

# Magnetic Negative Stiffness Damper (MNSD)

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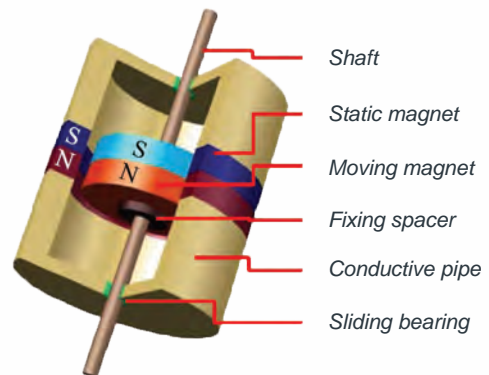
Compared with existing passive negative stiffness device, MNSD adopts a completely different magnetism principle. A passive MNSD can provide symmetrical negative stiffness integrated with damping in a compact and simple configuration. Its mechanical properties can be easily designed by adjusting magnet properties and arrangement.

The passive operation mode of MNSD, together with its compact size and simple design, makes MNSD a promising vibration suppression technique with high performance, cost-effectiveness, reliability and practicability. It has a great potential to replace conventional active or semi-active vibration suppression/isolation systems for various civil, mechanical, and aerospace structures.

The performance of MNSD for vibration mitigation was successfully illustrated in bridge stay cables, high-speed train suspensions, vehicle suspensions, vibration isolation tables, etc.

## Special Features

- Magnetic negative stiffness damper (MNSD) can achieve a vibration suppression performance comparable to that of active control
- Does not require any power supply, sensing or feedback controllers



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