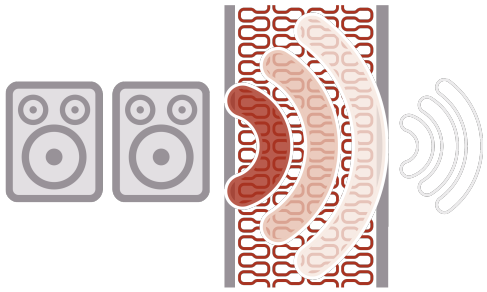
# SUPERIOR SOUND CONTROL

The insulation system used in your home critically impacts the comfort, energy efficiency, and sound control of the home. Within the walls of the most acoustically sound controlled home is BIBS® (Blow-In Blanket® system), the industry leading residential and commercial high-performance insulation system. BIBS is a proven, state-of-the-art insulation system utilizing specially manufactured fiberglass blowing wools installed in the walls, floors, attics, and cathedral ceilings behind a proprietary fabric. This forms a seamless blanket of insulation that completely fills around pipes, wires and other objects inside the cavity to maximize thermal efficiency and helps eliminate costly voids and air gaps. This process provides you with the highest effective R-values attainable on the market today.

BIBS is a proven, premium insulation that controls the transmission of sound. Controlling unwanted noise is a must, especially with newer homes featuring sophisticated, cinematic-quality, acoustical home theater systems. Many builders try to incorporate good sound control, but are often disappointed with the end results. Fortunately, to achieve the optimum level of sound control, BIBS is your solution.

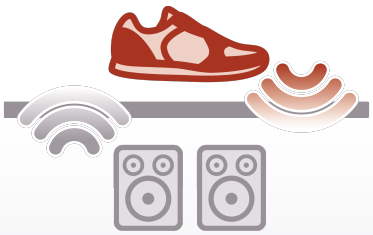
Adding blown-in fiberglass insulation to walls, floors, and ceilings is a cost-effective way to improve sound control. Choosing the right system is critical, but proper installation is just as important. Installing insulation between rooms attenuates (reduces) sound transmission and is most effective for airborne transmission at medium to high frequencies (normal speaking range.) This consistent density of insulation reduces sound transmission and provides the homeowner with appreciable sound control.



**High-Performance Insulation System**

BIBS® uses only high-quality fiber glass insulation produced by manufacturers CertainTeed, Johns Manville, and Knauf Insulation. Unlike other insulation systems that may leave voids or gaps, BIBS completely fills all spaces, reducing sound transmission through the wall cavity. Testing shows that fiberglass can add four to ten points to the STC (sound transmission class) of a wall or ceiling assembly. Fiberglass is a permanent solution; it doesn't settle or deteriorate over time, and therefore will not lose it's acoustical effectiveness.

In addition to its sound controlling benefits, BIBS also offers outstanding thermal performance and high R-values, cutting utility bills and leaving you with an energy-efficient home. It does not settle or separate, corrode pipes or wires, or produce mold or mildew. It is also fire-resistant, moisture-resistant, and does not attract or act as sustenance for animals. And because BIBS uses non-combustible fiber glass, there are no chemicals or noxious odors over time.

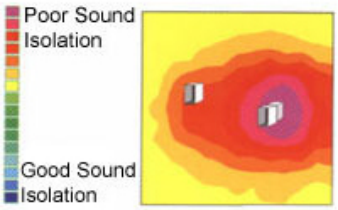


**Installation**

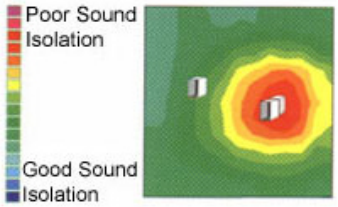
When BIBS is installed by a certified contractor, you have the peace of mind that the job will be completed properly. Certified Contractors are thoroughly trained to precise standards and continuing education ensures the skills of BIBS Certified installers' remain sharp. Choosing a Certified Contractor assures the performance of BIBS. Additionally, onsite testing confirms insulation density to ensure the highest level of thermal performance and sound control.

# SOUND INSULATION EFFECTIVENESS

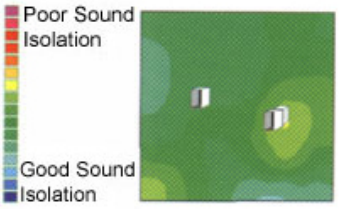
In the test graphic below, a small wall assembly was constructed with wood studs, resilient channels, and gypsum wallboard. Penetrations were made for single and back-to-back metal electrical boxes, as shown in the graphs to the right. The wall assembly was tested in three ways - no insulation, fiberglass batt insulation, and BIBS®. The assembly was tested to measure the speech frequency (500-2000Hz) sound transmission through the wall using a sound intensity-mapping program.



Wall with penetrations and no insulation



Wall with penetrations and batt insulation



Wall with penetrations and BIBS insulation

**Testing Environment**
In order to simulate a field installation, instead of laboratory conditions, R-11 kraft-faced insulation was cut with up to a 1/8" gap around all three metal electrical boxes. No insulation was installed between the back-to-back electrical boxes. Then, high sound levels were generated on one side of the assembly, and sound energy was transmitted through the panel. On the quiet side of the assembly, a sound intensity probe was used to scan the surface, measuring regions of locally high and low sound intensity levels.

**Measurement**
Sound intensity contour maps were generated from the experiment to graphically display the sound energy transmitted through the wall. The colors indicate local regions of high and low sound transmission.

**Results**
The contour maps show leakage through the back-to-back electrical box penetrations and slight leakage from the single metal electrical box penetration. The three tested assemblies demonstrate the importance of quality installation for sound control effectiveness. The small gaps in the R-11 batt insulated assembly clearly show reduced sound control effectiveness through the wall in the 500 to 2000 Hz frequency range.

| Insulation Package | STC Wall WITHOUT Obstructions or Penetrations | STC Wall WITH Obstructions or Penetrations | TL Value | Maximum TL Reduction Due to Penetrations |
|---|---|---|---|---|
| No Insulation | 35 | 37 | 48db | 5db |
| BIBS | 46 | 46 | 61db | 3db |

**Approved Use Fibers**
Certainteed InsulSafe®SP, InsulSafe®XC and Optima®
Johns Manville Climate Pro® and Spyder™
Knauf Perimeter Plus™ and Jet Stream® Max

**Building Standards**
BIBS® meets the following standards:
- International Building Code
- International Residential Code
- International Energy Conservation Code

**Availability and Installation**
Only trained contractors certified by BIBS® may install the system. This is the BIBS difference. It ensures a proper installation and outstanding performance. Our established network of insulation specialists extends across the United States and Canada.

**Acceptances**
BIBS® has been evaluated and accepted by the following government agencies:
CCMC #13198R and 11790R