Acoustical Tests

3” Subfloor

KINETICS

1”

2 Layers 1/2” OSB

3/4” Sleepers

3/4” Oak Hardwood Floor

3” Subfloor

1” Oak Hardwood Floor

3-1/2” Wood Deck Subfloor

KINETICS

2 Layers 3/4” Plywood

3/8” Plywood

6” Concrete Slab

KINETICS

1/2” Plywood

Precast Concrete 14” Tee

2” Topping Slab

KINETICS

1/2” Plywood

4” Concrete Slab

2 Layers 5/8” Gypsum Board

3-1/2” Fiberglass Insulation

Drywall Furring Channel

Cold Rolled Channel (CRC)

KINETICS

KINETICS

4” Concrete Slab

6” Concrete Slab

KINETICS

1/2” Plywood

6” Concrete Slab

3/4” Plywood

2 Layers 5/8” Drywall

3/4” Plywood

3/8” Plywood

6” Concrete Slab

KINETICS

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.

Noteworthy Projects

Over 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
- BN & I Marine Barracks Music Rooms
- Florida State University Communications Studios
- Cincinnati State Audio-Video and Control Studio
- CNN Studios
- WWP Entertainment Studios
- ESPN Studios
- University of Akron Student Union Ballroom
- NesenSmith Basketball Hall of Fame Office and Production Room
- Hocking College Gun Range
- Ramsey County Law Center Gun Range
- National Underground Railroad Freedom Center
- Teddy Roosevelt Reading Room
- Soldier Field-Chicago Bears Stadium Renovation
- Elder Shirt Lofts Condominiums

Essentials

- Proven effectiveness over the lifetime of an installation
- Constant System natural frequency
- Fixed-mount installation on the structural floor only
- Maximum effectiveness of floating floor composite system

Floor Isolation Theory

Floor isolation systems are incorporated in building design to prevent transfer of noise and airborne-transmissions. A “floated” floor (or rooftop) is supported resiliently mounted on the structural floor or rooftop. The design of an effective 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. Rises and composition of the floated floor.
5. Sound absorption in the airspace.
6. Control of sound radiating 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 floated floor is installed.

Manufacturing facilities in Ohio, USA; California, USA; and Ontario, Canada. Sales offices world-wide.

Kinetics Noise Control, Inc. is continually improving the quality of our products. We reserve the right to make changes to this and all products without notice.
RIM for Concrete Floated Floors

Successfully installed for years under concrete floors found in mechanical rooms, studios, ballrooms, fitness centers, and theaters, Kinetics Noise Control’s RIM System remains the leading formwork technique for isolating concrete slabs in any floor or roof system requiring sound abatement. An original, RIM System consistently provides continuous, high-performing 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: KIP isolators fixed in fiberglass batting, PIB Perimeter Isolation Board, acrylic, plywood junction plates, polyethylene sheeting and tape, and resilient, non-hardening perimeter sealant. 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 KIP isolators prespaced is rollup and delivered in poly bags along with the specified accessories to the jobite.

Benefits

- 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
- RIM System successfully installed for over 45 years
- Natural frequency constant over a wide load range

Installation Sequence

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

Concrete reinforcement is installed and then concrete poured in anchoring rebar bent to concrete edges. The final installation step of the RIM System requires removing the concrete reinforcement and pour concrete.

RIM for Wood Floated Floors

RIM System wood floated floors are ideally suited for dance studios, lift style condominiums, recording studios, and other applications where high performance noise control is required in combination with a lower profile, light weight assembly. A RIM System floated wood floor surpasses performance of commonly used underlayment due to the airspace and lower natural frequency created by the KIP pads spaced at 12", 16", or 24"-inches on center. RIM System can be supplied to fit any load condition. In the cases of heavy weight drops like those seen in fitness centers, please consider that lightweight composite floors can prove insufficient standing up to shock loads. Damage to the lightweight floor and isolators can occur depending on the impact/shock loads. Contact Kinetics for guidance when designing these projects.

Benefits

- Can be designed for any load range
- Easy to create 1", 2", 3", and 4" airspaces
- Fast, simple, inexpensive installation
- Optional channels on resilient can be used for stiffness and increased airspace

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

Concrete reinforcement (SRP board) is adhered to all non-isolated walls (the height of 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 KIP pads are then placed per submittal drawings. Typically, two layers of 3/4" plywood are laid (seams staggered) according to the manufacturer’s instructions. While two layers of 3/4" plywood often proves suitable for most installations, the KIP pads can be omitted when insufficient standing up to shock loads. Damage to the lightweight composite floors can prove insufficient standing up to shock loads. Contact Kinetics for guidance when designing these projects.

Benefits

- Can be designed for any load range
- Easy to create 1", 2", 3", and 4" airspaces
- Fast, simple, inexpensive installation
- Optional channels on resilient can be used for stiffness and increased airspace

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
Installation Sequence

1) Place Perimeter Board (Model SRP)

2) Pour the RIM and cut as needed

3) Secure junction plates on plywood as needed

4) Create with poly layer. Ready to insert reinforcement and pour concrete.

RIM for Concrete Floated Floors

Successfully installed for years under concrete floors found in mechanical rooms, studios, ballrooms, fitness centers, and theaters, Kinetics Noise Control’s RIM System remains the leading formwork technique for isolating concrete slabs in any floor or roof system requiring sound abatement. An original, RIM System consistently provides continuous, high-performing 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: KIP isolators fixed in fiberglass batting. P/B Perimeter Isolation Board, acrylic adhesive, plywood junction plates, polyethylene sheathing and tape, and resilient, non-hardening perimeter sealant. 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 consistent 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 KIP isolators prepressured is rollup and delivered in poly bags along with the specified accessories to the jobsites.

Benefits

- 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
- RMS System successfully installed for over 45 years
- Natural Frequency constant over a wide load range

Installation Sequence

Installation of RIM is quick and easy. Deconstruct the areas being treated by installing Perimeter Isolation Board (P/B) around the perimeter of the room. Additionally, P/B is used as a resilient barrier between any other non-isolated elements such as ducts, data, adjacent floors, pipes, and walls. The fiberglass batt and pre-spaced isolation pads are then rolled-out and placed on the subfloor with KIP isolators spaced at 12, 16, or 24-inches on center. The structural floor A-pouring form is created by placing plywood on top of the isolation, and in held together using junction plates and screws. Two layers of 6-mil poly overlapped and taped at the seams cover the pouring form as temporary waterproofing. Concrete reinforcement is installed and then concrete poured into place. If heavy point loads exist, individual KIP isolators spaced at 12, 16, or 24-inches on center are available for a second visit to “lift” the slab by an installation crew.

RIM for Wood Floated Floors

RIM System wood floated floors are ideally suited for dance studios, lift style condition, recording studios, and other applications where high performance noise control is required in conjunction with a lower profile, light weight assembly. A RIM System floated wood floor surpasses performance of common, unsupported subfloors due to the airspace and lower natural frequency created by the KIP pads spaced at 12-, 16-, or 24-inches on center. RIM System can be supplied to fit any load condition. In the cases of lightweight composite floors can prove insufficient stand-up shock to shock loads. Damage to the lightweight floor and isolators can occur depending on the impact/shock loads. Contact Kinetics for guidance when designing these projects.

Benefits

- Can be designed for any load range
- Easy to create 1", 2", 3", and 4" airspaces
- Fast, simple, inexpensive installation
- Optional channels on isolators can be used for stiffness and increased airspace

Installation Sequence

Installation of 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 SRP (perimeter isolation board) is adhered to all non-isolated walls (the height of the SRP is dictated by the height of the finished floor). The ratio of baling with secured pads is rolled-out and placed over the isolation pads, and the finished floor is installed according to the manufacturer’s instructions. KIP isolators spaced at 12, 16, or 24-inches on center. The height of SRP is dictated by the thickness of the finished floor. RIM System can be supplied to fit any load condition. In the cases of free floating composite floors, a wood floated floor surpasses performance of continuous, high-performing noise control is required in conjunction with a lower profile, light weight assembly. A RIM System floated wood floor surpasses performance of common, unsupported subfloors due to the airspace.
Installation Sequence

RIM for Concrete Floated Floors

Successfully installed for years under concrete floors found in mechanical rooms, studios, ballrooms, fitness centers, and theaters, Kinetics Noise Control’s RIM System remains the leading formwork technique for isolating concrete slabs in any floor or roof system requiring sound abatement. An original, RIM System consistently provides continuous, high-performing 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: KIP isolators fixed in fiberglass batting. PIB Perimeter Isolation Board, acrylic adhesive, plywood junction plates, polyethylene sheeting and tape, and resilient, non-hardening perimeter sealant. 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 subroutine. The fiberglass batting with KIP isolators pre-swatched is rolled up and delivered in poly bags along with the specified accessories to the jobites.

Benefits

- 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
- Optional channels or nailers can be used for stiffness and mass, which aids in load distribution

Installation Sequence

Installation of RIM is quick and easy. Decouple the areas being treated by installing Perimeter Isolation Board (PIB) around the perimeter of the room. Additionally, PIB is used as a resilient layer against any other non-isolated elements such as curbs, skylights, adjacent floors, pipe, and walls. The fiberglass batting with pre-swatched isolators is then rolled out over the isolation pads, and the finished floor is installed according to the manufacturer’s instructions. While two layers of 3/4” plywood often proves suitable for most isolated concrete slabs, there are instances where three layers of 3/4” plywood may be required (where the height of the RIM System is increased to the height of the finished floor). The ratio of balancing with secured pads are rolled into place. The 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 subroutine. The fiberglass batting with KIP isolators pre-swatched is rolled up and delivered in poly bags along with the specified accessories to the jobites.

Benefits

- Can be designed for any load range
- Easy to create 1”, 2”, 3”, and 4” airspaces
- Fast, simple, inexpensive installation
- Option channels or nailers can be used for stiffness and mass

Installation Sequence

RIM for Wood Floated Floors

RIM System wood floated floors are ideally suited for dance studios, lift style common areas, recording studios, and other applications where high performance noise control is required in conjunction with a lower profile. Light weight assembly. RIM System floated wood floor surpasses performance of common subfloor underlayments due to the airspace and lower natural frequency created by the KIP pads spaced at 12-, 16-, or 24-inches on center. RIM System can be supplied to fit any load condition. In the case of heavy weight drops like those seen in fitness centers, please consider that lightweight composite floors can prove insufficient when shock loading to st尤其上下. Damage to the lightweight floor and isolators can occur depending on the impact/shock loads. Contact Kinetics for guidance when designing these projects.

Benefits

- 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

Installation Sequence

Installation of 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 SRP (perimeter isolation board) is adhered to all non-isolated walls (the height of the SRP is dictated by the height of the finished floor). The rolls of balancing with secured pads are rolled into place. The KIP isolators spaced 12-, 16-, or 24-inches on center. RIM System can be supplied to fit any load condition. In the case of heavy weight drops like those seen in fitness centers, please consider that lightweight composite floors can prove insufficient when shock loading to st especially st尤其上下. Damage to the lightweight floor and isolators can occur depending on the impact/shock loads. Contact Kinetics for guidance when designing these projects.

Benefits

- 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
Acoustical Tests

Noteworthy Projects
Over our 45-plus year history, hundreds 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.

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• Hibbing College Gun Range
• Ramsey County Law Center Gun Range
• National Underground Railroad Freedom Center Mechanical Rooms
• Soldier Field-Chicago Bears Stadium Renovation
• Elder Shirt Lofts 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.

KINETICS™ RIM Roll-Out Floor Isolation System

Essentials
• Proven effectiveness over the lifetime of an installation
• Constant System natural frequency
• Field-maintains overall design for any load; from light to heavy floor-weights to heavy mechanical equipment rooms
• When used in conjunction with ceiling and wall separations, RIM is an essential component of "room-within-a-room" sound isolation construction.

Application
Kinetics Noise Control’s premier rollout system easily creates an airspace of 1 to 4 inches and incorporates a high-performance resilient deck. The isolation material with KIP isolators selected and spaced according to design criteria offers major advantages over other systems. Installation labor is substantially reduced, and 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/low deflection, and acoustical performance.

Floor Isolation Theory
Floor isolation systems are incorporated into building design to provide effective transmission control of airborne and 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 system natural frequency
3. Airspace height and venting
4. Resilient and composition of the floated floor
5. Sound absorption in the airspace
6. Control of sound reflecting paths

Creating airspace between the structural and isolated floors while decoupling the two floors with the appropriate resilient mount effectively controls 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.