

TVS SPRING JACK UP FLOOR

Product Description

Floating floor and room-within-a-room structures represent state-of-the-art technology to control vibration and structure-borne noise within buildings. This technology is used to separate TV, broadcasting or recording studios, recital & rehearsal rooms as well as theatres, discos, fitness studios and HVAC areas dynamically and acoustically from the surrounding environment.

At system natural frequencies, ranging from 7Hz down to 2.5Hz, TVS Acoustics steel spring elements provide the most efficient solutions in protecting highly sensitive areas from mechanical vibration and structure-borne noise.

Mitigation of structure-borne noise and vibration starts at frequencies as low as 4Hz thus giving the TVS Acoustics system an advantage over elastic pad material.



Basic Spring Element Systems

TVS Acoustics offers a variety of spring element systems for floating floors. In addition to a large number of steel springs of different elasticity and load capacity there are several element systems available designed for a wide range of applications:

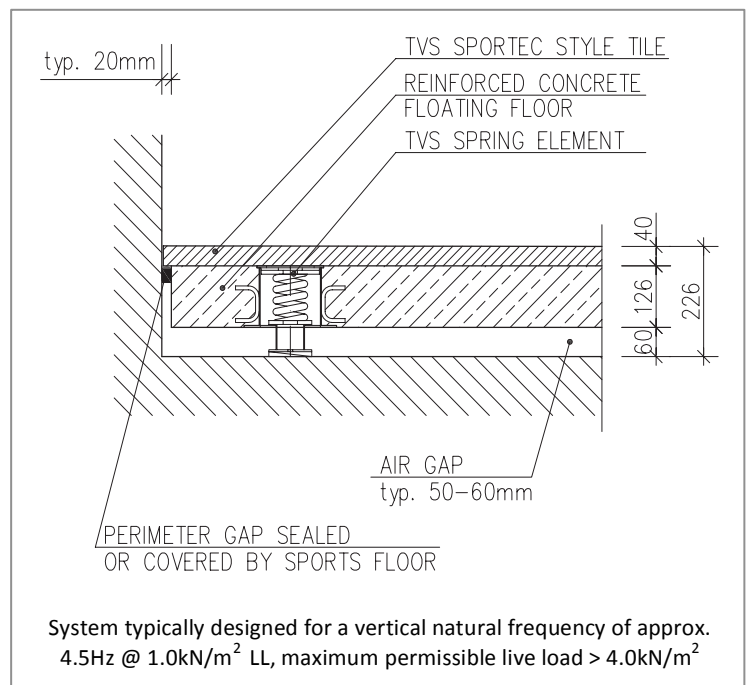
1. Embedded 'jack up' Spring Elements

Embedded in the concrete slab, jack-up type spring elements are a preferred choice in terms of simplified installation, high flexibility/re-adjustability and low system height.

2. Supporting Spring Elements

Supporting type spring elements arranged below the floating slab are designed to carry high and concentrated loads and can easily be adjusted to the actual loads if required post installation.

All spring elements can be provided with additional damping thus further improving the system's damping and attenuation performance.



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Supporting Spring Units

Supporting spring elements are simply arranged between the isolated and the non-isolated structure. For supporting spring elements, too, a broad range of different types of springs are available to provide system natural frequencies as low as 2.5 to 7Hz resulting in excellent vibration and structure-borne noise mitigation performance.

Embedded 'jack-up' Spring Elements

This floating floor spring element system* offers the following design features:

- A range of different types of springs are available to provide system natural frequencies as low as 2.5Hz up to 7Hz.
- One of the major benefits of this TVS Acoustics spring system is its accessibility from above, which allows for subsequent levelling of the floating slab, as well as spring replacement with springs of differing capacities.
- In order to achieve uniform spring deflections, elements of different type and load capacity can be combined in a system layout to allow for different slab loadings.
- Slab construction and the installation of the springs are very simple. Apart from a bond-breaking plastic layer, there is usually no need for any bottom formwork. The slab is lifted directly from the substructure after the concrete has achieved its design strength.
- The jack-up and adjustment facilities are an integral part of every element.
- The elements can be equipped with a damping system in order to stabilize the floating slab and to further improve attenuation capacity at higher frequency levels.

*European Patent

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