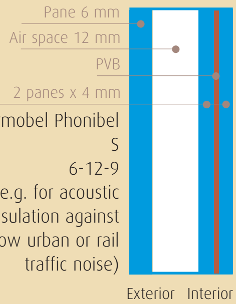
acoustic insulation
glass

In today's busy environment, tranquillity and comfort are something we all long for.

Noise is all around us; it simply cannot be limited to its source. As a result, we have to protect ourselves as best we can. To this end, AGC Flat Glass Europe offers a range of acoustic insulation glasses to keep noise out without affecting the amount of natural light entering a room.

Do you live on a noisy street? Well, Thermobel Phonibel of AGC Flat Glass Europe offers the perfect solution - this type of glass is very effective and offers long-lasting protection. Thermobel Phonibel double glazing combines several fundamental elements of acoustic insulation - thicker glass, asymmetric assembly (using glasses of different thickness), a wider air space, Stratobel laminated glass (see the Safety Glass leaflet) or acoustic laminated Stratophone glass. This final option includes a PVB film with higher acoustic insulation properties than ordinary PVB films. This means that Thermobel Phonibel truly offers protection against noise.

Composition of Themobel Phonibel in asymmetric double glazing with laminated glass

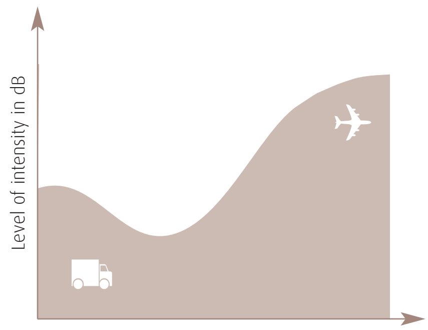


Thermobel Phonibel S 6-12-9 (e.g. for acoustic insulation against slow urban or rail traffic noise)

What do you hear?

Noise is the result of a combination of sounds of different frequencies. Slow urban traffic typically produces low and medium frequency sounds whilst an aeroplane taking off produces medium to high frequency sounds.

Scale of intensity (dB)	Types of noise	Hearing
0	total silence	threshold of hearing
20	whisper	
50	quiet apartment	
70	noisy road	fatigue
90	large orchestra	
100	underground train arrival	
130	aeroplane engine	threshold of pain



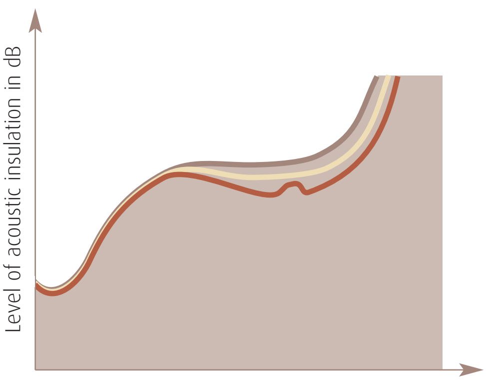
The intensity and frequency of noise determine which type of Thermobel Phonibel glass will best meet your needs.

Frequency and intensity

Sound moves through air like waves on water. The height of the wave determines the intensity of the sound, as expressed in decibels (dB). The number of waves per second determines the frequency, expressed in hertz (Hz).

When Thermobel Phonibel blocks the decibels...

The higher the curve, the greater the acoustic insulation.



- Double glazing with laminated acoustic insulation **Stratophone** - Thermobel Phonibel ST glass
- Double glazing with **laminated Stratobel** - Thermobel Phonibel S glass
- **Asymmetric double glazing** (for example, 8-12-5) - Thermobel Phonibel

Rw index

The Rw index (expressed in decibels) measures the acoustic performance of glass. The higher the Rw index, the better the level of acoustic insulation offered by the glass. The Rw index of ordinary double glazing is 29 dB whereas the **Thermobel Phonibel** range can offer an Rw index of around 50 dB.

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