### Acoustical Tests

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Test STC</th>
<th>Test IIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4” Plywood</td>
<td>60</td>
<td>69</td>
</tr>
<tr>
<td>3/8” Plywood</td>
<td>66</td>
<td>63</td>
</tr>
<tr>
<td>2 Layers 3/4” Plywood</td>
<td>72</td>
<td>62</td>
</tr>
<tr>
<td>2 Layers 1/2” OSB</td>
<td>72</td>
<td>63</td>
</tr>
<tr>
<td>1-1/2” Gypcrete</td>
<td>68</td>
<td>61</td>
</tr>
<tr>
<td>3” Subfloor</td>
<td>66</td>
<td>68</td>
</tr>
<tr>
<td>1” Oak Hardwood Floor</td>
<td>62</td>
<td>61</td>
</tr>
<tr>
<td>1/2” Plywood</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>4” Concrete Slab</td>
<td>66</td>
<td>68</td>
</tr>
<tr>
<td>6” Concrete Slab</td>
<td>66</td>
<td>68</td>
</tr>
<tr>
<td>Kinetics® KIP-22-Q2</td>
<td>72</td>
<td>62</td>
</tr>
<tr>
<td>4” Concrete Slab</td>
<td>66</td>
<td>68</td>
</tr>
<tr>
<td>Drop in Acoustical Ceiling</td>
<td>54</td>
<td>62</td>
</tr>
<tr>
<td>4-7/8” Concrete Slab</td>
<td>66</td>
<td>68</td>
</tr>
<tr>
<td>Kinetics® RIM Q-2-12</td>
<td>50</td>
<td>45</td>
</tr>
<tr>
<td>5/8” Plywood</td>
<td>66</td>
<td>68</td>
</tr>
<tr>
<td>4” Concrete Slab</td>
<td>66</td>
<td>68</td>
</tr>
<tr>
<td>Precast Concrete 14” Tee</td>
<td>64</td>
<td>71</td>
</tr>
<tr>
<td>2’ Topping Slab</td>
<td>54</td>
<td>62</td>
</tr>
</tbody>
</table>

### Essentials:
- Proven effectiveness over the lifetimes of an installation.
- Quick installation time, especially compared to “job-up” methods.
- System level natural frequency.”
- Flexible capacities allow design for any load, from light wood floors to heavy mechanical equipment rooms.
- When used in conjunction with ceiling and wall separation products, Model RIM is an essential component of “room-within-a-room” sound isolation construction.

### University of Illinois Recreation Center
- Maui Island Theater
- Kipchuck Hall of Fame

### National Underground Railroad Freedom Center
- University of Akron Student Union Ballroom
- Naimshald Basketball Hall of Fame

### Ramsey County Law Center Gun Range
- University of Oxford Student Union Ballroom
- National Underground Railroad Freedom Center

### Soldier Field-Chicago Bears Stadium
- University of Akron Student Union Ballroom
- Naimshald Basketball Hall of Fame

### Noteworthy Projects

- Call us to discuss your requirements for noise control, and learn how to employ the versatile, proven Model RIM System to solve your noise problems.

### Roll-out Floor Isolation System

**Model RIM (Roll-out Isolation Material System)**

**Floor Isolation Theory:**

Floor isolation systems are incorporated into building design to minimize floor impact noise and airborne sound transmission. A "floated" floor (or rooftop) is supported by resilient mounts installed on the structural floor or rooftop. The design of an effective isolation system is dependent on several factors including:

1. Stiffness and mass of the structural floor,
2. Isolation mount natural frequency and damping characteristics,
3. Airspace height and venting,
4. Sound absorption in the airspace,
5. Sound absorption in the airspace,
6. Control of sound flanking paths.

**Application:**

Kinetics Noise Control’s premier rollout system easily creates an airspace of 1 to 4 inches and incorporates a high-performance resilient decoupler. The isolation material with Model KIP isolators selected and spaced according to design criteria offers major advantages over other systems. Installation labor is substantially reduced, as it is easier to roll out testing with pre-spaced isolators versus measuring for and placing individual isolation pads. Application test data for Sound Transmission Class (STC) and Impact Insulation Class (IIC) are available for several types of isolated flooring assemblies documenting system performance.

**Equipment Rooms**

- Constant System natural frequency across a wide load range.

**Equipment Rooms**

- Kinetics Test Number A2-b and A3

### Kinetics Archetected Sound Isolation System

**KINETICS**

**Acoustic Design**

- 4” Concrete Slab
- 1” Oak Hardwood Floor

**Kinetics Test Number A14-a**

**Kinetics Test Number A15a**

**Kinetics Test Number A16a**

**KINETICS**

**Floor Isolation Theory:**

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**Equipment Rooms**

- Constant System natural frequency across a wide load range.

**Equipment Rooms**

- Kinetics Test Number A2-b and A3

### Kinetics Test Number A14-b

### Kinetics Test Number A13-b

### Kinetics Test Number A14-a

### Kinetics Test Number A2-a

### Kinetics Test Number A11
Installation Sequence:

1) Place Perimeter Board (Model PIB)
2) Roll-out Model RIM and cut as needed
3) Secure junction plates on plywood underlayments
4) Cover with poly layer. Ready to install reinforcement and pour concrete.

Concrete Floated Floor:

Benefits:
- STC 73/SC 70 Tests A2-b and A3
- Greater load capacity at a lower cost
- Can be designed for any load range
- Easy to create 1", 2", 3", and 4" airspaces
- Fast, simple, inexpensive installation
- Factory installation and supervision available
- Model RIM System successfully installed for over 45 years
- Natural frequency constant over a wide load range

Successfully installed for years under concrete floors found in mechanical rooms, studios, bathrooms, and theaters. Kinetics Noise Control’s Model RIM System remains the leading technology for isolating concrete slabs in any floor or roof system requiring sound abatement. An original, Model RIM System consistently provides continuous, high-performance noise control for critical applications. Our pour-in-place floor isolation system incorporates all critical components needed in a top-performing noise control system including: Model KIP isolators fixed in fiberglass batting, Model PIB Perimeter Isolation Board, spray adhesive, plywood junction plates, polyethylene sheeting and tape, and resilient, non-hardening perimeter sealant. Model KIP isolators spaced 12-, 16-, or 24-inches on center are available in different densities allowing for a multitude of load ranges under a single slab while maintaining a constant natural frequency. Factory-trained sales representatives can help designers determine which system to use based on dead and live load requirements. Kinetics Engineering Group will provide design submittals. The fiberglass batting with Model KIP isolators pre-spaced is rolled-up and delivered in poly bags along with the specified accessories to the jobsite.

Installation of Model RIM is quick and easy. Decouple the area being treated by placing Perimeter Isolation Board (Model PIB) around the perimeter of the room. Additionally, Model PIB is used as a resilient break against any other non-isolated elements such as cutout, drains, ductwork, adjacent floors, pipes, and walls. The fiberglass batt with pre-spaced isolation pads is then rolled out over the structural floor. A pouring form is created by placing plywood on top of the isolators, and is held together using junction plates and screws. Two layers of 5/8-mil overlapped and taped at the seams create the pouring form as temporary waterproofing. Concrete reinforcement is installed and then poured in place. As dictated by the designer,utex can move about the floor to complete work in the space without the concrete having been cured to full strength – the floor is already positioned at final design elevation. There is no worry about keeping the floor clear for a second visit to "lift" the slab by an installation crew. The final installation step of the Model RIM System requires removing the Model PIB bear strap and sealing the perimeter of the floating floor with resilient, non-hardening caulk.

Wood Floated Floor:

Benefits:
- STC 66/EC 63 Test A15-a
- Can be designed for any load range
- Easy to create 1", 2", 3", and 4" airspaces
- Fast, simple, inexpensive installation
- Optional channels or nailers can be used for stiffness and increased airspace

Model RIM System wood floated floors are ideally suited for dance studios, lift style microbiomes, recording studios, and any other application where high performance noise control is required and the structure cannot support the weight of an isolated concrete slab. A Model RIM System wood floated floor surpasses performances of continuous underlayments due to the airspace and lower natural frequency created by the Model KIP pads spaced at 12-, 16-, or 24-inches on center. Model RIM System can be supplied to fit any load condition. Installation is easy and quick due to the pre-spaced Model KIP pads. Moreover, the natural frequency remains relatively constant over a wide range of loads, which is common in wood built construction (i.e. a piano in a music studio). Kinetics Noise Control invites comparison between our Model RIM System wood floated floors and any other product available.

Installation of Model RIM System for a wood floated floor is similar to that of the isolated concrete slab. Starting with a level subfloor, a 3/8" thick strip of Model SRP (perimeter isolation board) is adhered to all non-isolated walls (the height of Model SRP is dictated by the height of the finished floor). The rolls of batting with secured pads are rolled out into place. If heavy point loads exist, individual Model KIP pads are then placed per submittal drawings. Typically, two layers of 1/2" plywood are laid (sounds staggered) over the isolation pads, and the finished floor is installed according to the manufacturer’s instructions. Where extra noise control is required, layers of subflooring can be sandwiched between the two layers of 1/2" plywood. This adds mass, an essential requirement to effective noise control – compare sound level A15-a and A15-b. The installation is completed by applying acoustical caulking to the top of the Model SRP board.
Concrete Floated Floor:

Benefits:
- STC 75/IC 63 Test A2-b and A3
- Greater load capacity at a lower cost
- Can be designed for any load range
- Easy to create 1", 2", 3", and 4" airspaces
- Fast, simple, inexpensive installation
- Factory installation and supervision available
- Model RIM System successfully installed for over 45 years
- Natural frequency constant over a wide load range

Installation Sequence:
1) Place Perimeter Board (Model SRP)
2) Roll-out Model RIM and cut as needed
3) Secure junction plates on plywood pouring form
4) Cover with poly layer. Ready to install reinforcement and pour concrete.

Installation of Model RIM System for a wood floated floor is similar to that of the isolated concrete slab. Starting with a level subfloor, a 3/8” thick strip of Model SRP (perimeter isolation board) is adhered to all non-isolated walls (the height of Model SRP is dictated by the height of the finished floor). The rolls of batting with secured pads are rolled out into place. If heavy point loads exist, individual Model KIP pads can be placed per submittal drawings. Typically, two layers of ¾” plywood are laid (seams staggered) over the insulation pads, and the finished floor is installed according to the manufacturer’s instructions. Where extra noise control is required and the structure cannot support the weight of an isolated concrete slab, a Model RIM System wood floated floor surpasses performance of continuous underlays due to the airspace and lower natural frequency created by the Model KIP pads spaced at 12-, 16-, or 24-inches on center. Model RIM System can be supplied to fit any load condition. Installation is easy and quick due to the pre-spaced Model KIP pads. Moreover, the natural frequency remains relatively constant over a wide range of loads, which is common in wood building structures (i.e. a piano in a music studio). Kinetics Noise Control indexes comparison between our Model RIM System wood floated floor and any other product available.

Installation Sequence:
1) Place Perimeter Board (Model SRP)
2) Roll-out Model RIM
3) Secure junction plates on plywood pouring form
4) Apply finish floor per manufacturer instructions

Wood Floated Floor:

Benefits:
- STC 65/IC 63 Test A1-5
- Can be designed for any load range
- Easy to create 1", 2", 3", and 4" airspaces
- Fast, simple, inexpensive installation
- Optional channels or nailers can be used for stiffness and increased airspace

Model RIM System wood floated floors are ideally suited for dance studios, lift style soundrooms, recording studios, and any other application where high performance noise control is required and the structure cannot support the weight of an isolated concrete slab. A Model RIM System wood floated floor surpasses performances of continuous underlays due to the airspace and lower natural frequency created by the Model KIP pads spaced at 12-, 16-, or 24-inches on center. Model RIM System can be supplied to fit any load condition. Installation is easy and quick due to the pre-spaced Model KIP pads. Moreover, the natural frequency remains relatively constant over a wide range of loads, which is common in wood building structures (i.e. a piano in a music studio). Kinetics Noise Control indexes comparison between our Model RIM System wood floated floor and any other product available.
**Acoustical Tests**

**STC 54**
- BC 24

**STC 73**
- BC 70

**STC 72**
- BC 62

**STC 66**
- BC 60

**STC 71**
- IC 64

**STC 68**
- IC 60

**STC 58**
- FIC 45

**STC 56**
- IC 63

**STC 71**
- IC 64

**Noteworthy Projects**

Over our 50-year history, thousands of Kinetics Model RIM systems have been installed successfully under mechanical equipment rooms, gymnasium floors, rooftops, acoustic and fitness centers, theater and cinema venues, recording and broadcasting studios, private residences, loading docks, garage areas, and bowling centers around the world. Below, we've listed just a few of our noteworthy projects.

- University of Illinois Recreation Center
- Boston University Arena Mechanical Room
- 4th & 5th Avenue Barracks Music Rooms
- Florida State University Communications Studios
- Cincinnati State Audio Studio and Control Room
- CNN Studios
- WWII Entertainment Studios
- ESPN Studio East
- Akron Student Union Ballroom
- Nasmith Basketball Hall of Fame Office and Projection Room
- Ramsey County Law Center Gun Range
- National Underground Railroad Freedom Center
- Soldier Field-Chicago Bears Stadium
- Chicago Public Schools 1/2 Floor Renovation
- Elder Shirt Lofts Condominiums
- Gene Siskel Film Center Theater
- Navy Pier USA Lounge
- Lucky Strike Lanes at Gallery Place
- First Baptist Church of West Palm Beach
- Gymnasium and Fellowship Hall
- LA Fitness Centers
- Georgia International Convention Center Rooftop
- AMC Easton 30 at Easton Town Center
- Mevyco Centre Velo 20 Multiplex Theater
- LULU Music and Arts Building Percussion Studios
- Young Professionals Building Hospital
- University of the Ozarks Tutoring Rooms
- Brophy College Preparatory Gymnasium
- University of the Arts Charter School
- Hill Professional Medical Building
- CSU Cal Tech High School

Call us to discuss your requirements for noise control, and learn how to employ the versatile, proven Model RIM System to solve your noise problems.

**Floor Isolation Theory:**

Floor isolation systems are incorporated into building design to minimize floor impact and airborne sound transmission. A "floated" floor (or rooftop) is supported by resilient mounts installed on the structural floor or rooftop. The design of an effective isolation system is dependent on several factors including:

1. **Stiffness** and mass of the structural floor
2. **Isolation mount natural frequency and damping characteristic**
3. **Airspace height and venting**
4. **Mass and composition of the floated floor,**
5. **Isolation mount natural frequency and damping characteristics,**
6. **Control of sound flanking paths.**

Creating airspace between the structural and isolated floors while decoupling the two floors with the appropriate resilient mount effectively controls noise transmission. Maximum effectiveness of floating floor composite construction is achieved when the finished floor is fully isolated from the building structure and non-structural components, such as ductwork and piping. Accordingly, airborne and impact noise transmissions are greatly reduced between the room incorporating the floating floor system and other parts of the building. Additionally, floating floor systems are often used to prevent transmission of vibration and airborne noise from entering into the space in which the floating floor is installed. One such application would be the construction of floating floors for a multiplex theater adjacent to a railway. Kinetics Noise Control floating floor systems offer the largest, variety of isolation mounts to fit specific applications. These include resilient pre-constructed floating floor systems, steel springs, and resonant or natural rubber pads. Acoustical data for Sound Transmission Class (STC) and Impact Insulation Class (IIC) are available for several types of isolated floating/rooftop assemblies documenting system performance.

**Application:**

Kinetics Noise Control’s premier rollaway system easily creates an airspace of 1 to 4 inches and incorporates a high-performance resilient decoupler. The isolation material with Model KIP isolators selected and spaced according to design criteria offers major advantages over other systems. Installation labor is substantially reduced, as it is easier to roll out latex with pre-spaced isolators versus measuring for and placing individual isolation mounts. This feature also ensures that the system will reach the high levels of expected performance. Additionally, floating floor systems are incorporated into building design to minimize floor impact and airborne sound transmission. Maximum effectiveness of floating floor composite construction is achieved when the finished floor is fully isolated from the building structure and non-structural components, such as ductwork and piping. Accordingly, airborne and impact noise transmissions are greatly reduced between the room incorporating the floating floor system and other parts of the building. Additionally, floating floor systems are often used to prevent transmission of vibration and airborne noise from entering into the space in which the floating floor is installed. One such application would be the construction of floating floors for a multiplex theater adjacent to a railway. Kinetics Noise Control floating floor systems offer the largest, variety of isolation mounts to fit specific applications. These include resilient pre-constructed floating floor systems, steel springs, and resonant or natural rubber pads. Acoustical data for Sound Transmission Class (STC) and Impact Insulation Class (IIC) are available for several types of isolated floating/rooftop assemblies documenting system performance.
Acoustical Tests

Noteworthy Projects

Over our 45+ year history, thousands of Kinetics® Model RIM systems have been installed successfully under mechanical equipment rooms, gymnasium floors, rooftops, aerobic and fitness centers, theater and cinema venues, recording and broadcasting studios, private residences, loading docks, gun ranges, and bowling centers around the world. Below, we’ve listed just a few of our noteworthy projects.

- University of Illinois Recreation Center
- Boston University Arena Mechanical Room
- 8th & I Marine Barracks Music Rooms
- Florida State University Communications-Studios
- Cincinnati State Audio and Control Room
- CNN Studio
- WWF Entertainment Studios
- ESPN Studio East
- Akron Student Union Ballroom
- Carnegie Hall
- Ramsey County Law Center Gun Range
- National Underground Railroad Freedom Center
- Soldier Field-Chicago Bears Stadium
- Brooks College Preparatory Gymnasium
- University of the Arts Tutoring Rooms
- General Electric Medical Building
- Rider University Gymnasium
- Brown Camp Loft Condominiums

Essentials:

- Proven effectiveness over the lifetime of an installation.
- Quick installation time, especially compared to "bump-out" methods.
- Particle System that minimizes long-term loads
- Flexible capabilities allow design for any load, from light loads to heavy mechanical equipment rooms.
- When used in conjunction with ceiling and wall separation products, Model RIM is an essential component of "room-within-a-room" sound isolation construction.

Floor Isolation Theory:

Floor isolation systems are incorporated into building design to minimize floor impact and airborne sound transmissions. A “floated” floor (or rooftop) is supported by resilient mounts installed on the structural floor or rooftop. The design of an effective isolation system is dependent on several factors including:

1.) Stiffness and mass of the structural floor, 2.) Isolation mount natural frequency and damping characteristics,
3.) Airspace height and venting, 4.) Presence and composition of the floated floor,
5.) Sound absorption in the airspace,
6.) Control of sound flanking paths.

1. Stiffness and mass of the structural floor:

- Lower the mass and stiffness of the structural floor or rooftop, the easier it is to control the transmission of impact sounds into the building structure.

2. Isolation mount natural frequency and damping characteristics:

- Lower the isolation mount natural frequency, the easier it is to control the transmission of impact sounds into the building structure.

3. Airspace height and venting:

- Higher the airspace height, the easier it is to control the transmission of impact sounds into the building structure.

4. Presence and composition of the floated floor:

- Lower the stiffness and mass of the floated floor, the easier it is to control the transmission of impact sounds into the building structure.

5. Sound absorption in the airspace:

- Higher the sound absorption in the airspace, the easier it is to control the transmission of impact sounds into the building structure.

6. Control of sound flanking paths:

- Lower the sound transmission between the structural and floated floors, the easier it is to control the transmission of impact sounds into the building structure.

Application:

Kinetics Noise Control’s premier rollout system easily creates an airspace of 1 to 4 inches and incorporates a high-performance resilient decoupler. The isolation material with Model KIP isolators incorporates a high-performance resilient decoupler. Acoustical data for Sound Transmission Class (STC) and Impact Isolation Class (IIC) are available for various types of isolated flooring assemblies documenting system performance.

Model RIM (Roll-out Isolation Material) System

Download Model RIM information including three-part specification, installation guidelines, and typical installation drawings at www.kineticsnoise.com/arch/rim.html

STC 127 IIC 72

STC 108 IIC 70

STC 128 IIC 67

STC 109 IIC 65

STC 130 IIC 66

STC 111 IIC 64

STC 132 IIC 68

STC 113 IIC 66

STC 134 IIC 70

STC 115 IIC 68

STC 136 IIC 72

STC 117 IIC 70

STC 138 IIC 74

STC 119 IIC 72

STC 140 IIC 76

STC 121 IIC 74

STC 142 IIC 78

STC 123 IIC 76

STC 144 IIC 80

STC 125 IIC 78

STC 146 IIC 82

STC 127 IIC 80

STC 148 IIC 84

STC 129 IIC 82

STC 150 IIC 86

STC 131 IIC 84

STC 152 IIC 88

STC 133 IIC 86

STC 154 IIC 90

STC 135 IIC 88

STC 156 IIC 92

STC 137 IIC 90

STC 158 IIC 94

STC 139 IIC 92

STC 160 IIC 96

STC 141 IIC 94

STC 162 IIC 98

STC 143 IIC 96

STC 164 IIC 100

STC 145 IIC 98

STC 166 IIC 102

STC 147 IIC 100

STC 168 IIC 104

STC 149 IIC 102

STC 170 IIC 104

STC 151 IIC 106

STC 172 IIC 106

STC 153 IIC 108

STC 174 IIC 108

STC 155 IIC 110

STC 176 IIC 110

STC 157 IIC 112

STC 178 IIC 112

STC 159 IIC 114

STC 180 IIC 114

STC 161 IIC 116

STC 182 IIC 116

STC 163 IIC 118

STC 184 IIC 118

STC 165 IIC 120

STC 186 IIC 120

STC 167 IIC 122

STC 188 IIC 122

STC 169 IIC 124

STC 190 IIC 124

STC 171 IIC 126

STC 192 IIC 126

STC 173 IIC 128

STC 194 IIC 128

STC 175 IIC 130

STC 196 IIC 130

STC 177 IIC 132

STC 198 IIC 132

STC 179 IIC 134

STC 200 IIC 134

STC 181 IIC 136

STC 202 IIC 136

STC 183 IIC 138

STC 204 IIC 138

STC 185 IIC 140

STC 206 IIC 140

STC 187 IIC 142

STC 208 IIC 142

STC 189 IIC 144

STC 210 IIC 144

STC 191 IIC 146

STC 212 IIC 146

STC 193 IIC 148

STC 214 IIC 148

STC 195 IIC 150

STC 216 IIC 150

STC 197 IIC 152

STC 218 IIC 152

STC 199 IIC 154

STC 220 IIC 154

STC 201 IIC 156

STC 222 IIC 156

STC 203 IIC 158

STC 224 IIC 158

STC 205 IIC 160

STC 226 IIC 160

STC 207 IIC 162

STC 228 IIC 162

STC 209 IIC 164

STC 230 IIC 164

STC 211 IIC 166

STC 232 IIC 166

STC 213 IIC 168

STC 234 IIC 168

STC 215 IIC 170

STC 236 IIC 170

STC 217 IIC 172

STC 238 IIC 172

STC 219 IIC 174

STC 240 IIC 174

STC 221 IIC 176

STC 242 IIC 176

STC 223 IIC 178

STC 244 IIC 178

STC 225 IIC 180

STC 246 IIC 180

STC 227 IIC 182

STC 248 IIC 182

STC 229 IIC 184

STC 250 IIC 184

STC 231 IIC 186

STC 252 IIC 186

STC 233 IIC 188

STC 254 IIC 188

STC 235 IIC 190

STC 256 IIC 190

STC 237 IIC 192

STC 258 IIC 192

STC 239 IIC 194

STC 260 IIC 194

STC 241 IIC 196

STC 262 IIC 196

STC 243 IIC 198

STC 264 IIC 198

STC 245 IIC 200

STC 266 IIC 200

STC 247 IIC 202

STC 268 IIC 202

STC 249 IIC 204

STC 270 IIC 204

STC 251 IIC 206

STC 272 IIC 206

STC 253 IIC 208

STC 274 IIC 208