

Thornton Tomasetti



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Thornton Tomasetti, FSD Active Sign Strategic Collaborative Agreement Around Innovative Vibration Damping Technology

(New York, N.Y. – June 14, 2022) – [Thornton Tomasetti](#) and [FSD Active Limited](#) (FSDA), a UK-based high-tech start-up specializing in active control solutions for floor vibrations, announce the signing of a strategic collaborative agreement. The relationship formalizes Thornton Tomasetti's long-term interest in and support for FSDA's CALM@FLOOR active mass damping (AMD) technology. CALM@FLOOR is a highly innovative product for controlling building floor vibrations and enabling more sustainable structures.

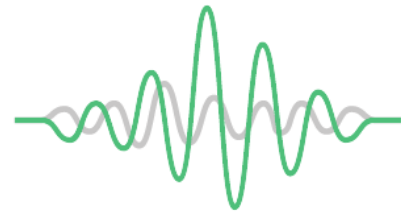


CALM@FLOOR is the result of more than 15 years of academic and industrial research, as well as significant public and private investment. Active mass damping systems reduce floor vibrations by effectively damping them with a motor. Each lightweight and compact unit can fit on or under building floors and provide a potential reduction in vibration by up to a factor of 10. This allows engineers to design modern, efficient and sustainable buildings with versatile long-span floors and greatly reduced embodied carbon.

"CALM@FLOOR is one of the most exciting vibration control products to emerge in the last 20 years," Thornton Tomasetti

Principal Michael Wesolowsky, a leader in the firm's acoustics and vibration group, said. "It is the world's first commercially available mechatronics device specifically developed to replace structural materials as a solution for excessive resonant floor vibrations. This is crucial as vibration serviceability has become the governing design criterion for many modern open-plan, long-span commercial floors, determining the size and shape of millions of square feet that Thornton Tomasetti designs every year in the US and around the world."

Using the same principle as noise cancelling headphones, but on a much larger scale, CALM@FLOOR continually monitors floor vibrations and instantly generates a force that acts on the structure to cancel them out. "Field trials have demonstrated that CALM@FLOOR provides additional floor damping ratio, typically of the order of 10-15%, which is far beyond anything else on the market," FSDA Founder and Director Aleksandar Pavic said. "It is also more cost-effective than other passive technologies or increasing structural sizes to control vibrations."



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Additionally, CALM®FLOOR enables the use of modern and environmentally friendly lightweight floor decking solutions, such as cross-laminated timber, wider utilization of which is often hampered by potentially excessive walking-induced vibration.

“Throwing huge amounts of steel and concrete at resonant vibration problems goes against all the principles of lean design and is woefully wasteful in the context of today’s climate emergency,” FSDA Founder and CEO Paul Reynolds said. “CALM®FLOOR also provides an effective and convenient solution to previously intractable vibration problems. Its flexibility makes CALM®FLOOR very easy to install and move around to the floor area where walking-induced vibration control is needed.”

Typical applications of CALM®FLOOR include commercial offices, retail, airports, education, research and healthcare. The damping system is particularly suitable for change-of-use applications where building flexibility is critical. The first commercial installations of CALM®FLOOR units are scheduled in the next quarter.

About Thornton Tomasetti

Thornton Tomasetti applies engineering and scientific principles to solve the world’s challenges – starting with yours. An independent organization of creative thinkers and innovative doers collaborating from offices worldwide, our mission is to bring our clients’ ideas to life and, in the process, lay the groundwork for a better, more resilient future. For more information, visit www.ThorntonTomasetti.com or connect with us on [LinkedIn](#), [Twitter](#), [Instagram](#), [Facebook](#), Vimeo and [YouTube](#).

About FSD Active Limited

FSD Active is a world leader in the development and commercialisation of active mass damping devices for floor vibrations. We believe we can achieve unparalleled performance, efficiency and sustainability of buildings and civil structures through the use of advanced active technologies. For more information visit fsdactive.com or connect with us on [LinkedIn](#) and [Twitter](#).