

Isolating Floors Theory:

Sound Control Floor Systems encompass a wide range of resilient composite constructions designed for varying acoustical criteria. An isolated floor, commonly called a "floating" floor, is used to minimize airborne and impact-generated sound transmission through the floor/ceiling assembly. Depending on application, the floating floor may be supported on resilient pads, a continuous resilient underlayment, or spring mounts. The perimeter of the floor is isolated with a resilient isolation board to prevent sound flanking.

Concrete floating floors:

Concrete floating slabs are used where mass is needed to boost low frequency noise reduction. This creates an airspace between a poured non-structural slab and the subfloor below. Selection of the appropriate isolation material is based on the application. Both formwork systems and "jack-up" systems using neoprene or fiberglass pads produce relatively high STC and IIC ratings when compared to thinner continuous underlayment assemblies. Where heavy impacts from sport and fitness activity are a concern, a spring liftslab floor system is often utilized.

[Kinetics Model RIM, roll-out isolation material](#), is a versatile formwork floating floor system used for many applications. The RIM system will produce high STC (airborne noise) and IIC (Impact noise) ratings by "floating" a concrete slab that is poured in place over plywood or metal deck formwork. The RIM system consists of 1-inch to 4-inch thick [Kinetics Isolation Pads, Model KIP](#), and a sound-absorptive fiberglass blanket. These pads are available in a wide range of densities and load capacities, that can be used to fit any load requirements. A major benefit of Model RIM is that installation is very economical, and the floor can be used immediately after the concrete has cured.



[Model FC Floating Channel floor system](#). Kinetics Isolation Pads, Model KIP, are used under steel channels in order to provide a rigid base. The channel provides a framing element for securing plywood or metal decking as part of this formwork isolation assembly. The pads are bonded to the underside of the channel.



The [Model FLM liftslab system](#) is an optional method for isolating a concrete slab on resilient neoprene or fiberglass pads by raising or "jacking" up the floor after the concrete cures. This method, like the RIM system, creates a typical 1-inch to 4-inch air space; however, the sound absorbing fiberglass blanket is excluded.

[Model LSM spring liftslab floor systems](#) are often used in gymnasiums and fitness rooms to control heavy impacts. Higher deflection springs isolate the concrete slab against lower forcing frequencies and minimize energy transfer into the structural floor. The lower natural frequency of these isolators is also effective for structure-borne vibration isolation.

High performance floated wood and composite floors:

The formwork systems mentioned above are readily adapted for use under lighter weight composites. These systems are used when the subfloor will not support the weight of a concrete slab, meet floor elevations or when concrete is unnecessary. While these systems do not benefit from the added mass of concrete, they are effectively employed in a wide range of applications.

[Kinetics Model RIM, roll-out isolation material](#), The RIM system consists of 1-inch to 4-inch thick [Kinetics Isolation Pads, Model KIP](#), and a sound-absorptive fiberglass blanket.

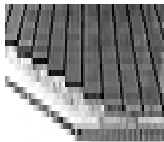
Plywood and plywood/gypsum board composites are layered on top of the pads to provide a subfloor to which the finished floor can be installed.



[Model FC Floating Channel floor system](#). Kinetics Isolation Pads, Model KIP, are used under steel channels in order to provide a rigid base. The pads are bonded to the underside of the channel, which becomes a framing element for securing plywood. Model FC is often used on stage and dance floors with the channel legs acting as a deflection limit stop.

Continuous sound control underlayments:

Low-profile underlayments are most typically used in multi-family residential applications. Hard finish floors like wood and tile create higher levels of impact generated noise in spaces below. Occupant complaint is not uncommon and class action litigation has increased awareness among developers. Effective sound control underlayments exceed building code requirements for IIC (Impact Insulation Class) and STC (Sound Transmission Class) and minimize occupant complaints.



[Model SR Floorboard](#) has been lab and field tested for superior impact noise (IIC) ratings under wood, tile, and stone finish floor assemblies. SR Floorboard is highly ranked by acoustical engineers who have compared acoustical data, both lab and field tests, to evaluate expected performance.



[Model Soundmatt](#), (5/16") and [LP Soundmatt](#) (3/16") are used effectively in lower profile assemblies where the overall finish floor height is especially critical. Both are acoustical lab tested with proven results for IIC, Impact Isolation Class, and STC, Sound Transmission Class, performance.