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## **Understanding How Indow Inserts Block Noise**

Indow window inserts are an excellent, cost-effective way to mitigate noise coming into your space through the windows and our Acoustic Grade takes that protection to the next level. However, Indow inserts are not perfect for every situation. Understanding how noise enters your space, and how Indow inserts reduce that noise, will inform your decision about purchasing Indow inserts.

### How does sound enter your space?

- Sound waves enter your space through every surface, gap and crack
- The thicker and better sealed a surface the less noise penetrates
- In many rooms the most noise enters through the windows because the walls, ceilings and floors
  are thicker and the windows have cracks and openings where the noise can penetrate.
- Doors are notorious for letting in noise when they are not well sealed around the perimeter.

### How much noise is coming through the windows?

- Window to wall, floor, and ceiling ratios: When windows are a small percentage of the wall surface a higher percentage of the overall room noise comes through the walls, floor, & ceiling.
- Air sealing and insulation: Unsealed gaps or uninsulated walls, floors and ceilings allow sound into spaces, which reduces the overall noise reduction by Indow inserts. Block construction typically provides significantly more noise reduction than stick frame construction.
- Type of Windows: Indow inserts noise reduction data is based on testing performed in front of operable single pane windows. There will be less overall noise reduction when Indow inserts are used in front of double pane windows.
- Examples: Indow inserts provide dramatic overall room noise reductions when placed over operable single pane windows where the windows are a significant percentage of the wall area and the walls are insulated. Indow inserts provide less overall room noise reduction when placed over double pane windows that are a small percentage of the wall area and the walls are thin and poorly insulated.

#### What type of noise are you dealing with?

- High pitched or low pitched? Indow inserts lab testing showed reductions of 10dBa for Standard Grade Indow inserts and 18.9dBa for Acoustic Grade Indow inserts. Testing indicates that Indow inserts will be more effective at reducing sound at higher frequencies than lower ones. The sound from a train screeching on the tracks will be reduced more than the low rumble of the engine.
- How close is the sound source? The closer the sound source, the more intense the sound waves and therefore you may
  perceive a smaller overall reduction in the noise.

The perception of noise has many variables associated with it and each structure is different. Indow Window inserts cannot guarantee the specific effect on the overall noise infiltration into your space. Your dealer can help you evaluate Indow inserts, but it is the customer's responsibility to determine if Indow inserts are appropriate for them. Due to the custom nature of Indow inserts, all purchases are final and no refunds for properly fitting product will be provided.