

General Overview:

The Lateral Excitation Stand from MB Dynamics provides a versatile means of suspending and supporting MB MODAL 50 and MODAL 110 exciters during experimental modal surveys. The stand applies either horizontal forces into the side of a test structure, or oblique forces from underneath a structure. Piano wire stingers or compression stingers may also be used. The exciter can be suspended with four turnbuckles, as shown in the illustration to the right. When suspended, the piano wire connects to the test item's force sensor. It then passes through the MB exciter through-hole and its corresponding base, as well as its bolt-on inertial masses (when used to add inertia). The piano wire then wraps around a pulley and is tensioned using a small hand winch. After applying the static force which exceeds the dynamic force, the Dumore Chuck within the exciter moving element is tightened to secure the piano wire.

This stinger reduces force measurement errors, given that the tension-only stinger applies only axial forces, without side loads contaminating force data. The exciter can also set on top of the lateral arm and be rotated in its trunnion base to provide excitation at any angle. Both MB Dynamics MODAL 50 and MODAL 110 exciters are compatible for use with this stand.



Lateral Excitation Stand
(shown with MB Dynamics MODAL 110 Exciter)

Key Features:

- Vertical adjustment range of stinger when suspended: 305 mm up to 1415 mm
- Horizontal adjustment range along lateral arm: 300 mm
- Maximum suspended load: 60 kg
- Dimensions: 1380 mm x 785 mm x 1910 mm
- Durable and rugged aluminum profiles for main structural parts
- Weight without exciter: 85 kg
- Mobility: one-person lift at rear to raise on to heavy-duty wheels
- Rubber feet on adjustable steel legs for stability during excitation
- Low gear- ratio hand crank for easy vertical adjustment
- ¼-turn handles for securing lateral arm and piano wire pulley
- Static preload applied with small hand winch

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