Extremely low vibration amplitudes are required for some sensitive applications, even lower than already low levels normally present in the Turbo SEM pumps. Typically scanning electron microscopes or other analytical instruments require additional dampening of vibration amplitude. To further reduce the residual amplitude (of the SEM pumps), a new double vibration damper is provided. To effectively reduce the total vibration level transmitted to the system, the Turbo pump should be suspended from the double damper. Although the actual dampening effect depends on the specific complete system, using a Agilent new double damper, the residual vibration amplitude can be typically reduced by a factor 100 (for ISO 160 F flange). In the following picture the transfer function and an experimental vibration spectrum are included.
Pump + Damper: two points analysis

Power spectrum

Hz
m/s²

Power spectrum

Hz
m/s²
Power spectrum

Hz

m/s^2

625 635 645 655 665 675 685 695 705 715 725

Hz

pump
damper flange