Sylomer® Demonstration kit for airborne / structure borne noise (REF:760065)



When you want to soundproof an element that generates noise and vibrations, you have to have in mind that the noise is transmitted through the air (air transmission) and also through solidarity (structural transmission). This is why, in order to avoid noise transmission and achieve optimum insulation, we must have in mind all the rigid connections to the structure. In this way, as far as possible, we will have to avoid these rigid joints or in the case that it is not possible to isolate them with the use of anti-vibration mounts or some type of anti-vibration material such as Sylomer®.

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Technical characteristics

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In this video you will be able to observe with a music box, a metallic instrument that generates vibrations by means of a mechanical excitation, the effects of the transmission of airborne and structural noise, and also how it is possible to obtain an optimal isolation of the same ones with the correct use of antivibration mounts.

First of all, you will be able to observe how when you put the music box directly on the table (structural transmission) the noise is very strong. In this case there is no type of antivibration mounts, so all the vibration generated by the music box is transmitted directly to the structure without any isolation. This structure amplifies the noise by increasing the noise level in the room.

In the second case, it's observed how by putting on a cover to reduce airborne noise, the structure continues to amplify the noise and the sound level in the room is not reduced. Many people tend to think that noise is only transmitted through the air (sound pressure). However, this example allows us to confirm the importance of the structural transmission of noise.

In the third case, it's shown that when the music box is placed on a base that does not contain anti-vibration mounts, the noise is still transmitted structurally. This is mainly due to the fact that the vibrations generated by the music box do not suffer any energy loss when propagating through the structure.

In the fourth case, the music box (the source of the vibrations) is placed on correctly dimensioned anti-vibration mounts made by Sylomer®, from the Austrian company Getzner. The elastic suspension of the music box significantly reduces the vibration transmitted to the structure (insulation), thus reducing the noise level in the room. Furthermore, the installation of a cover over the music

In the fifth and last case, we will show the effect of an acoustic bridge. We have installed the music box with correctly dimensioned anti-vibration mounts and a correct covering for airborne sound insulation, but we have forgotten a rigid point between the music box and the structure. This rigid connection acts as a vibratory transmission bridge, which significantly reduces the total isolation of the music box as we can see in the example.

For more information please do not hesitate to contact our application technicians . They will answer any questions you may have.

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