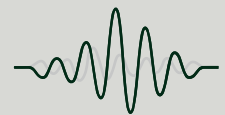




**BUILD
BIGGER
SPACES**



**REDUCE
BUILD
COSTS**



**REMOVE
VIBRATION
FROM ANY FLOOR**

Why use floor vibration control?

Do you have an existing floor that vibrates too much and needs a quick and easy fix?

Do you want to build new floors that are economic and with low carbon footprint?

Do you want to have lightweight floors with excellent vibration performance for residences, offices, healthcare facilities, laboratories and many other uses?

Our new active vibration control technology is an elegant solution to tackle these challenges. It is a radically different approach to control vibrations in existing and new buildings.



What are the challenges?

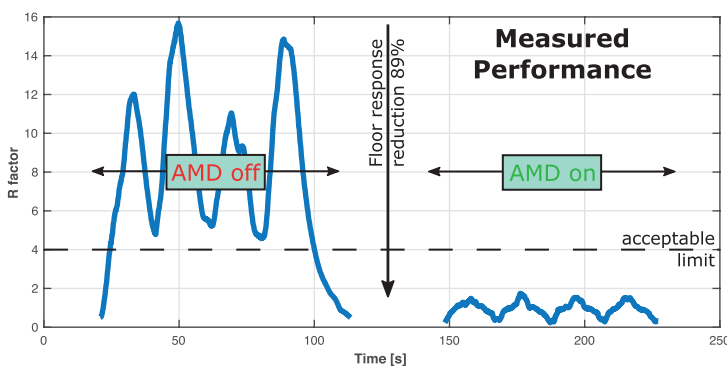
Modern construction techniques allow engineers to design increasingly long span and slender floors using lightweight and sustainable materials. However, a key drawback is that such floors can suffer problematic vibrations from people walking around. This reduces the comfort, wellbeing and productivity of occupants.

Floor vibrations have traditionally been controlled by:

- Adding more material to reduce vibrations; this is expensive, wasteful and unsustainable
- Using passive technologies such as constrained layer damping and tuned mass dampers to control vibrations; these are usually not effective enough

Our active vibration control technology is a major engineering breakthrough that enables floors to be both structurally efficient and to have excellent vibration performance.

The plot below shows actual performance of AMD technology in an office building in the UK. The addition of a single AMD reduced vibrations by 89%, instantly converting the floor performance from highly problematic to excellent and well within accepted limits.



How can FSD Active Ltd help?

We are world-renowned experts in building floor vibration and installed the world's first active control system for a concert venue. Our floor AMD uses proprietary control software and optimised components to create a cost-effective vibration control product, which is small, easy to use and reliable.

Schemes for floor designs using AMDs can be simulated and explored by any practising engineer. We can provide sophisticated analysis services for more challenging projects. We can then carry out detailed AMD system design, manufacture, installation and commissioning.

What is Active Control?

Active Mass Dampers (AMDs) are a new method of reducing floor vibrations by effectively dampening them out with a motor.

This is done by measuring the vibrations as they occur and instantly generating a force that acts on the structure to cancel them out.

The technology is similar to noise cancelling headphones, but on a much larger scale.

- Excellent Vibration Reductions**
Patent pending technology delivers up to 10x vibration reduction over a broad range of floor vibration frequencies
- Low Cost**
Whole life cost considerably lower than passive TMDs or increasing structural sizes to control vibrations; leasing options available to minimise up-front capital expenditure
- Low Mass**
One AMD unit for every 50-250m² of floor area; at least 10x less mass needed than for passive tuned mass dampers
- Reduced Carbon Footprint**
Up to 50% weight reduction for floors where size and shape are dictated by vibrations
- Enabling Longer Spans**
For efficient composite, prestressed, cross laminated timber and lightweight modular flooring systems
- Online Operation**
Continuous status and performance monitoring; automatic maintenance callouts covered by service or lease agreements
- Compact Size**
Dimensions 400mm (height) x 600mm x 230mm; simply bolt on 60kg device to the floor
- Robust, Reliable and Safe**
Robust, Reliable and Safe: To be UKCA and CE certified with proprietary control algorithms developed to maximise performance

