Anniversary

MITSUBISHI ELECTRIC
Changes for the Better

SOLUTIONS FOR SEMICONDUCTOR MANUFACTURING

ELIMINATE VIBRATION AT THE SOURCE

SOLUTION OVERVIEW

MITSUBISHI ELECTRIC SERVO SYSTEM
MELSERVO-J5

Do you have issues with vibration in your system?

The source of vibration in a mechanical system can come from any number of components but the end result is the same: decreased machine lifetime, poor quality parts, reduce system performance.

In the semiconductor industry precision is a requirement. If you struggle to mitigate vibration in your machine let us do it for you. Mitsubishi Electric's Advanced Vibration Suppression algorithm identifies and negates vibration in a mechanical system. Vibration Suppression is available at no cost with our high performance MELSERVO-J5 Servo Amplifiers and Motors.

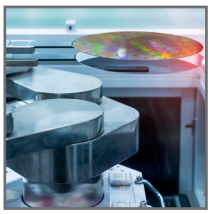
KEY BENEFITS:

- Utilize software tools to correct for mechanical issues
- Suppress vibrations, extend machine lifetime, reduce settling time, and improve servo performance
- Suppress vibrations in more flexible (low-rigidity) machines

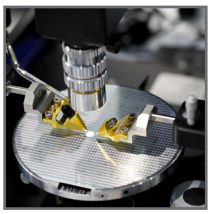
Finally, a software solution for mechanical issues.

APPLICATION USAGE:

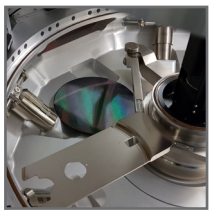
CMP Tool
(Chemical Mechanical Planarization)



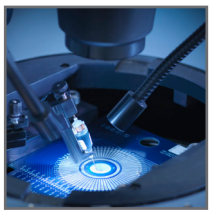
Wafer Handling Tool



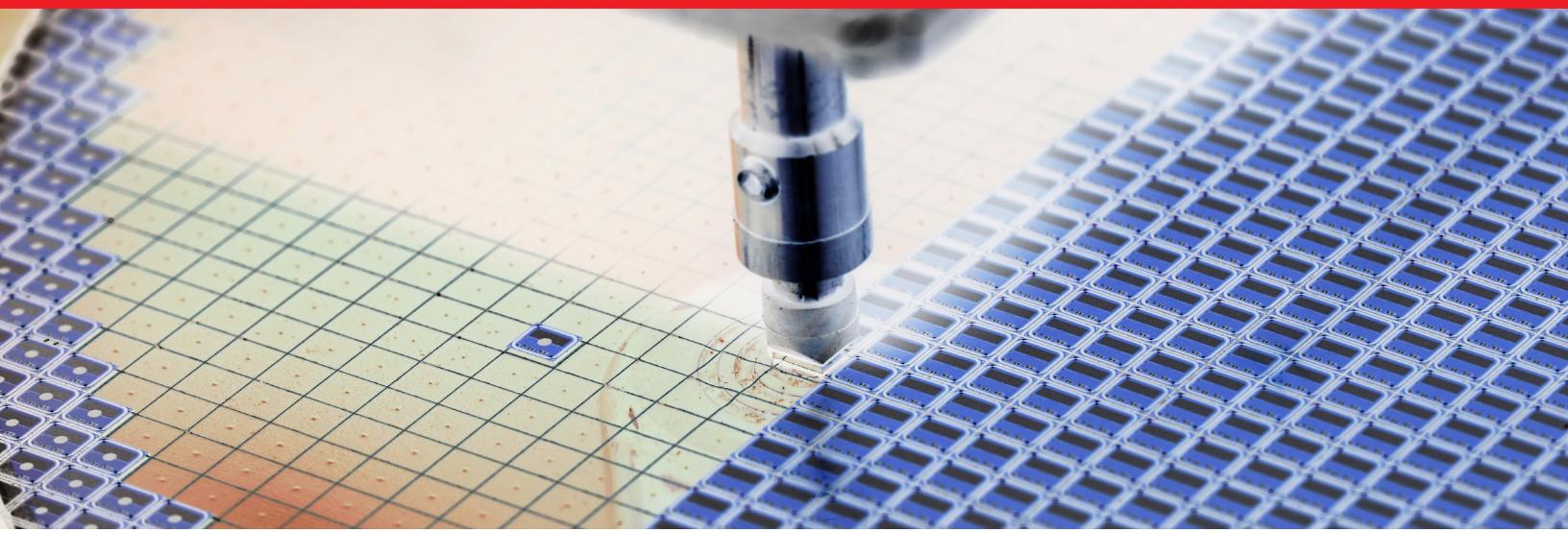
Ion Implant



CVD Tool
(Chemical Vapor Deposition)



Etching Tool



VIBRATION SUPPRESSION TOOLS

Mitsubishi Electric's MELSERVO-J5 products offer a number of tools to suppress vibrations. We have highlighted features improved with MELSERVO-J5 below. Check out our website for more information.

COMMAND NOTCH FILTER

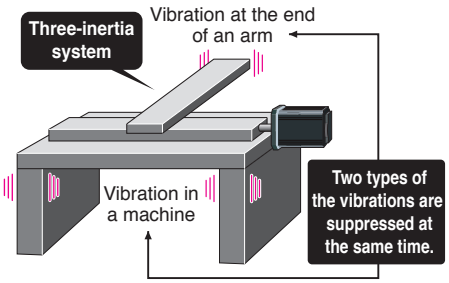
Lower the gain of a specific frequency contained in a position command in order to suppress load-side vibration. The command notch filter has an applicable frequency range between approximately 1 Hz and 2000 Hz.

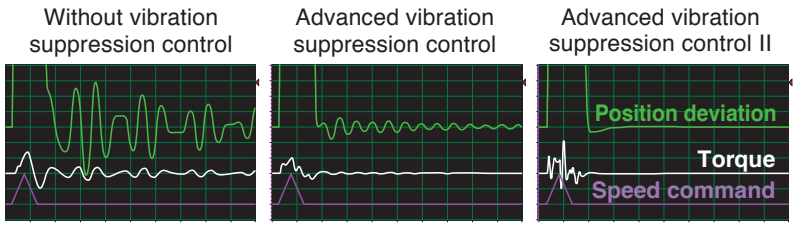
ADVANCED VIBRATION SUPPRESSION CONTROL II

This function suppresses up to two types of low frequency vibrations in a three-inertia system. The range of suppression frequency has been extended to effectively suppress residual vibration with a relatively low frequency of 100Hz or less. Enabling shorter settling time for more flexible machine systems. Adjustment is easily performed on MR Configurator2.

MACHINE RESONANCE SUPPRESSION FILTER

Suppress the resonance of a mechanical system using this function. The applicable frequency range has been expanded to include a range of between 10 Hz and 8000 Hz. The machine resonance frequency is detected by the machine analyzer function in MR Configurator2.





VIBRATION SUPPRESSION IN ACTION

Watch a quick video demonstration on the advanced vibration suppression control feature with the Mitsubishi Electric MR-J4 Series servo.

> WATCH NOW

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NEXT STEPS

For more information or a free consultation with an automation engineer, please

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