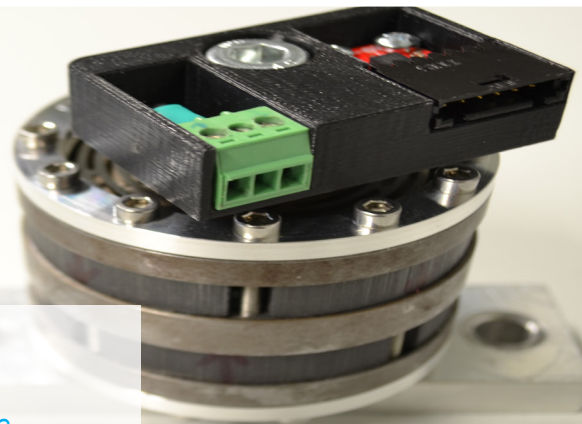


## Active vibration dampers

*Plug&Play vibration damping for large frequency range*

***The Linz Center of Mechatronics GmbH offers cost-effective active vibration damping. The actuator reduces vibration automatically (Plug&Play) at the applied point by use of a built-in acceleration sensor and a robust adaptive control design.***



Many industrial processes produce unwanted vibrations which have a negative effect on people, building structures or the production process itself with sound or vibration in the foundations. Until now, the suppression of vibration was associated with either intensive system analysis or high power suppression. The active vibration damper by LCM performs the compensation automatically and extremely effectively.

### DESIGN FEATURES:



The active vibration damper is held in its zero position by a mechanical spring and deflected from this position electromagnetically. This design allows the actuator to be used in any position and cover a wide frequency range. The combination of permanent and electromagnets and the optimised ratios of the mechanical and electromagnetic factors make it possible to achieve high performance with small size and low weight.

A plug-and-play application is possible thanks to the built-in acceleration sensor and adaptive control algorithm. The algorithm minimises the vibrations at the location of application automatically and effectively.

## Vibration dampers - technical data

Total weight: approx 800g\*

Moving mass: approx 500g\*

Output: approx 30W\*

Magnetic force: 40N\*

Max. dynamic force at 10 Hz (resonant): 150N\*

Deflection: +/- 1mm\*

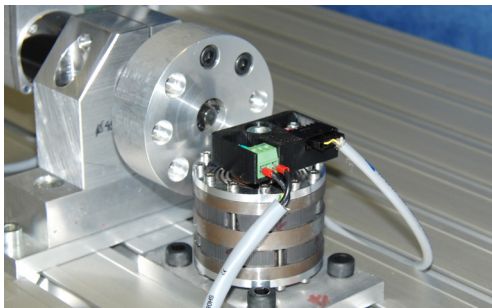
Frequency range: 40Hz to 200Hz\*

\*) Example for specific size. The principle is scalable and feasible in any size.

### BENEFITS:

- Any mounting position
- High power density
- Feasible at any size (principle is scalable)
- Plug&Play
- Cost-effective total system

### APPLICATIONS:



Thanks to its robust and easy operation, the active electromagnetic vibration damper can be used in practically any situation where there is sufficient space for installation. Examples include:

- Automotive (e.g. active chassis damping)
- Engineering/Machine tools (e.g. reduction in vibrations transmitted into the foundation of a machine)
- Construction
- Medical technology
- Robotics
- Energy supply
- etc

