kg.

Compressive strength table expressed in Megapascal (MPa) which is the same as Newton/square millimetre (N/mm<sup>2</sup>)

190x190x80 >9MPa

190x190x50 >13MPa

190x90x80 >13MPa

190x190x95 >9MPa

190x190x100 >9MPa

300x300x100 >10MPa

240x240x80 >9MPa

240x115x80 >15MPa

115x115x80 >15MPa

Specially Engineered glass bricks

190x190x80 >13MPa (bullet resistant\*, +90min fire rated security block)

190x190x160 >9MPa (double thickness block)

190x190x100 TF30 La Rochere double thickness >10MPa

190x190x150 TF60 La Rochere triple thickness >10MPa

190x190x80 30F Seves single thickness >9MPa

190x190x160 60F Seves double thickness >9MPa

190x190x160 90F Seves double thickness >13MPa

Further information currently being updated...



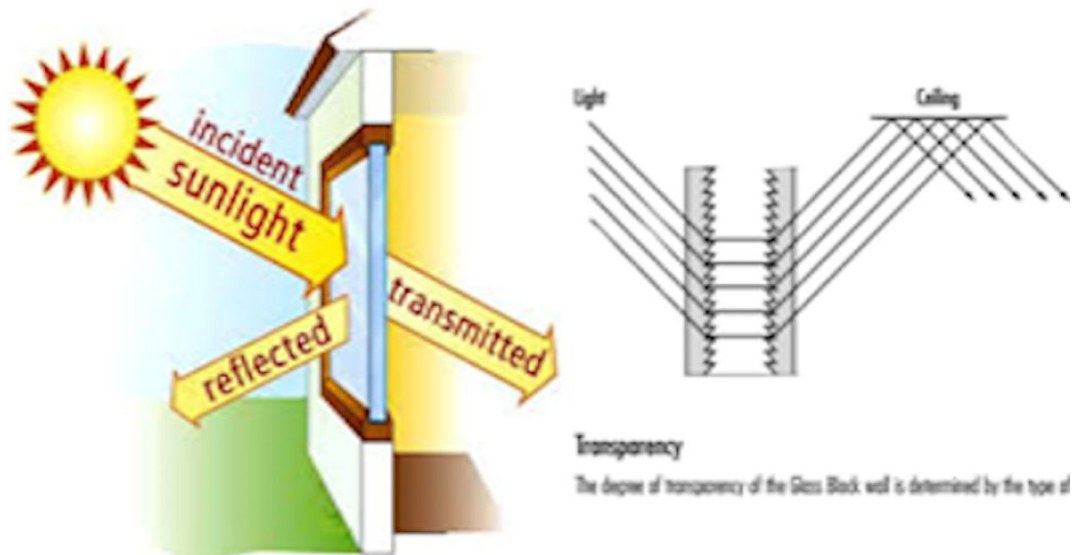
## Thermal Properties / Insulation Values

### Thermal Qualities:

The thermal insulation qualities of our glass bricks is generally equivalent to a brick veneer wall (if shaded) or standard double glazing. The degree of insulation is known as the k-value of the heat transfer [h/m<sup>2</sup>k]. The k-value of our glass bricks are on average 3.00/m<sup>2</sup>. The insulating quality is better the lower the value is (The K value is the rate of heat transfer through a square metre of material per change in degree Celsius, from one side to the other.).

- 190x190x80 (U) 3.0 Wm<sup>-2</sup>K<sup>-1</sup>
- 190x190x50 (U) 3.1 Wm<sup>-2</sup>K<sup>-1</sup>
- 190x90x80 (U) 3.2 Wm<sup>-2</sup>K<sup>-1</sup>
- 190x190x100 (U) 3.0 Wm<sup>-2</sup>K<sup>-1</sup>
- 300x300x100 (U) 3.0 Wm<sup>-2</sup>K<sup>-1</sup>
- 240x240x80 (U) 3.0 Wm<sup>-2</sup>K<sup>-1</sup>
- 240x115x80 (U) 3.1 Wm<sup>-2</sup>K<sup>-1</sup>
- 115x115x80 (U) 2.8 Wm<sup>-2</sup>K<sup>-1</sup>
- 190x190x100 TF30 La Rochere(double thickness)(U) 2.3 Wm<sup>-2</sup>K<sup>-1</sup>
- 190x190x150 TF60 La Rochere(triple thickness)(U) 1.7 Wm<sup>-2</sup>K<sup>-1</sup>
- 190x190x80 30F Seves single thickness(U) 3.0 Wm<sup>-2</sup>K<sup>-1</sup>
- 190x190x160 60F Seves double thickness(U) 3.0 Wm<sup>-2</sup>K<sup>-1</sup>
- 190x190x160 90F Seves double thickness(U) 1.5 Wm<sup>-2</sup>K<sup>-1</sup>
- 190x190x100 x 2 skins(U) 1.5 Wm<sup>-2</sup>K<sup>-1</sup>
- 190x190x80 Seves Energy Saving (2 Chamber Argon Filled) (U) 1.1 Wm<sup>-2</sup>K<sup>-1</sup>

Further information currently being updated...



# Light Transmission

As an approximate guide, not to be relied upon for complete accuracy:

## Colourless Blocks

- 190x190x80mm thick blocks - 79-81%
- 190x90x80mm thick blocks - 79%
- 240x240x80mm thick blocks - 85%
- 240x115x80mm thick blocks - 77%
- 300x300x100mm thick blocks 84%
- 190x190x100mm thick blocks - 80%
- 190x190x50mm thick blocks - 78%

## Coloured Blocks

- 190x190x80 Grey 49%
- 190x190x80 Light Blue 72%
- 190x190x80 Light Green 69%
- 190x190x80 Turquoise 69%
- 190x190x80 Pink 71%
- 190x190x80 Brown 54%
- 190x190x80 Blue 50%

No information currently available for laminated multi-layer bricks, theoretically they will transmit less light due to extra thickness, more layers of glass and the translucent film of silicone binding the layers together.

- 190x190x100mm double thickness blocks - ?
- 190x190x150mm triple thickness blocks - ?
- 190x190x160mm double thickness blocks - ?