VR9210

iDOF™
INSTANT DEGREES OF FREEDOM

iDOF™: Prevent Under/Over Testing

When testing critical, high-value products it's essential to understand the extent of random vibration conditions and product responses during start-up. This is especially important on short duration tests, as hidden test conditions would lead to product designs based on under or over-testing.

iDOF overcomes the issues created with traditional PSD scaling methods, which simply multiply the PSD estimate which was averaged at a low level and display the scaled version after the transition to a higher level. iDOF is accomplished by confidently removing estimation error, reducing the variance of the PSD estimate in a manner significantly faster than traditional averaging methods, all while maintaining accuracy.

Features

Fast and Accurate Random Start-up

Rapidly and accurately displays a smooth, low variance PSD plot. Preserves and displays resonance shifts and vibration patterns which occur in reality during the low to full level transition.

Innovative PSD Estimation Method

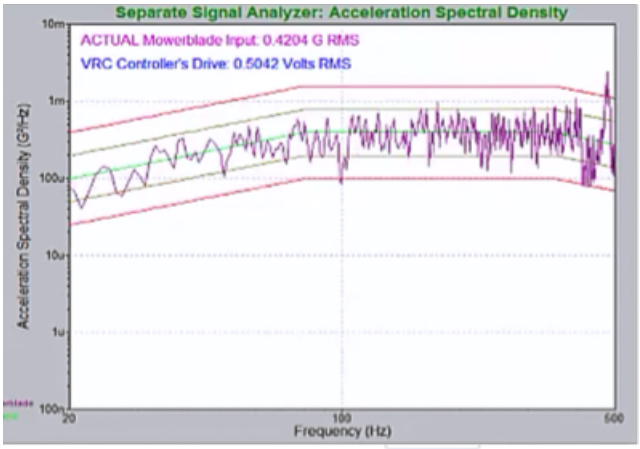
- Rapidly reduces estimation error
- Accurately displays the actual vibration
- Uses only measurements taken at full level

Smoother Control Lines

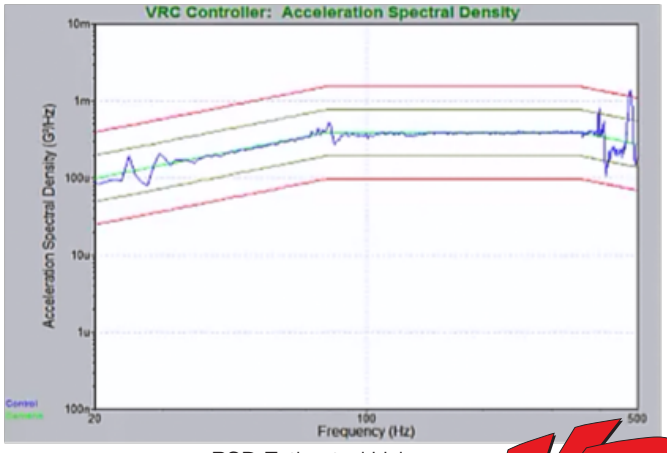
Significantly lowers the variance in the estimated PSD as compared to traditional averaging providing ultra-smooth control lines; the smoothest in the industry.

iDOF Setting	
iDOF Range	Up to 10,000
Settings definition	Setting a higher iDOF value will remove more estimation error from the PSD plot, resulting in a smoother control line

Comparison of resonances in traditional averaging PSD and the new iDOF estimated PSD



PSD Estimate Using Traditional Averaging



PSD Estimated Using iDOF

VIBRATION RESEARCH