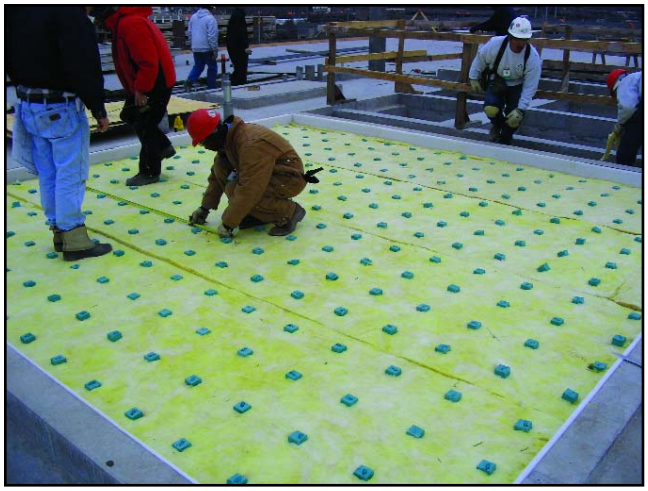
KINETICS Noise Control

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 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.) Mass and composition of the floated floor,
5.) Sound absorption in the airspace
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 offers the largest variety of isolation mounts to fit specific applications. These include resilient pre-compressed fiberglass pads, steel springs, and neoprene or natural rubber pads. Acoustical test data for Sound Transmission Class (STC) and Impact Insulation Class (IIC) are available for several types of isolated floor/ceiling assemblies documenting system performance.

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 batting 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. This system is designed to meet requirements for; load capacity, natural frequency/pad deflection, and acoustical performance.

Wood Floated Floor:

Benefits:

- STC 66/IIC 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

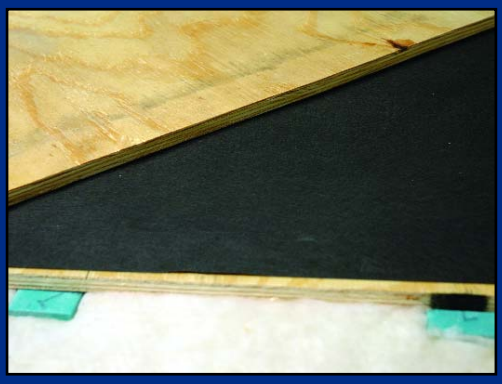
Model RIM System wood floated floors are ideally suited for dance studios, loft style condominiums, recording studios, and any other application where high performance noise control is required and the structure cannot support the weight of an isolated concrete slab. A Model RIM System floated wood floor surpasses performance 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 floor 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 ¾” plywood are laid (seams staggered) over the isolation pads, and the finished floor is installed according to the manufacture’s instructions. Where extra noise control is required, layers of gypsum board can be sandwiched between the two layers of ¾” plywood. This adds mass, an essential requirement to effective noise control – compare sound test A-15-a and A-15-b. The installation is completed by applying acoustical caulking to the top of the Model SRP board.

Installation Sequence:

1) Place Perimeter Board (Model SRP)

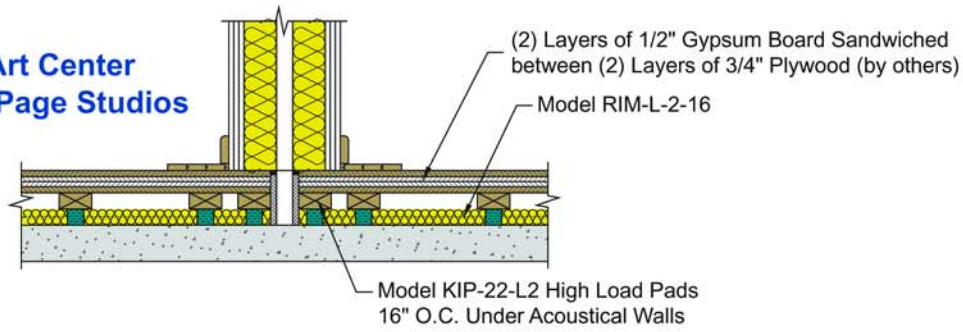
2) Roll-out Model RIM



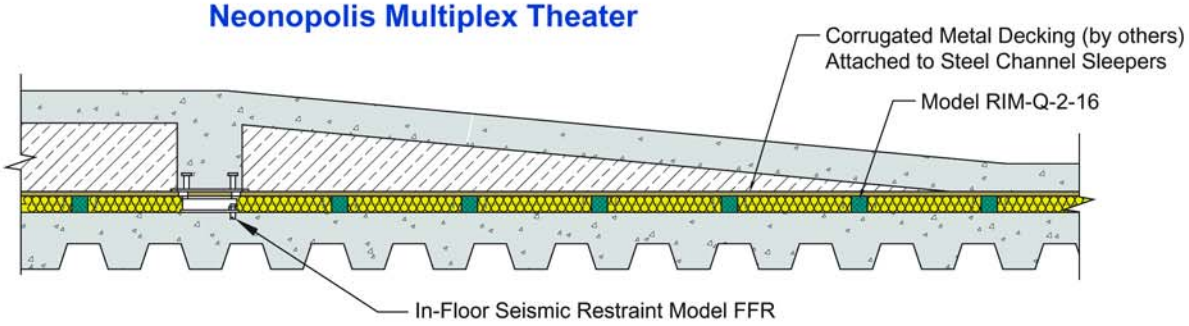
3) Build-up isolated subfloor

4) Apply finish floor per manufacturer instructions

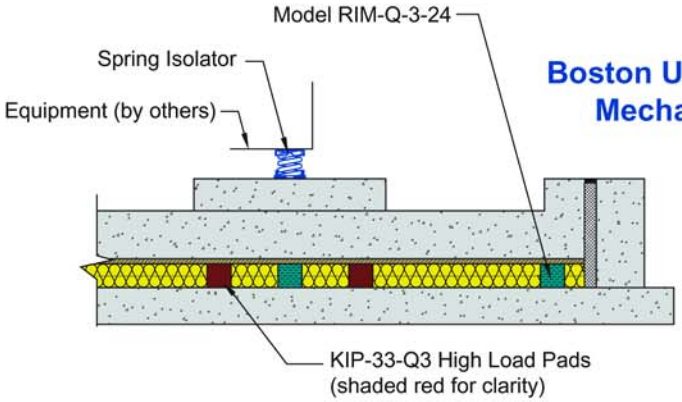
McAinch Art Center
College of DuPage Studios



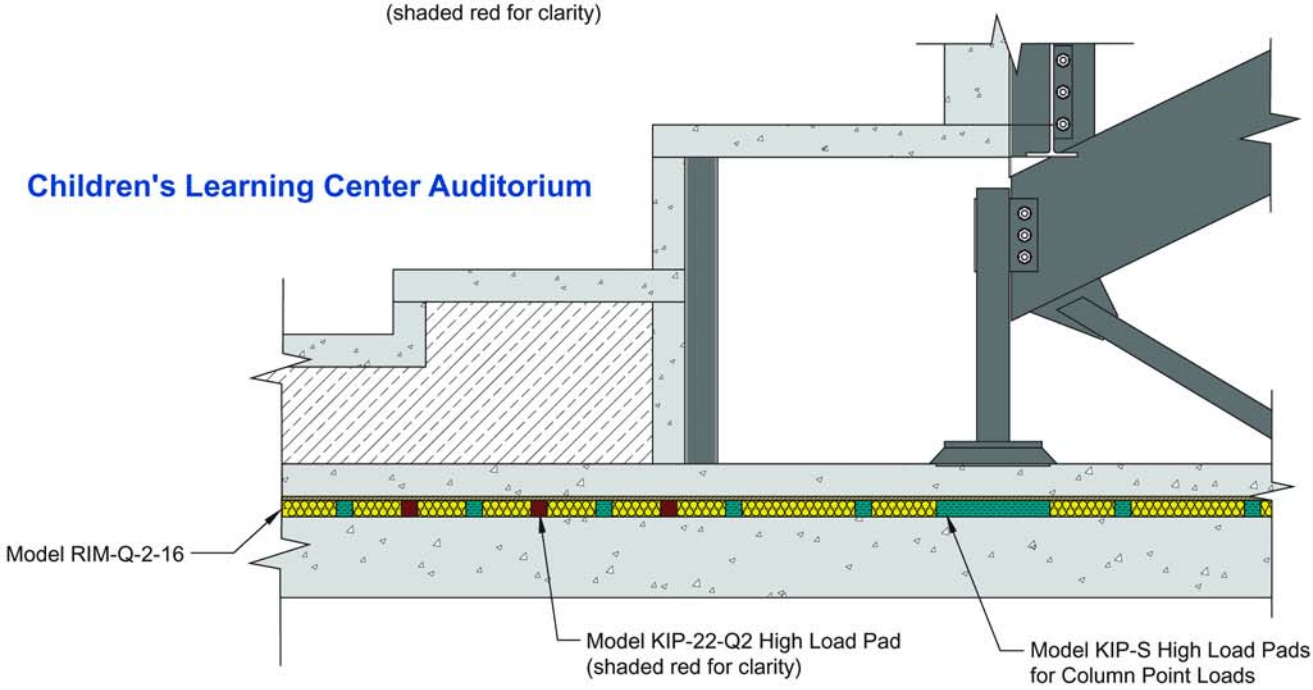
Neonopolis Multiplex Theater



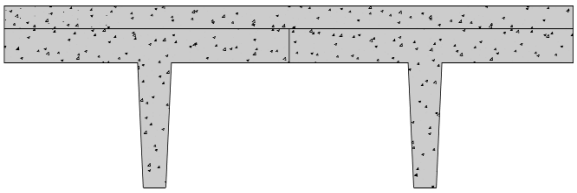
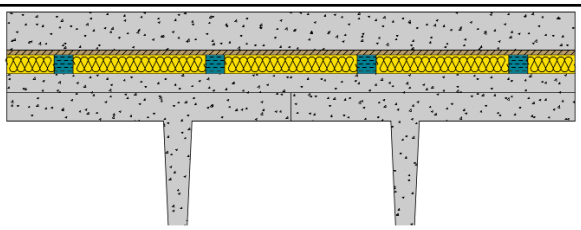
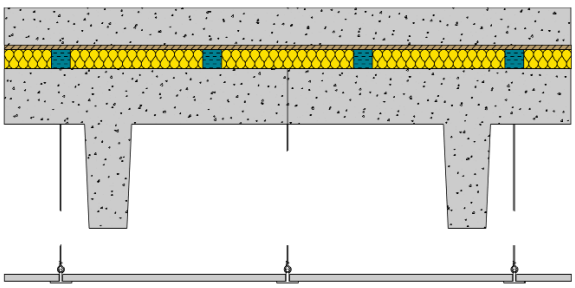
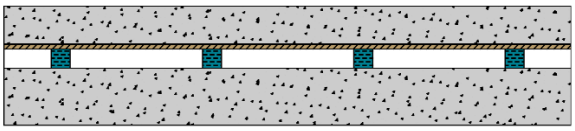
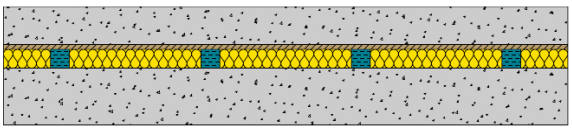
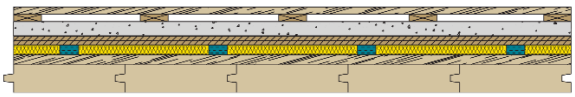
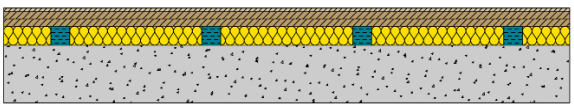
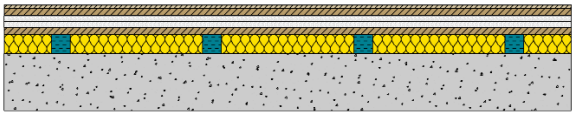
Boston University Arena
Mechanical Room



Children's Learning Center Auditorium



Acoustical Tests

2'' Topping Slab Precast Concrete 14'' Tee	**STC 54**	**IIC 24**	 **Kinetics Test Number A2-a**
4''Concrete Slab 1/2'' Plywood **Kinetics® RIM L-2-12** 2'' Topping Slab Precast Concrete 14'' Tee	**STC 73**	**IIC 70**	 **Kinetics Test Number A2-b and A3**
4'' Concrete Slab 5/8'' Plywood **Kinetics® RIM Q-2-12** 4-7/8'' Concrete Slab with 17'' Tee Drop in Acoustical Ceiling	**FSTC 72**	**FIIC 68**	 **Kinetics Test Number A11**
4'' Concrete Slab 1/2'' Plywood **Kinetics® KIP-22-Q2 Isolation Pads** 6'' Concrete Slab	**STC 68**	**IIC 60**	 **Kinetics Test Number A13-a**
4'' Concrete Slab 1/2'' Plywood **Kinetics® RIM-Q-2-16 Isolation System** 6'' Concrete Slab	**STC 72**	**IIC 62**	 **Kinetics Test Number A13-b**
1'' Oak Hardwood Floor 3'' Subfloor	LOFT	**FIIC 15**	 **Kinetics Test Number A14-a**
3/4'' Oak Hardwood Floor 3/4'' Sleepers 1-1/2'' Gypcrete 2 Layers 1/2'' OSB **1" Kinetics® RIM L-1-16** 1'' Oak Hardwood Floor 3'' Subfloor	LOFT W/ 1" RIM	**FSTC 50**	**FIIC 45**	 **Kinetics Test Number A14-b**
3/8'' Plywood 2 Layers 3/4'' Plywood **Kinetics® RIM I-2-16** 6" Concrete Slab	**STC 66**	**IIC 63**	 **Kinetics Test Number A15-a**
3/8'' Plywood 3/4'' Plywood 2 Layers 5/8'' Drywall 3/4'' Plywood **Kinetics® RIM I-2-16** 6" Concrete Slab	**STC 71**	**IIC 64**	 **Kinetics Test Number A15-b**

Noteworthy Projects

Over our 45-plus 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 Studio and Control Room
- CNN Studios
- WWF Entertainment Studios
- ESPN Studios
- University of Akron Student Union Ballroom
- Naismith Basketball Hall of Fame Office and Projection Room
- Hibbing College Gun Range
- Ramsey County Law Center Gun Range
- National Underground Railroad Freedom Center Mechanical Rooms
- Soldier Field-Chicago Bears Stadium Renovation Rooftop
- Elder Shirt Lofts Condominums
- Gene Siskel Film Center Theater
- Navy Pier USO 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
- Muvico Centro Ybor 20 Multiplex Theater
- LSU Music and Arts Building Percussion Studios
- Peabody Institute Rehearsal Hall and Percussion Room Renovation
- Brophy College Preparatory Gymnasium
- University of the Ozarks Tutoring Rooms
- IU Professional Medical Building Mechanical Room
- Cass Technical High School Mechanical Equipment Rooms
- Brown Camp Loft Condominiums

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.

Essentials:

- Proven effectiveness over the lifetime of an installation.
- Quick installation time, especially compared to “jack-up” methods.
- Constant System natural frequency across a wide load range.
- 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.

KINETICS Noise Control

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Kinetics Noise Control, Inc. is continually upgrading the quality of our products. We reserve the right to make changes to this and all products without notice.

Download Model RIM information including three-part specification, installation guidelines, and typical installation drawings at **www.kineticsnoise.com/arch/rim.html**. *Call the factory at 800-959-1229 if needing additional information; ask for Architectural sales. Purchase Model RIM and accessories through your local sales representative* (**www.kineticsnoise.com/replocation.asp**).