TUNED MASS DAMPERS
BRIDGES, FLOORS, STADIUMS & ROOFS

motioneering

Easy Integration

Motioneering TMDs are easy to incorporate into a structure. Connection details are standardized. Designs are modular, so TMDs arrive on site in one piece. Simply lift, set, level, and bolt-in-place. A range of styles are available.

Proven Performance

Motioneering has over 25 years of experience designing and building TMDs. Our solutions are always performance tested and proven to perform in the as-built structure with 100% reliability.

Low Profile Configuration
Horizontal Orientation

Suitable for under-slab mounting, or for longitudinal mounting between girders

Low Frequency Upright Configuration
Horizontal Orientation

Suitable for beam web-mounting, or for flange mounting.

Upright Configuration
Vertical Orientation

Suitable for beam web-mounting, or for flange mounting.

Contact Us

Reach out to learn more about the work we do, and how we can support the technical and business success of your next project.

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SAMPLE APPLICATIONS
BRIDGES, FLOORS, STADIUMS & ROOFS

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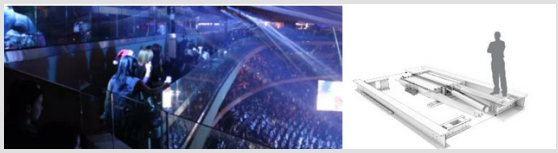
OTTAWA AIRPORT PARKWAY BRIDGE
Ottawa, ON, Canada

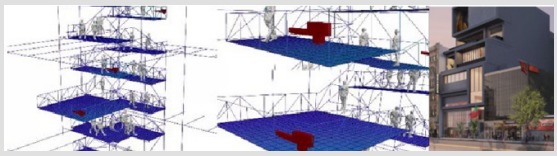
Motioneering TMDs are mounted on the girder webs of this bridge spanning the Ottawa Airport Expressway, to control vertical vibrations from walking and running activities. The TMDs are concealed from view within a weatherproof enclosure.

MADISON SQUARE GARDEN
New York City, NY, USA



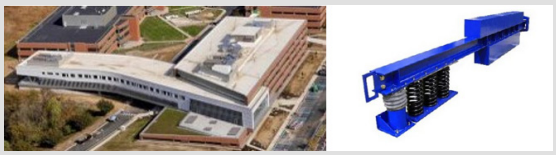
Motioneering TMDs are used to control vertical floor vibrations in the upper seating areas of the arena to ensure occupant comfort due to lively crowds during concerts and sporting events. A total of ten TMDs are installed within the structure under these floors.

STUDIO MUSEUM STAIRCASE
Harlem, NY, USA



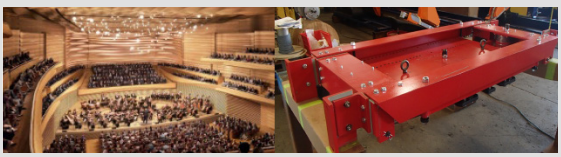
Motioneering TMDs are used for vertical vibrations on five landings of the staircase. The TMDs are concealed within the balustrades.

VANGUARD GROUP OFFICES
Malvern, PA, USA



Motioneering floor TMDs are installed at the mid-span of the floor beams in this open plan office space. Four TMDs are used to control vertical vibrations from walking activities.

LINCOLN CENTER CONCERT HALL
New York City, NY, USA



As part of a major renovation to David Geffen Hall, two Motioneering floor TMDs are used for controlling vibrations in the suspended first tier overlook floors above the grand promenade.

RETAIL ELECTRONICS STORE
Vancouver, BC, Canada

Motioneering TMDs are used to control vertical floor vibrations in the demonstration area of this special electronics retail space. Three TMDs are integrated into the floor system.

TECHNICAL SPECIFICATIONS
BRIDGES, FLOORS, STADIUMS & ROOFS

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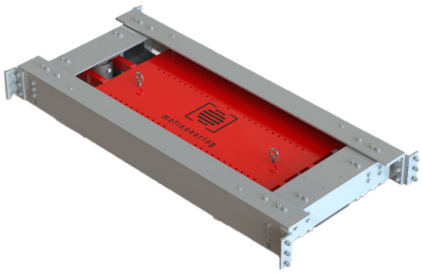
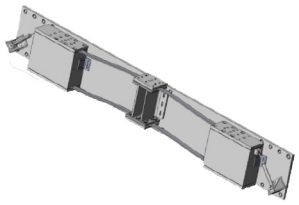
Low Profile Configuration
Flat Orientation

Dynamic Mass[1]	Dead Mass[2]	Tuning Range		Dimensions inc Dynamic Motion Envelope			Internal Damping Range
		Low	High	Length	Width	Height	
(kg)	(kg)	(hz)	(hz)	(mm)	(mm)	(mm)	(%)
350	750	3.0	13.0	1845	1030	285	1 to 20
550	950	3.0	9.4	1930	1030	285	1 to 20
700	1100	3.0	11.2	2085	1030	285	1 to 20
900	1350	3.0	10.5	2265	1245	285	1 to 20
1400	1900	3.0	10.1	2325	1245	285	1 to 20



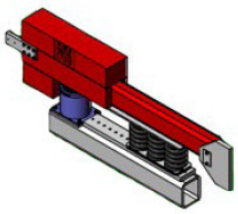
Low Profile Upright Configuration
Vertical Orientation

Dynamic Mass[1]	Dead Mass[2]	Tuning Range		Dimensions inc Dynamic Motion Envelope			Internal Damping Range
		Low	High	Length	Width	Height	
(kg)	(kg)	(hz)	(hz)	(mm)	(mm)	(mm)	(%)
1500	2650	1.5	3.4	4500	305	700	1 to 20
750	1320	1.5	3.4	4500	305	700	1 to 20



Upright Configuration
Vertical Orientation

Dynamic Mass[1]	Dead Mass[2]	Tuning Range		Dimensions inc Dynamic Motion Envelope			Internal Damping Range
		Low	High	Length	Width	Height	
(kg)	(kg)	(hz)	(hz)	(mm)	(mm)	(mm)	(%)
2000	2200	2.5	6.5	4705	250	800	1 to 20
200	310	3.4	9.5	1540	155	820	1 to 20
750	900	3.1	8.6	2510	190	820	1 to 20



1. Do not include TMD active mass in the structure when determining target frequencies.
2. Dead mass accounts for mounting materials and rigid framing requirements which varies based on TMD configuration. Site-specific needs may require some changes of the dead mass for supporting the TMD. Consult with Motioneering for further details.
3. Low Frequency Upright TMD includes reinforced spine to facilitate easy installation.
4. Custom Configurations also available.