Advanced Vibration Control

Nonstop Innovating

Products Catalog 2025

Active vibration isolation technology Smart products powered by AI/ML

Vibration isolation

IoT

Artificial intelligence

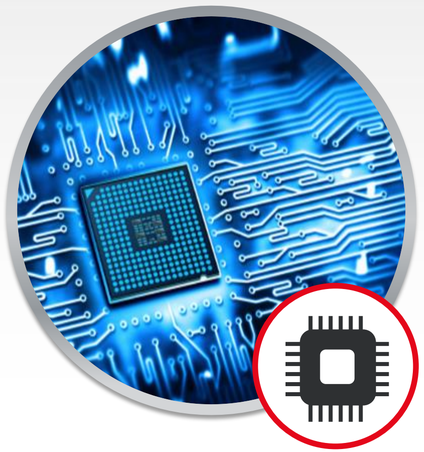
Sensing vibrations sources

Copyright K&S Advanced Systems Ltd. All rights reserved | www.kns-systems.com

Industries Using K&S devices

High-precision tools are sensitive to vibrations and require vibrations control for optimal performance.

Microscopes AFM, SEM, TEM, etc.



Semiconductors

Metrology and Inspection

Automotive

Medical

Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

Successful Track Record Serving International Market Leaders

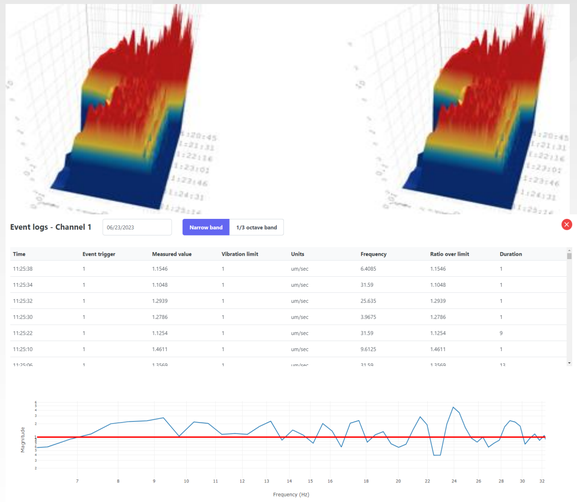
Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

K&S Products Line

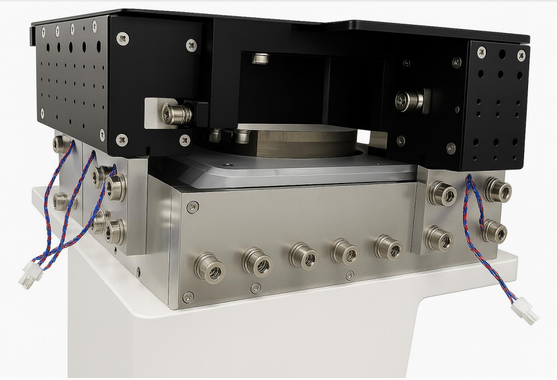
Aristt
Tabletop Active Vibration Control System

Arismd ULTRA
Modular Active Vibration Control System

SMU
Smart Manufacturing Utility



FF
Feed Forward Control OEM Systems



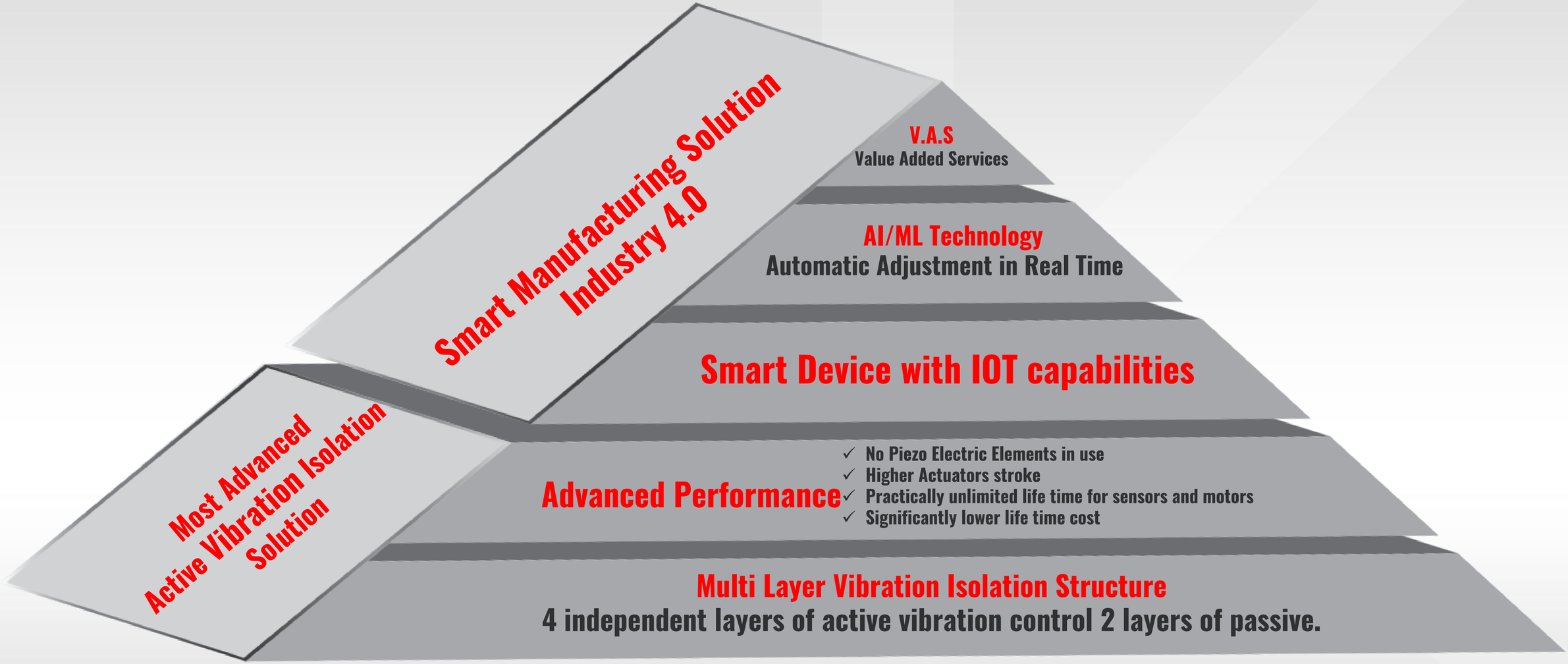
Sotott
Tabletop Passive Vibration Isolation System

Sotomd
Modular Passive Vibration Isolation System

SMU
Analyzer kit

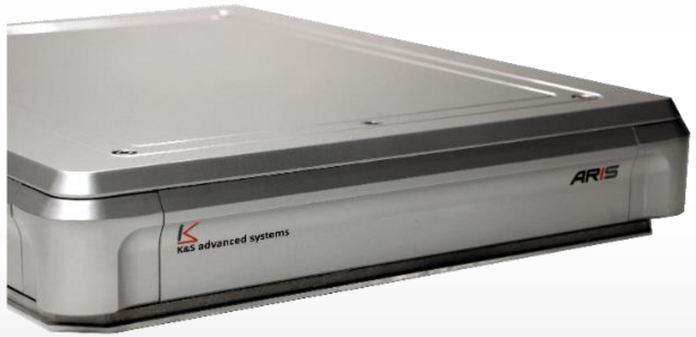
Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

High Level System Architecture



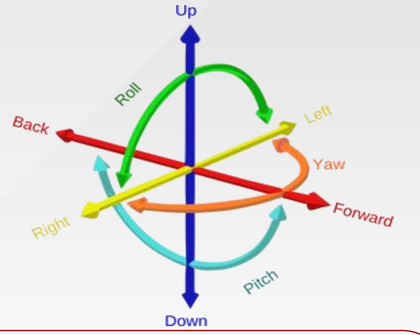
Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

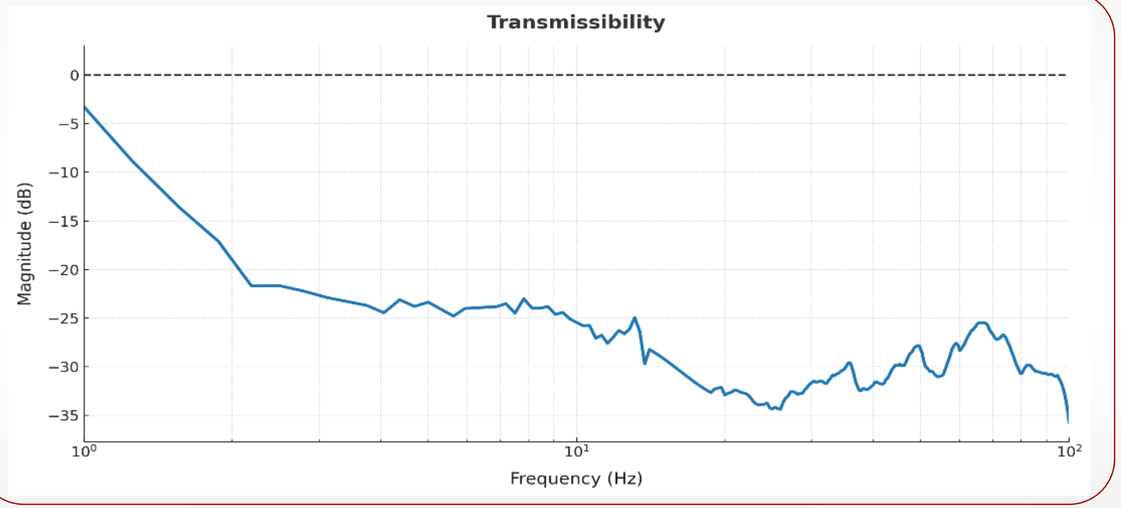
Aris – Active Vibration Control System



Key Capabilities

- 6 degree of freedom
- Active gain starting from 0.5Hz
- Built In Artificial Intelligence
- Software adjustable active bandwidth
- Built in real time diagnostic tools
  - 2 channels Spectrum Analyzer
  - 8 channels Oscilloscope



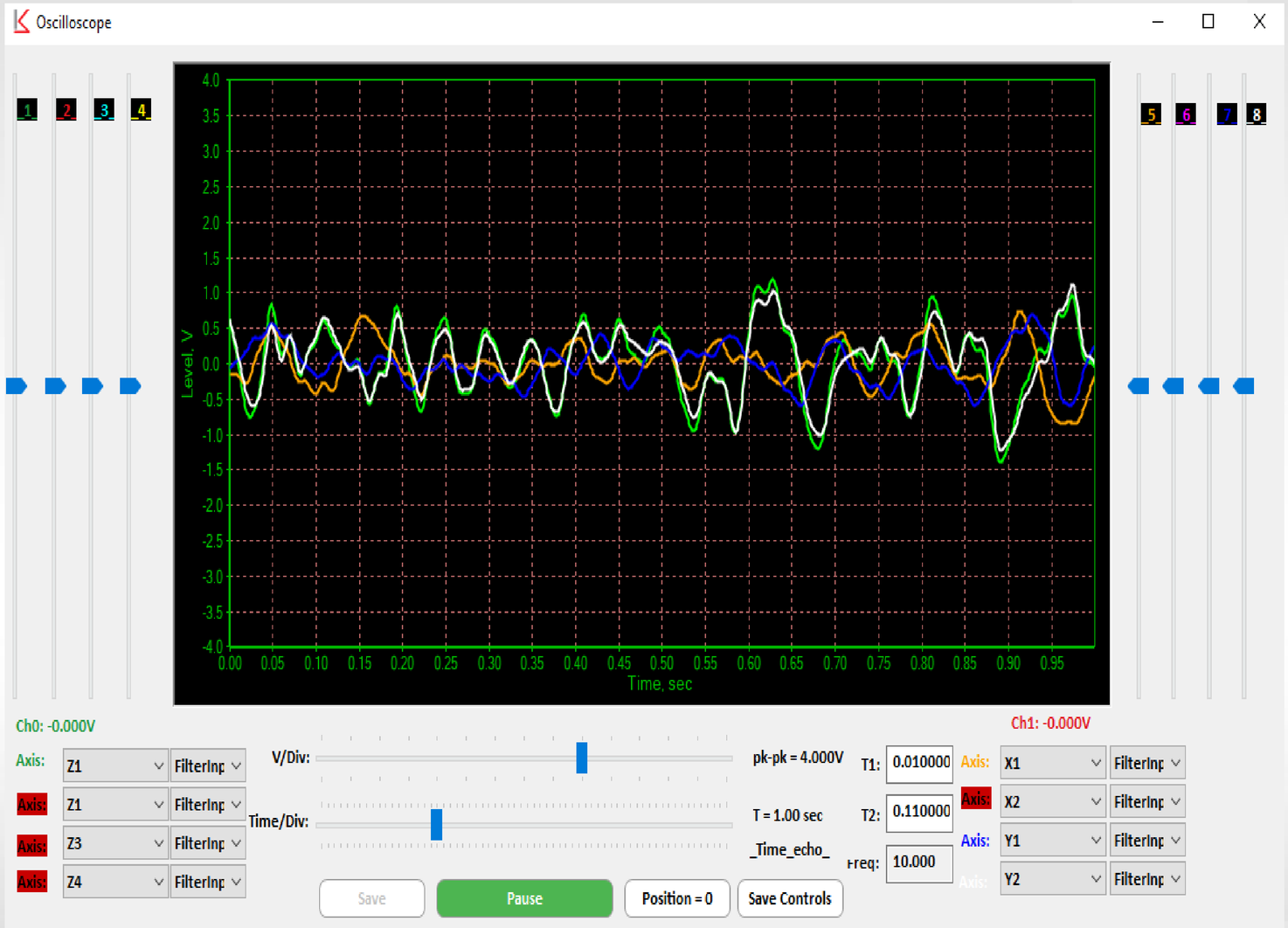


Transmissibility may not represent System performance to full extend in the setups, where Payloads generated internal resonances which are exceeded or are absent on the Floor vibration spectrum.

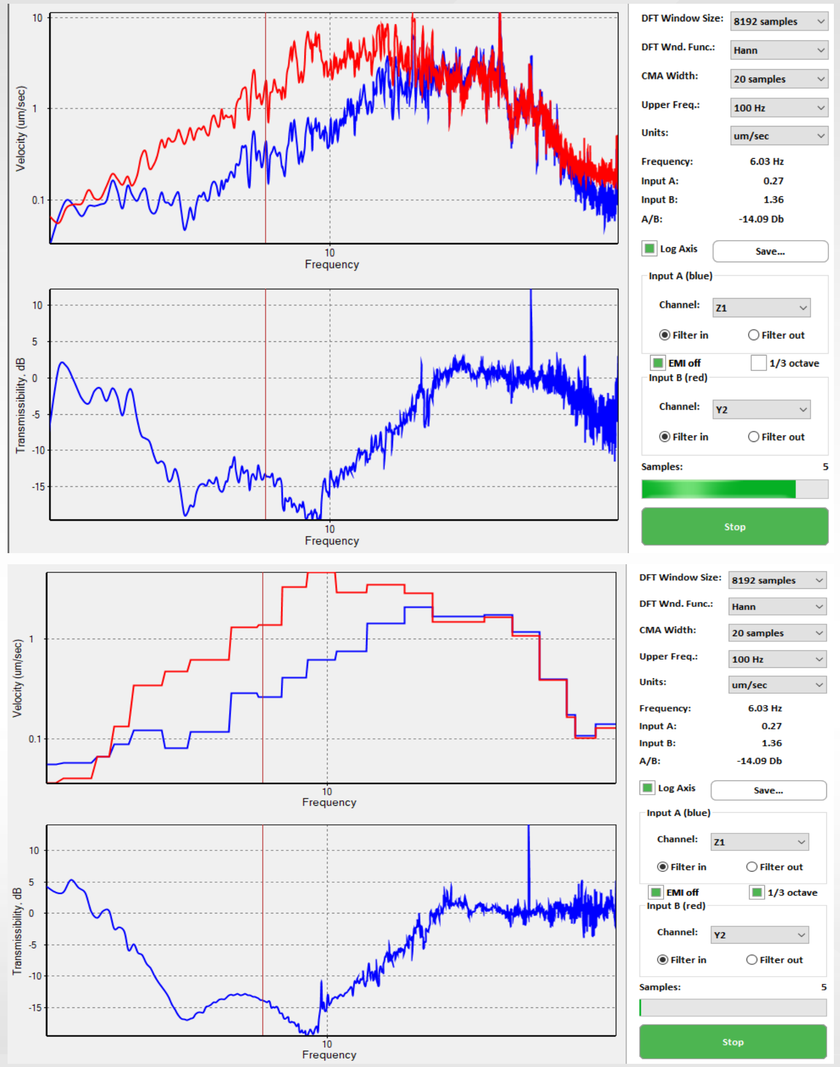
Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

Aris – Built In Diagnostic Tools

8 x Channels real time Oscilloscope



2 x Channels Spectrum Analyzer



Copyright K&S Advanced Systems Ltd. All rights reserved | www.kns-systems.com

Advanced Vibration Isolation

Arismdxxx

Modular Active Vibration Control Systems

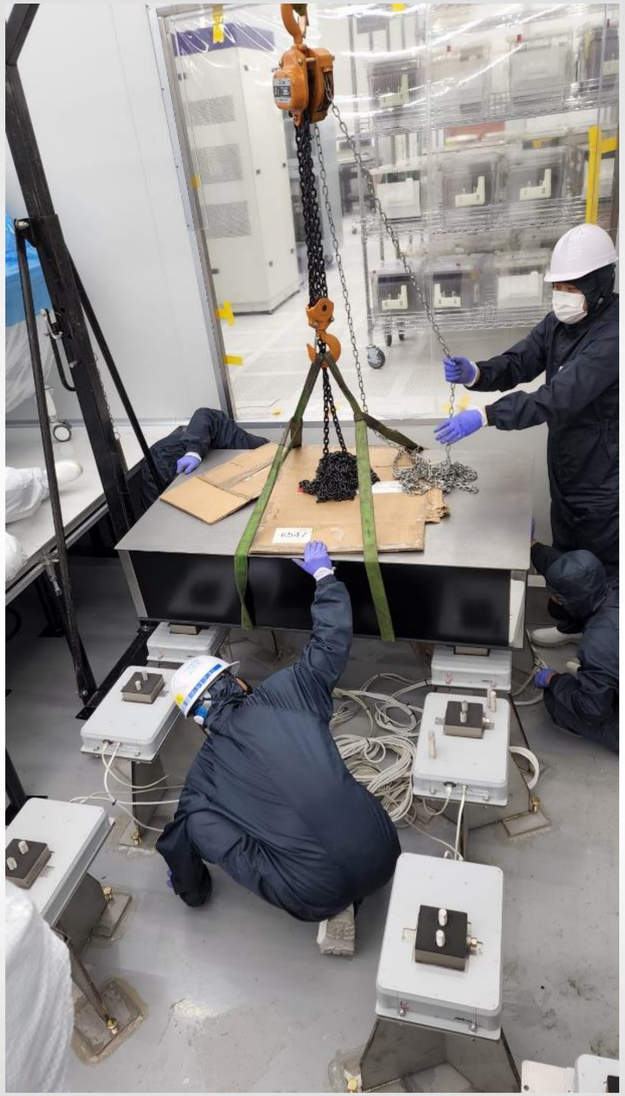
Arismdxxx ULTRA Modular Active Vibration Control Systems

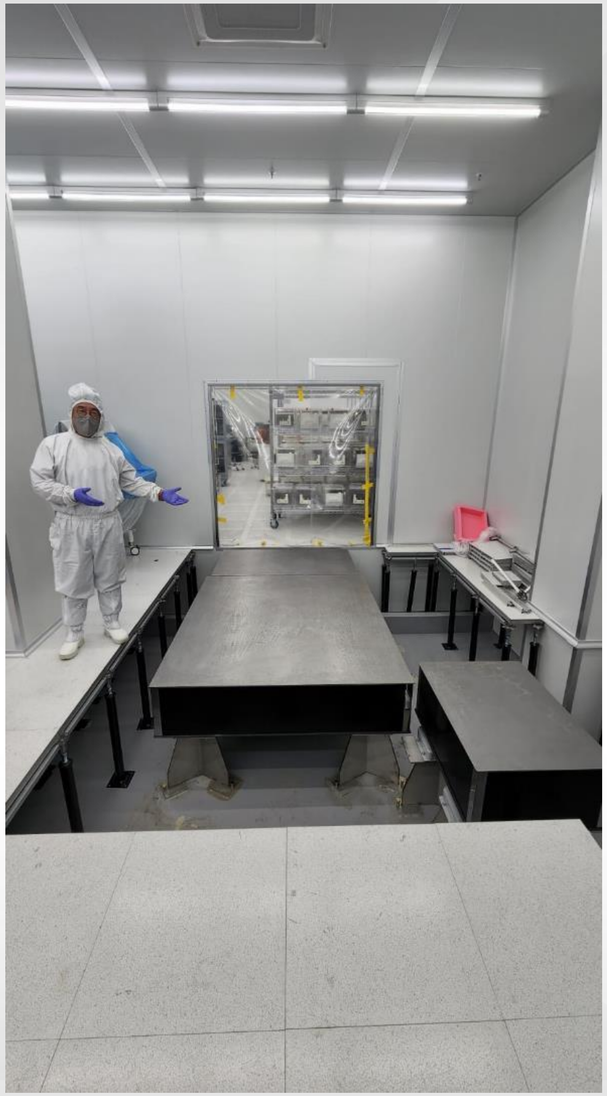
- 6 degree of freedom
- Active gain starting from 0.5Hz
- Built In Artificial Intelligence
- Active Vibration Control Performance
  - ~ 8dB reduction at 1Hz
  - ~20dB reduction at 3Hz
- Settling time < 0.1sec
  - In lab working conditions
- Software adjustable active bandwidth
- Built in real time diagnostic tools
  - 2 channels Spectrum Analyzer
  - 8 channels Oscilloscope
- Input Voltage AC 80-260V/50-60Hz

Device Type	Size L x W x H (mm)	Load Capacity Min-Max (kg)	Comments
Arismd300 ULTRA	416 x 282 x 77	90-300	Related to Single Isolator
Arismd500 ULTRA	416 x 282 x 77	130-500	Related to Single Isolator
Arismd700 ULTRA	416 x 282 x 77	200-700	Related to Single Isolator
Arismd1000 ULTRA	416 x 282 x 77	300-1000	Related to Single Isolator
Arismd1500 ULTRA	416 x 282 x 77	350-1500	Related to Single Isolator
Arismd300 ULTRA + Wedge Mount	416 x 282 x 120	90-300	Related to Single Isolator
Arismd500 ULTRA + Wedge Mount	416 x 282 x 120	130-500	Related to Single Isolator
Arismd700 ULTRA + Wedge mount	416 x 282 x 120	230-700	Related to Single Isolator
Arismd1000 ULTRA + Wedge Mount	416 x 282 x 120	250-1000	Related to Single Isolator
Arismd1500 ULTRA + Wedge Mount	416 x 282 x 120	350-1500	Related to Single Isolator

Copyright K&S Advanced Systems Ltd. All rights reserved | www.kns-systems.com

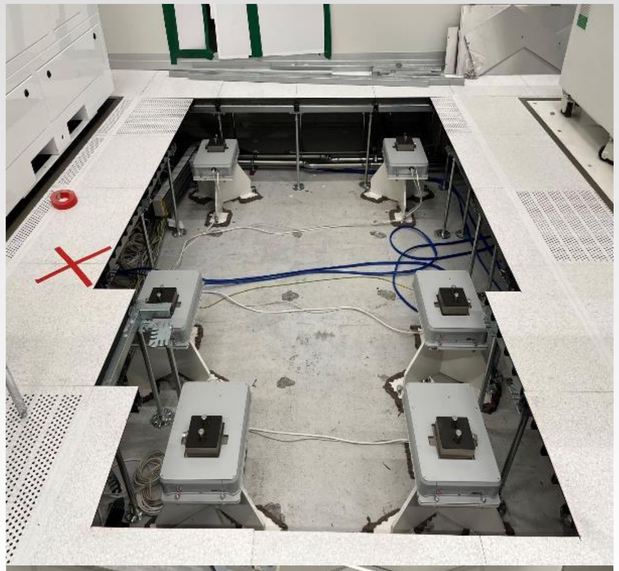
Arismd Example of In FAB installation

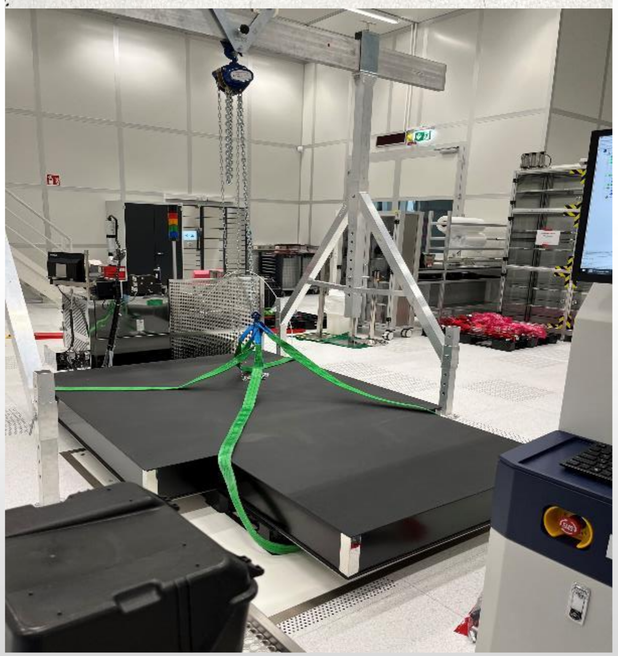


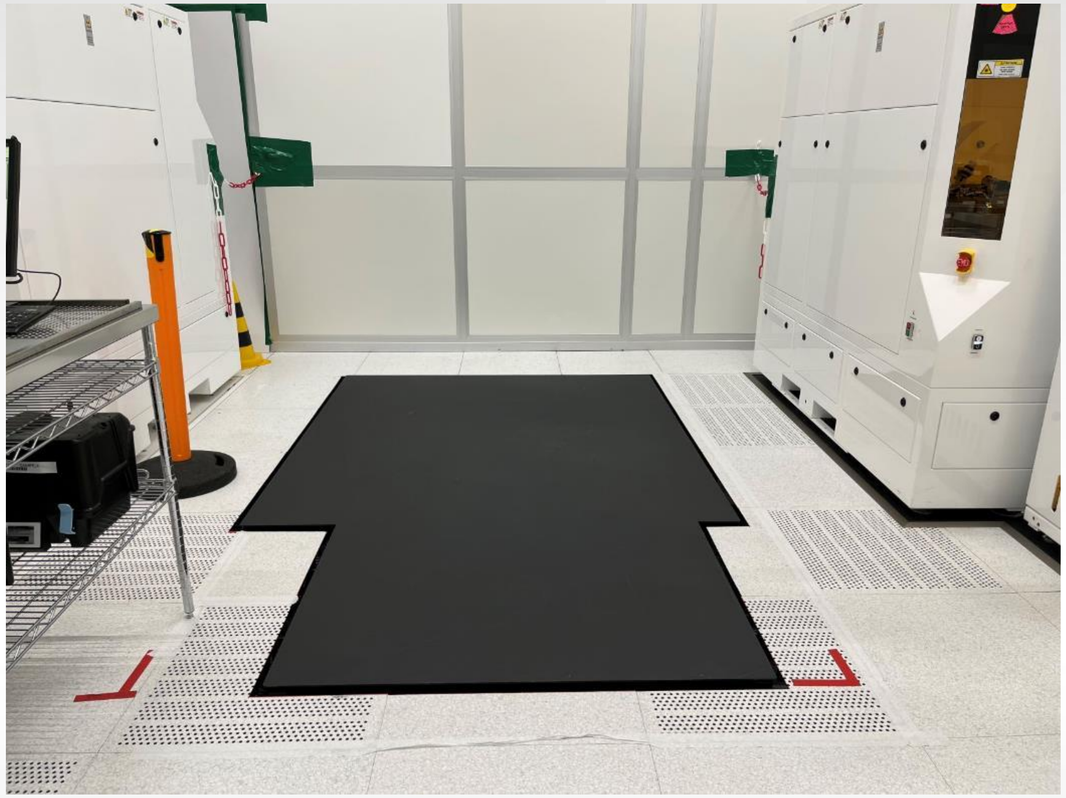


Copyright K&S Advanced Systems Ltd. All rights reserved | www.kns-systems.com

Arismd Example of In FAB installation

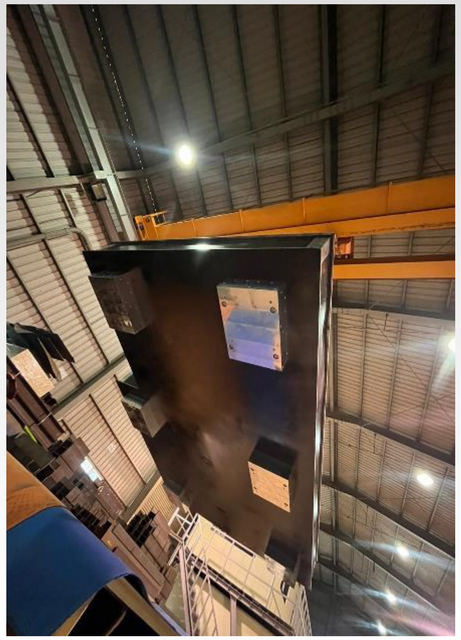


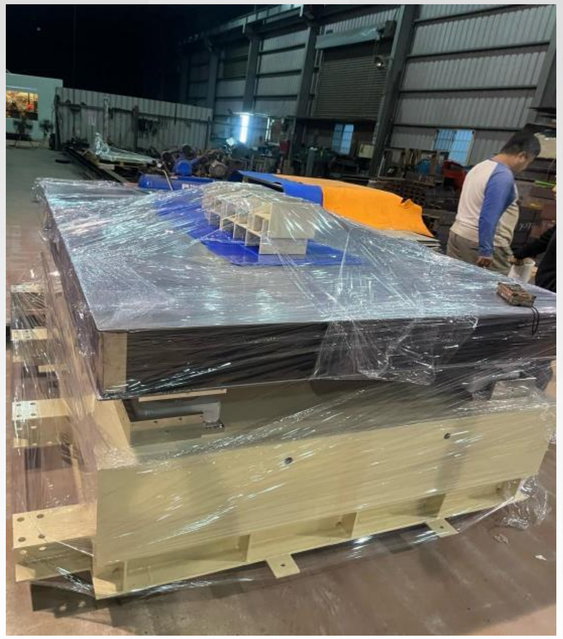


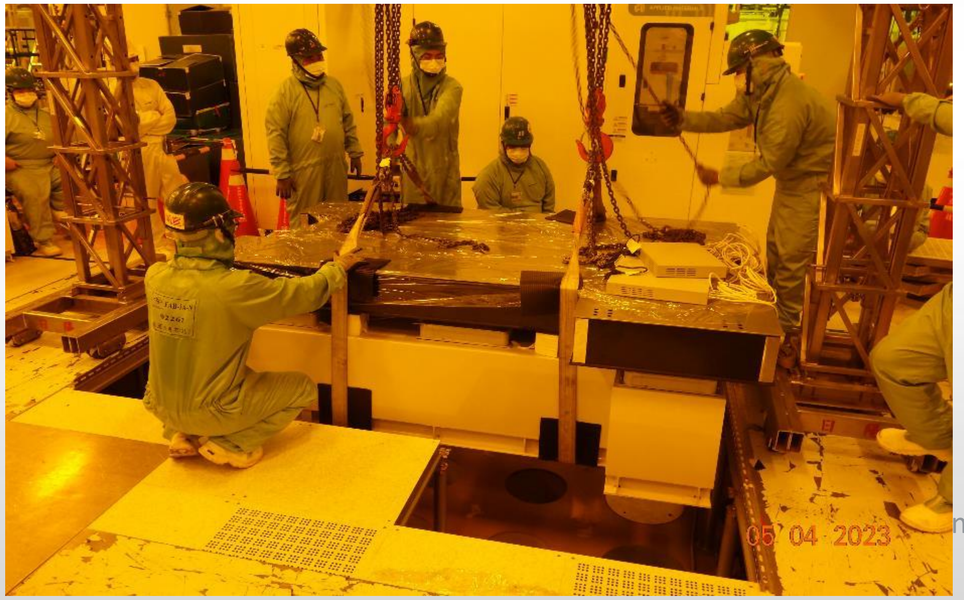


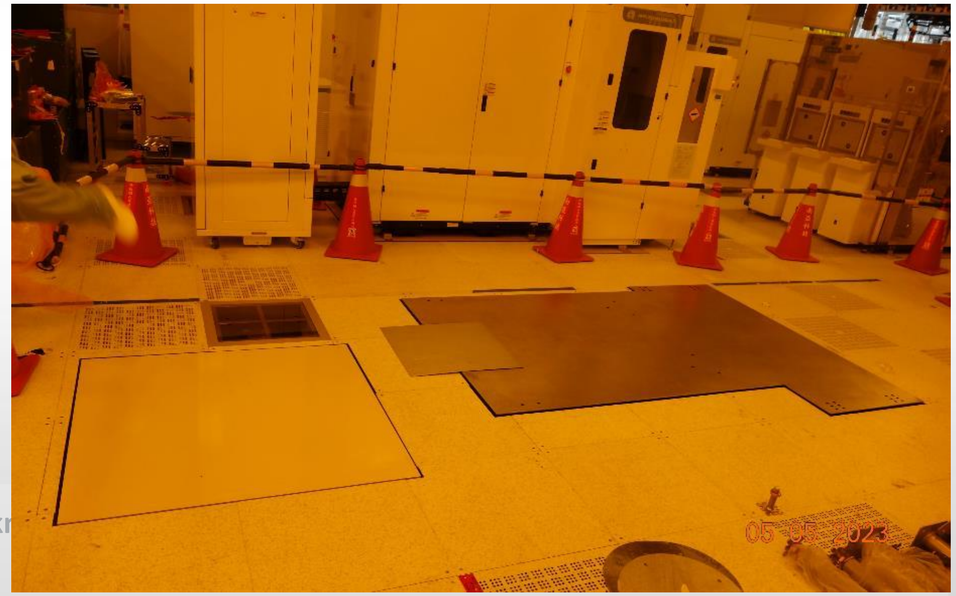
Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

Arismd Example of In FAB installation

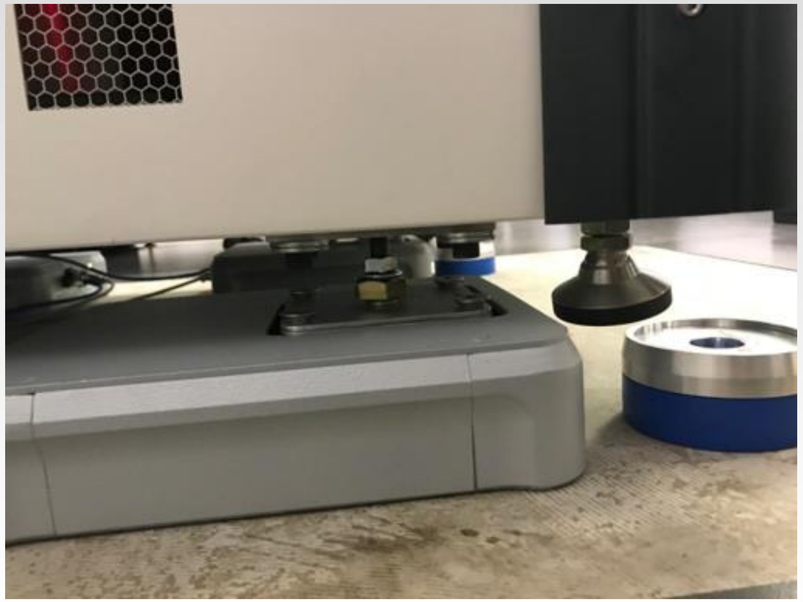


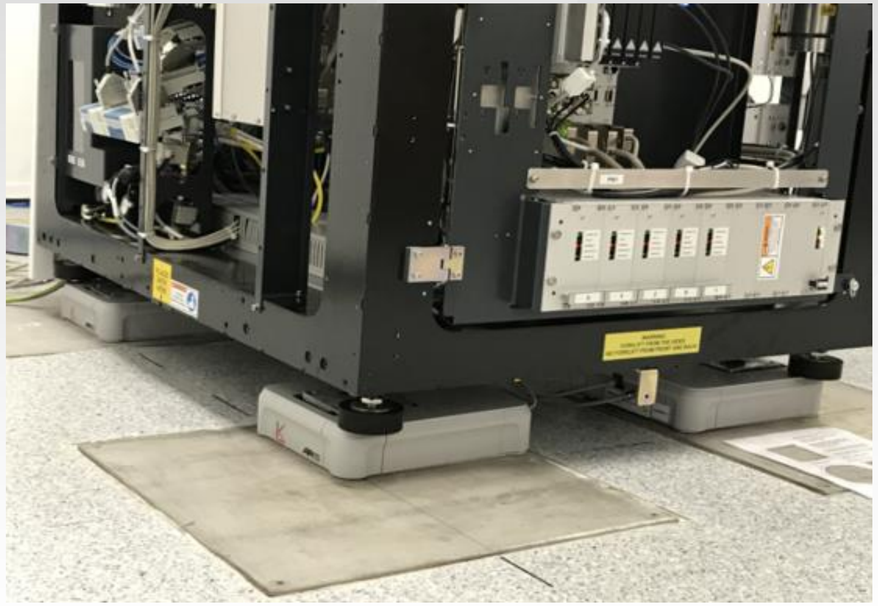


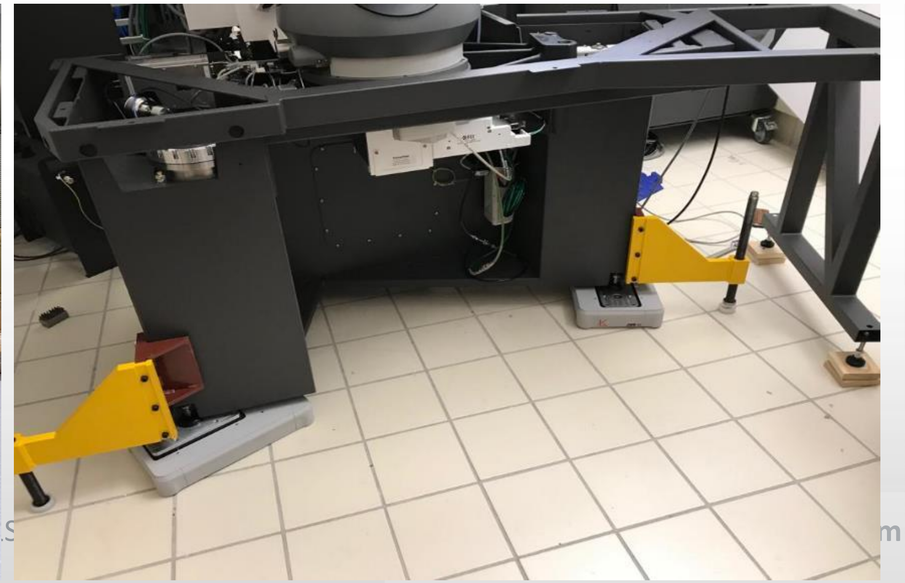


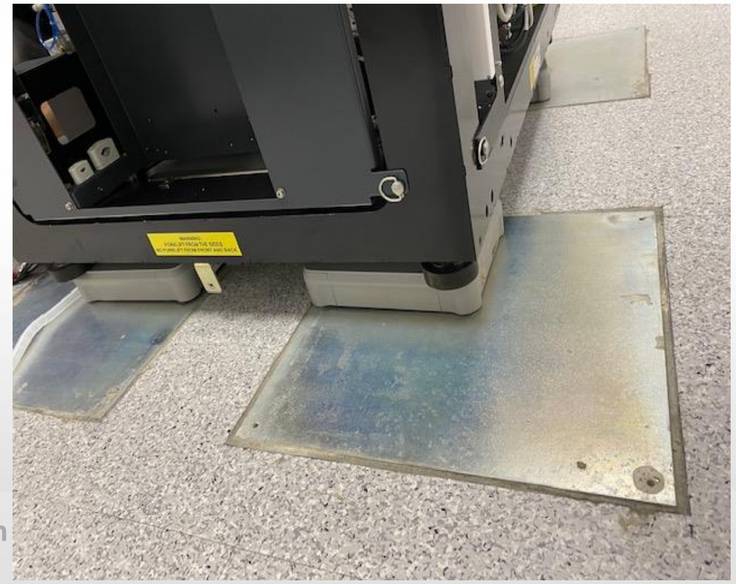


Arismd pro Installation examples for Electronic Microscopes









Advanced Vibration Isolation

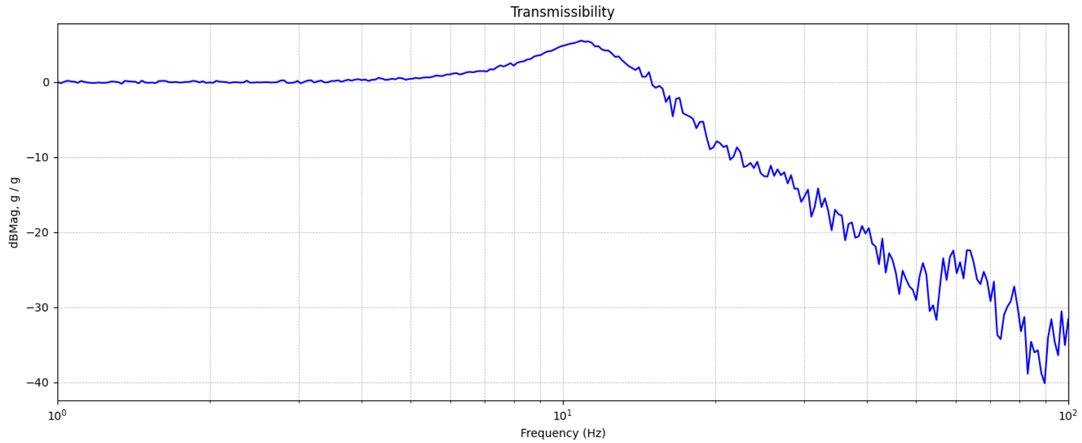
sotomdxxx

Modular Passive Vibration Isolation Systems

sotomdxxx pro Modular Passive Vibration Isolation Systems

Device Type	Size L x W x H (mm)	Load Capacity Min-Max (kg)	Comments
Sotomd300 pro	270 x 230 x 77	90-300	Related to Single Isolator
Sotomd500 pro	270 x 230 x 77	130-500	Related to Single Isolator
Sotomd700 pro	270 x 230 x 77	200-700	Related to Single Isolator
Sotomd1000 pro	270 x 230 x 77	250-1000	Related to Single Isolator
Sotomd1500 pro	270 x 230 x 77	350-1500	Related to Single Isolator

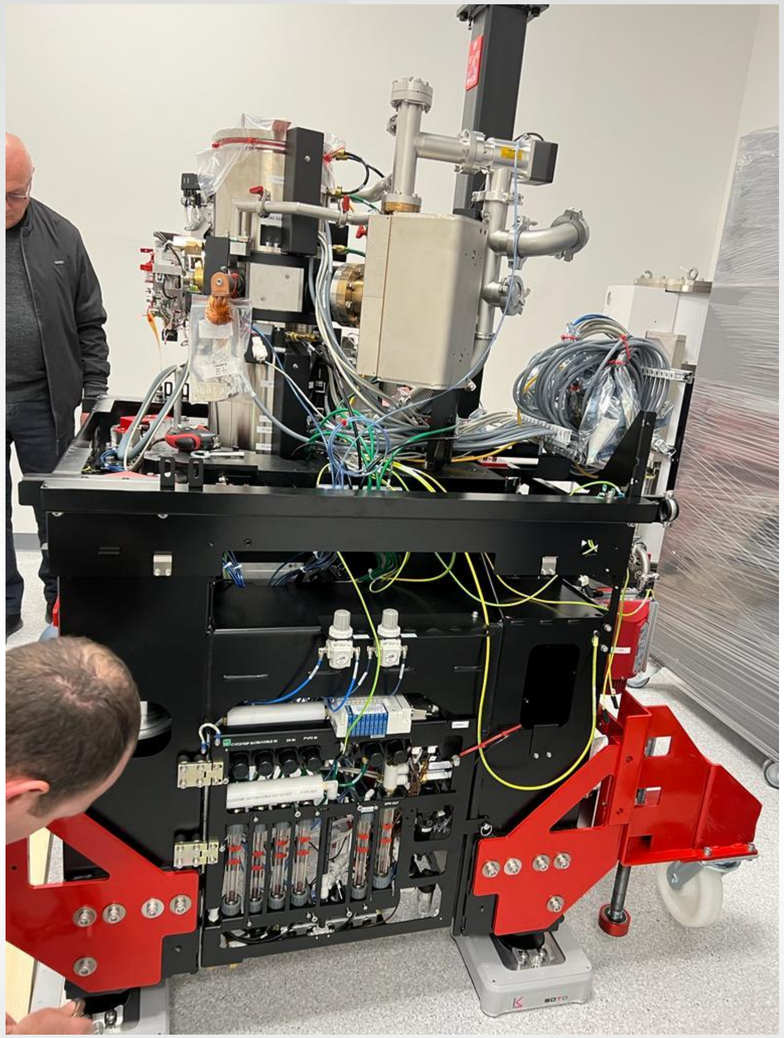
- Highly Damped Step Respond
- Simple Installation
- Ability to support Massive Machines
- Almost no amplification on Low Frequencies
- Significant reduction on Frequencies higher than 10Hz
- Settling time < 0.3sec
  - In lab working conditions



Transmissibility may not represent System performance to full extend in the setups, where Payloads generated internal resonances which are exceeded or are absent on the Floor vibration spectrum.

Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

sotomdxxx pro **Example of Installations**

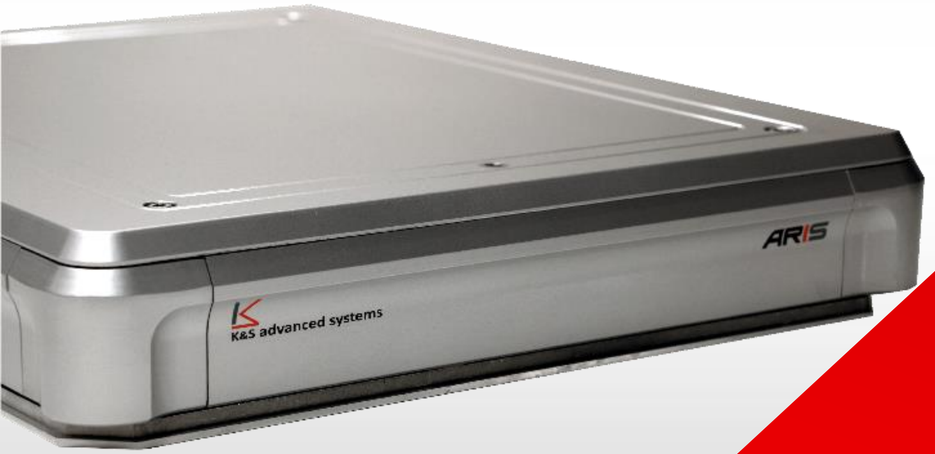


Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

Advanced Vibration Isolation

Aristtxxx

Table**T**op **Active Vibration Control Systems**



Aristtxxx Tabletop **Active Vibration Control Systems**

- 6 degree of freedom
- Active gain starting from 0.5Hz
- Built In Artificial Intelligence
- Active Vibration Control Performance
  - ~ 8dB reduction at 1Hz
  - ~20dB reduction at 3Hz
- Settling time < 0.1sec
  - In lab working conditions
- Software adjustable active bandwidth
- Built in real time diagnostic tools
  - 2 channels Spectrum Analyzer
  - 8 channels Oscilloscope
- Input Voltage AC 80-240V/50-60Hz

Device Type	Size L x W x H (mm)	Load Capacity Min-Max (kg)	Comments
Aristt20	450x300x80	5-20	
Aristt75	450x300x80	15-75	
Aristt75-I	450x300x65	15-75	IVF Special Edition
Aristt75X	400x500x80	15-75	
Aristt100	400x500x80	40-100	
Aristt150	400x500x80	70-150	
Aristt180	500x600x80	80-180	
Aristt180-m	500x600x80	M	M-modification in load capacity
Aristt200	600x800x80	80-200	
Aristt200-m	600x800x80	M	M-modification in load capacity

Copyright K&S Advanced Systems Ltd. All rights reserved | www.kns-systems.com

Advanced Vibration Isolation

sottxxx

TableTop Passive Vibration Isolation Systems

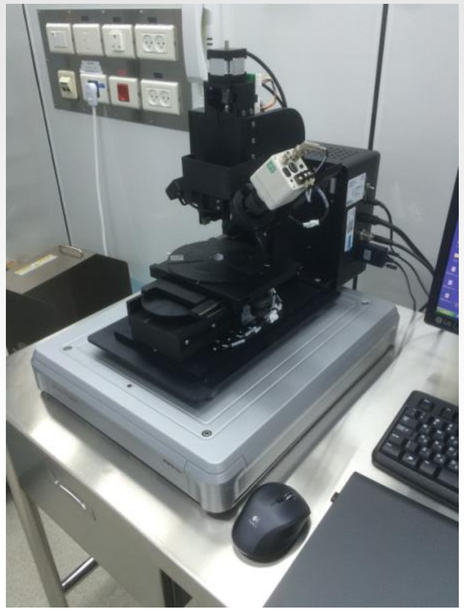
sotottxxx Tabletop Passive Vibration Isolation Systems

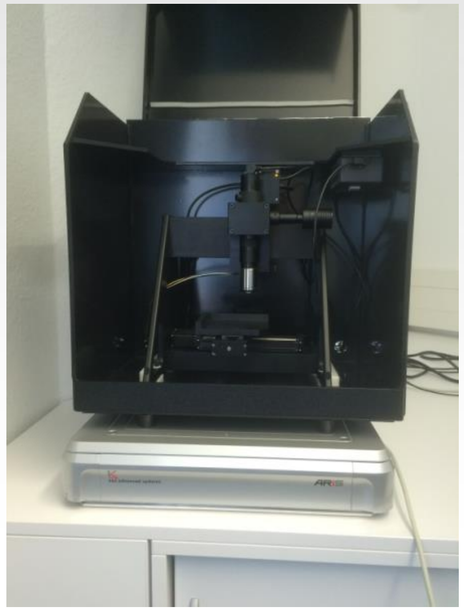
- Highly Damped Step Respond
- Simple Installation
- Ability to support Massive Machines
- Almost no amplification on Low Frequencies
- Significant reduction on Frequencies higher than 10Hz
- Vibration Isolation Performance
  - ~30-40 dB reduction at > 20Hz
- Settling time < 0.3sec
  - In lab working conditions

Device Type	Size L x W x H (mm)	Load Capacity Min-Max (kg)	Comments
sotott20	450x300x80	5-20	
sototT75	450x300x80	15-75	Among others, IVF ICSI Station Tabletop compatible
sotott75-I	450x300x65	15-75	IVF OEM Special Edition
sotott75X	400x500x80	15-75	
sotott100	400x500x80	40-100	
sotott150	400x500x80	70-150	
sotott180	500x600x80	80-180	
sotott180-m	500x600x80	M	M-modification in load capacity
sotott200	600x800x80	80-200	
sotott200-m	600x800x80	M	M-modification in load capacity

Copyright K&S Advanced Systems Ltd. All rights reserved | www.kns-systems.com

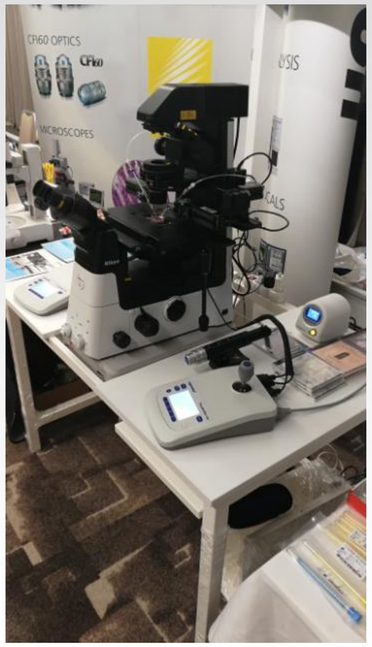
TableTop Systems Installation Examples – Semiconductors

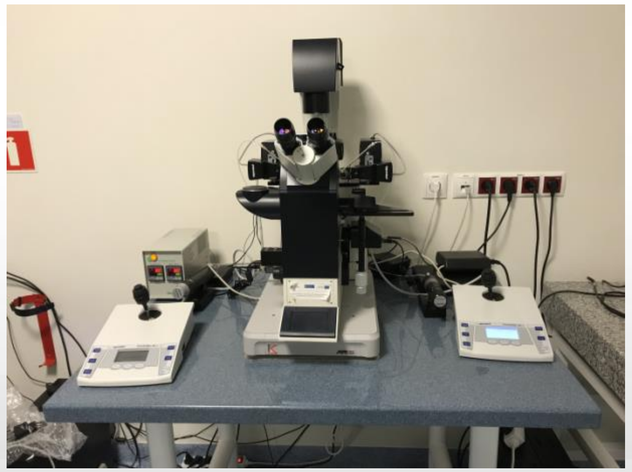




Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

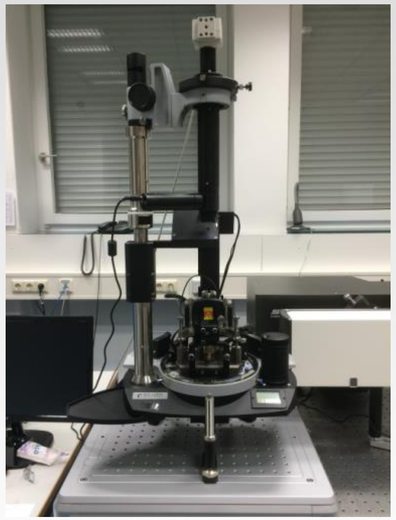
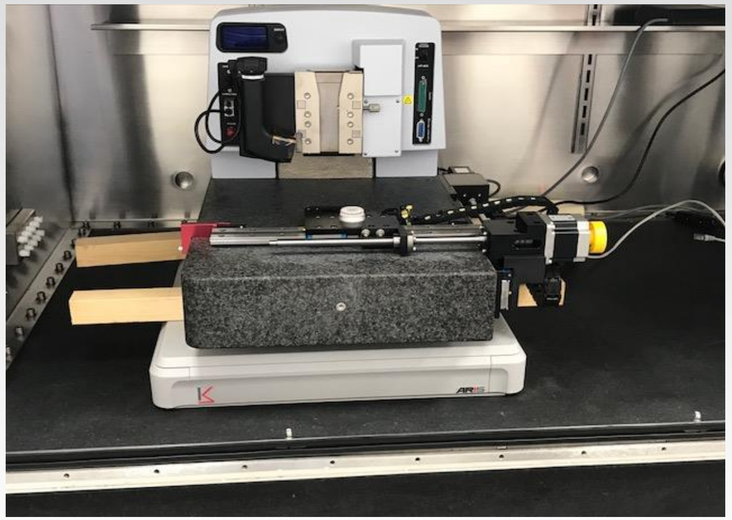
TableTop Systems Installation Examples – IVF

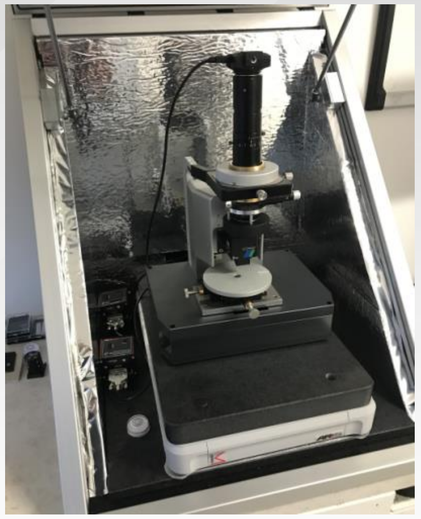
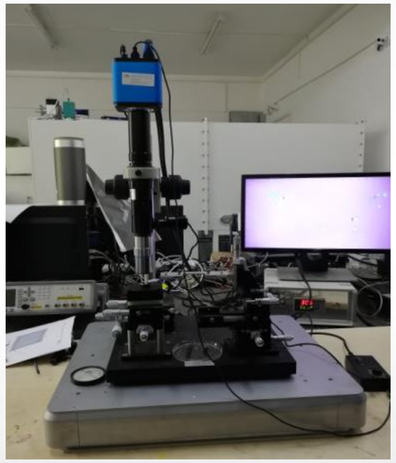
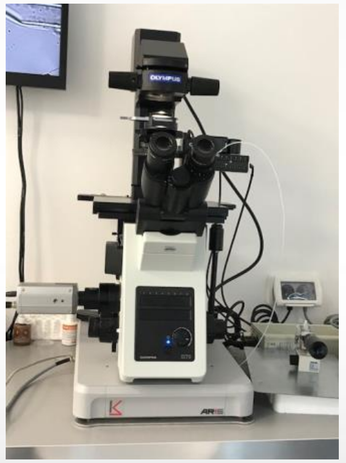


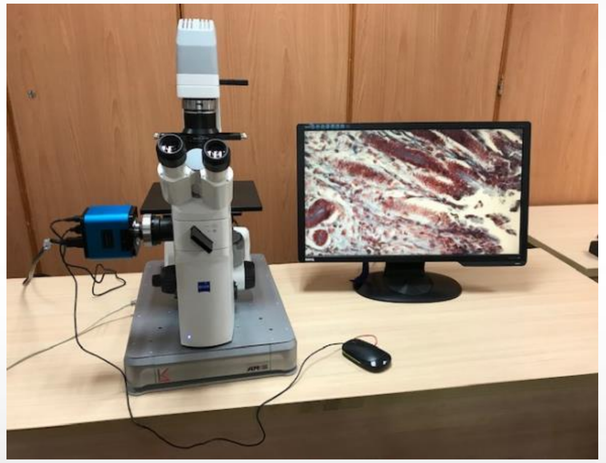


Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

TableTop Systems Installation Examples – AFM and Inverted Microscopes

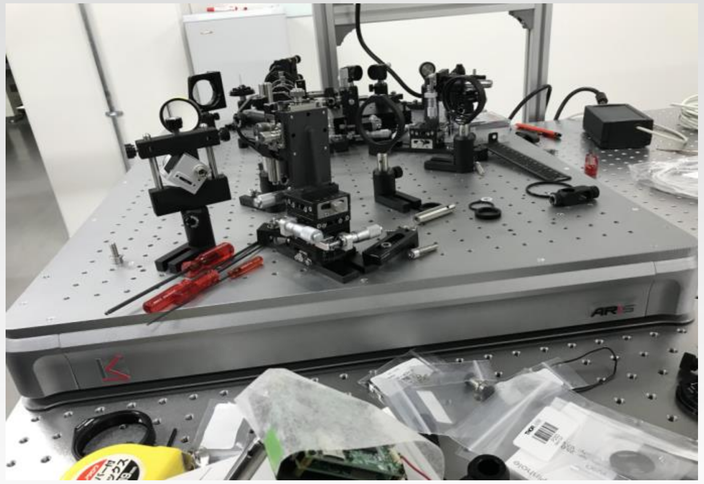



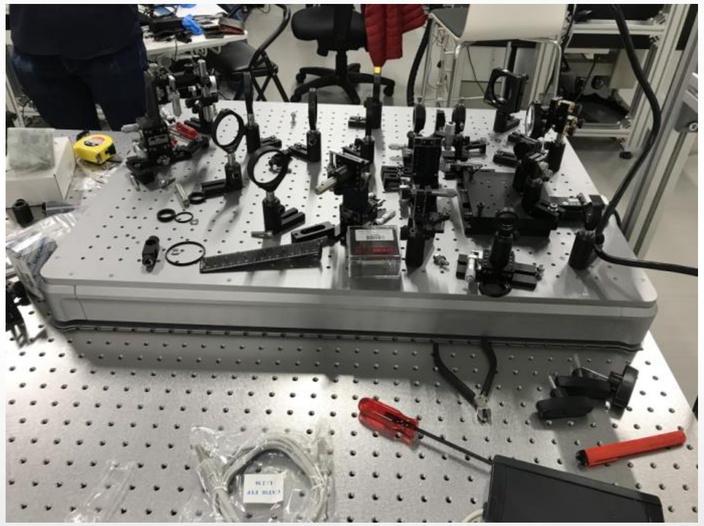






Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

TableTop Systems Installation Examples – Desktop SEM's and Photonics





Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

Advanced Vibration Control

SMU

Smart Manufacturing Utility

SMU Smart Manufacturing Utility

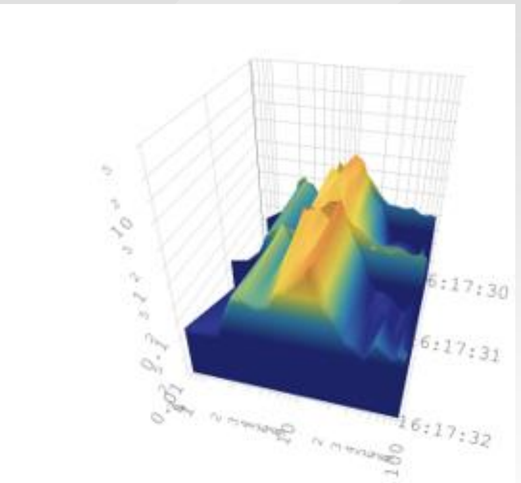
- Real Time Vibrations monitoring and Analyzes
- Using AI and Machine Learning to determine machine operational pattern
- Monitoring Vibrations level predefined by user
  - Per Machine
  - FAB Installation Floor Area
- Analyze and reporting out of predefined spec event
  - Per Machine
  - FAB Installation Floor Area
- Flexible in installation area and position

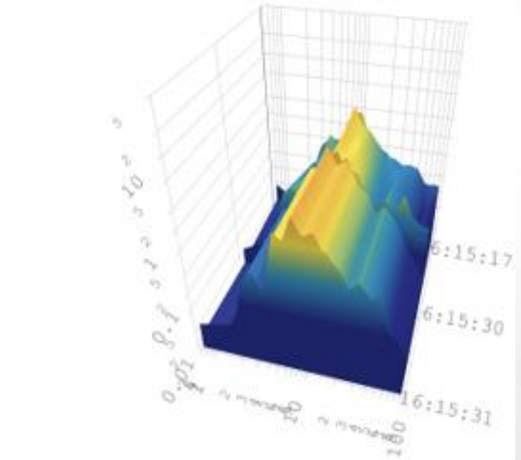
Device Type	Description	Comments
SMU Analyzer kit	Analyzer kit able to support up to 8 (Vertical and/or Horizontals – any mix) different sensors for Vibrations Monitoring	The main target of Analyzer kit is to Monitor and Analyze vibrations (Real Time 24/7) in Semiconductor FAB/LAB/Clean Room. Compact design allowing Flexible installation and monitoring capabilities on Machine Level and Floor Level in multiple locations.
SMU	SMU – Smart Manufacturing Utility	Smart Manufacturing Utility can be connected to multiple (practically unlimited ArisMD Ultra or Analyzer Kit's) devices. This in order to monitor and analyze vibrations coming from FAB floor and on Machines level, analyzing and reporting vibrations, which increases predefined level.
Sensors	Vertical and Horizontal Vibrations Monitoring Sensors	

Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

Logging and Analyzing

SMU Smart Manufacturing Utility

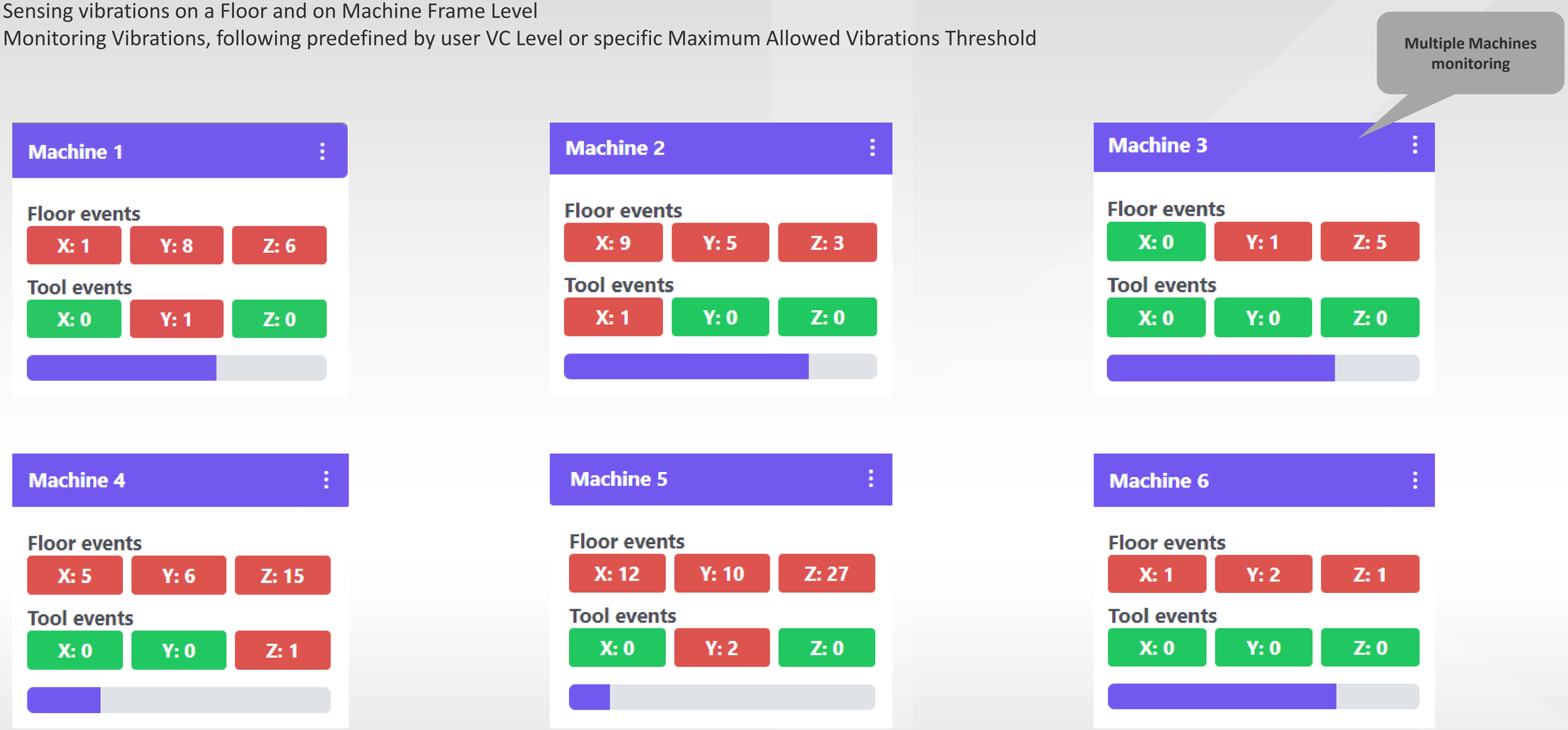




Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

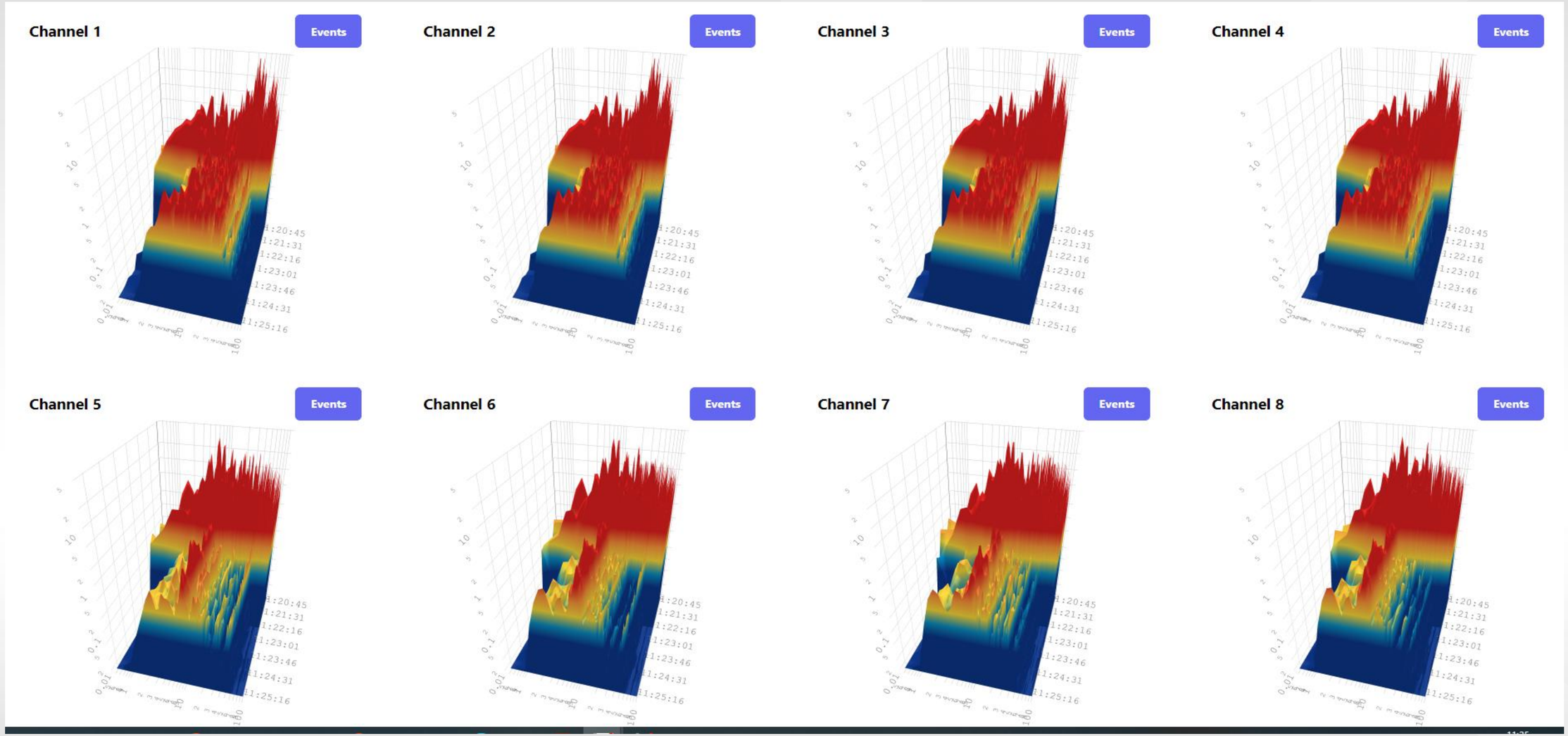
SMU Smart Manufacturing Utility – Monitoring multiple machines in a FAB/LAB/Clean Room

- Sensing vibrations on a Floor and on Machine Frame Level
- Monitoring Vibrations, following predefined by user VC Level or specific Maximum Allowed Vibrations Threshold



Copyright K&S Advanced Systems Ltd. All rights reserved | www.kns-systems.com

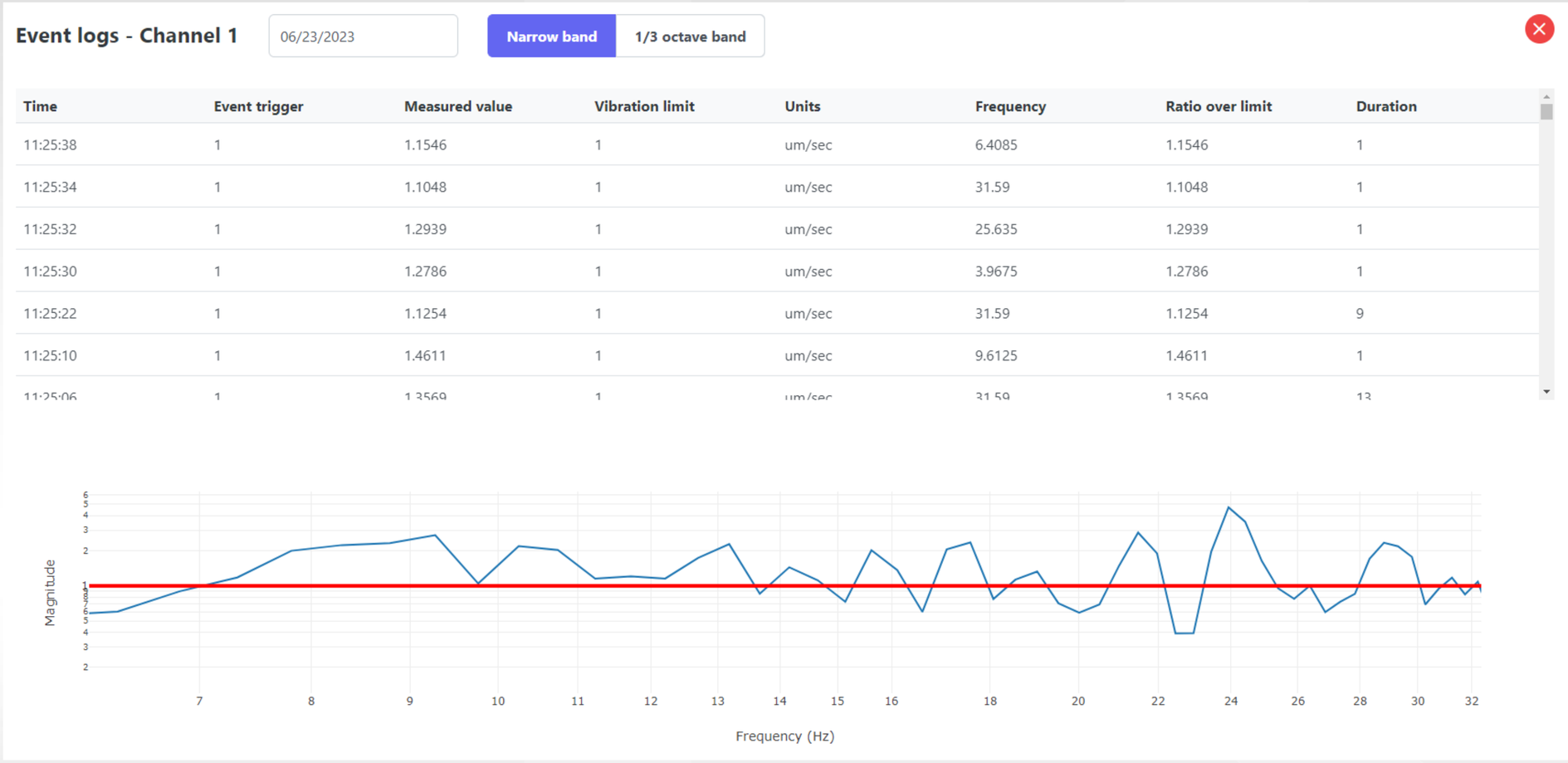
SMU Analyzer – 3D View



Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

Smart Manufacturing Utility – Event Log

- Event Log – showing the list of Events per Machine
  - Date and Time Stamp
    - Number of dates to store data
  - Event trigger (machine or floor)
    - Frequency
    - Axis
    - Amplitude
  - Amplifications detected over predefined limit – Smart algorithm
  - Duration of event
  - E- Mail Notifications

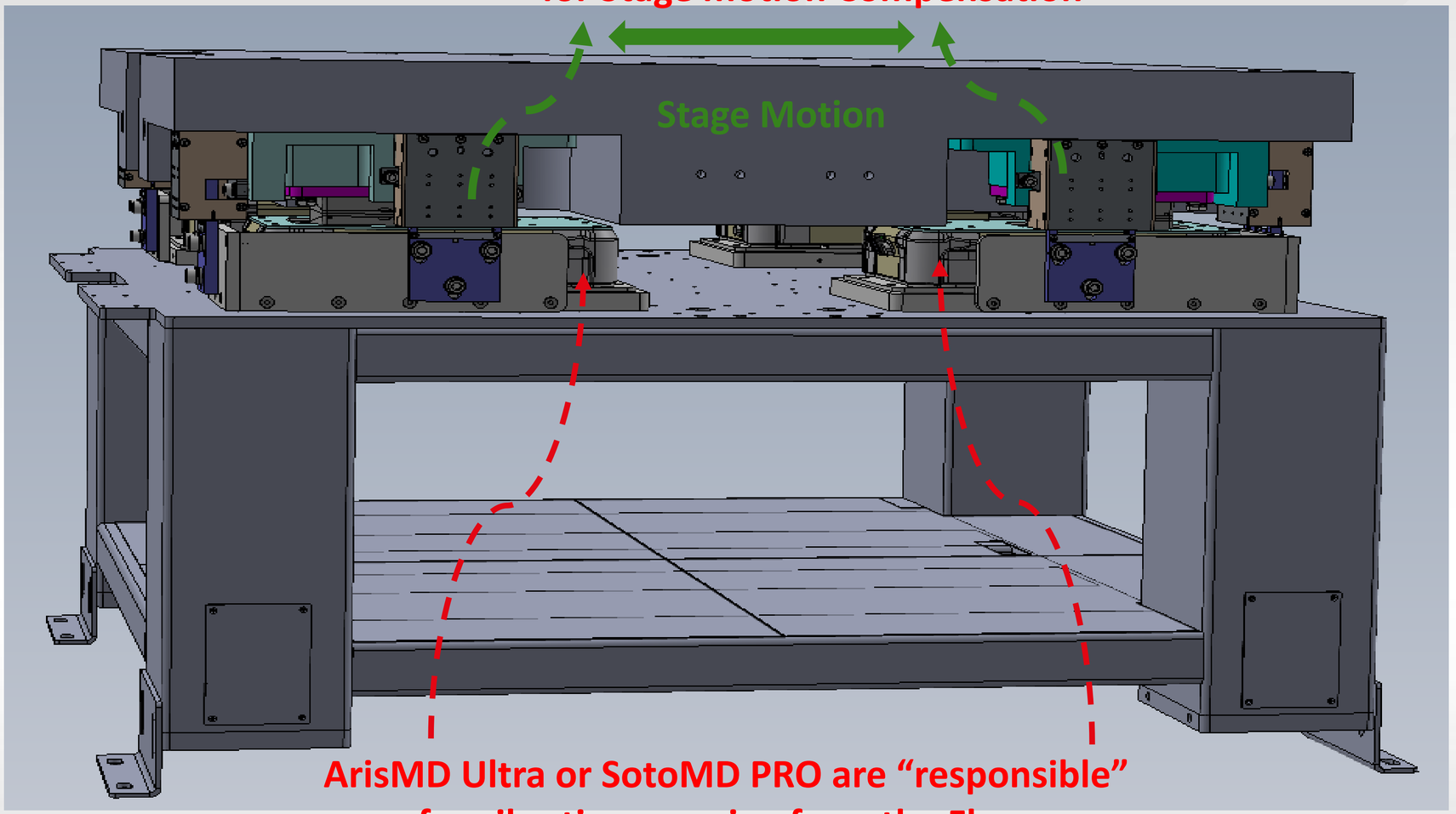


Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

Advanced Vibration Isolation

OEM Solutions

Feed Forward (FF) Control System is “responsible” for Stage motion Compensation



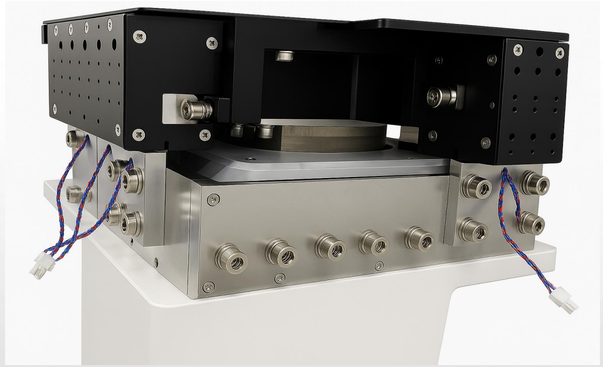
ArisMD Ultra or SotoMD PRO are “responsible” for vibrations coming from the Floor

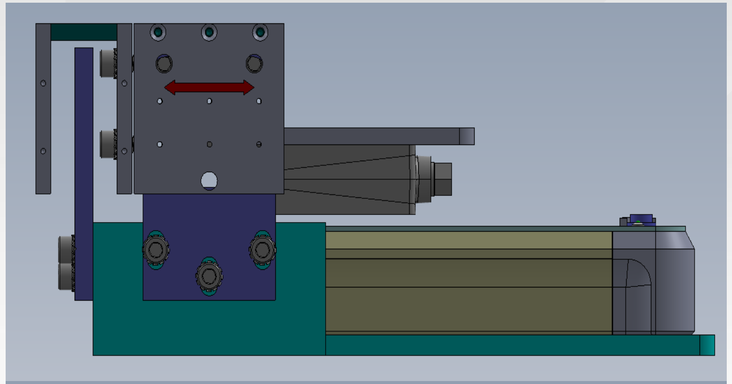
Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

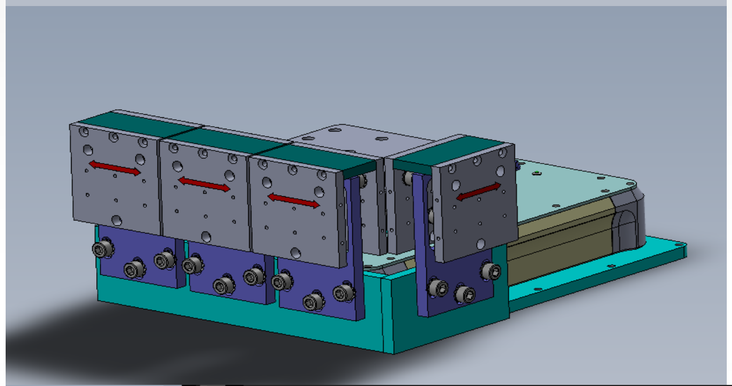
Feed Forward Motors Control for Stage Motion Compensation

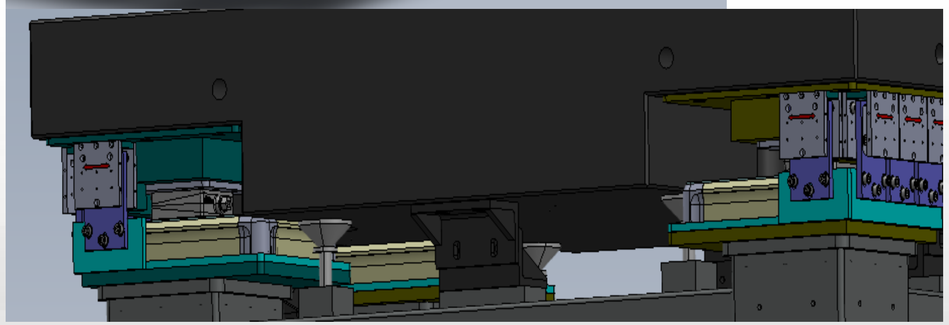
K&S Feed Forward Control Solutions for Stage Motion Compensation

Device Type	Motor Power	Comments
FFM-H	130N	Feed Forward Motor - Horizontal
FFM-V	130N	Feed Forward Motor - Vertical
Combo CPS	**COMB**ined **C**ontrol and **P**ower **S**ystem Including: • 80/240V AC Power Supply, 1200W, 20A • Up to 20 Motors Control Interfaces • Up to 8 Sensors Connections • LAN interface for Communication	







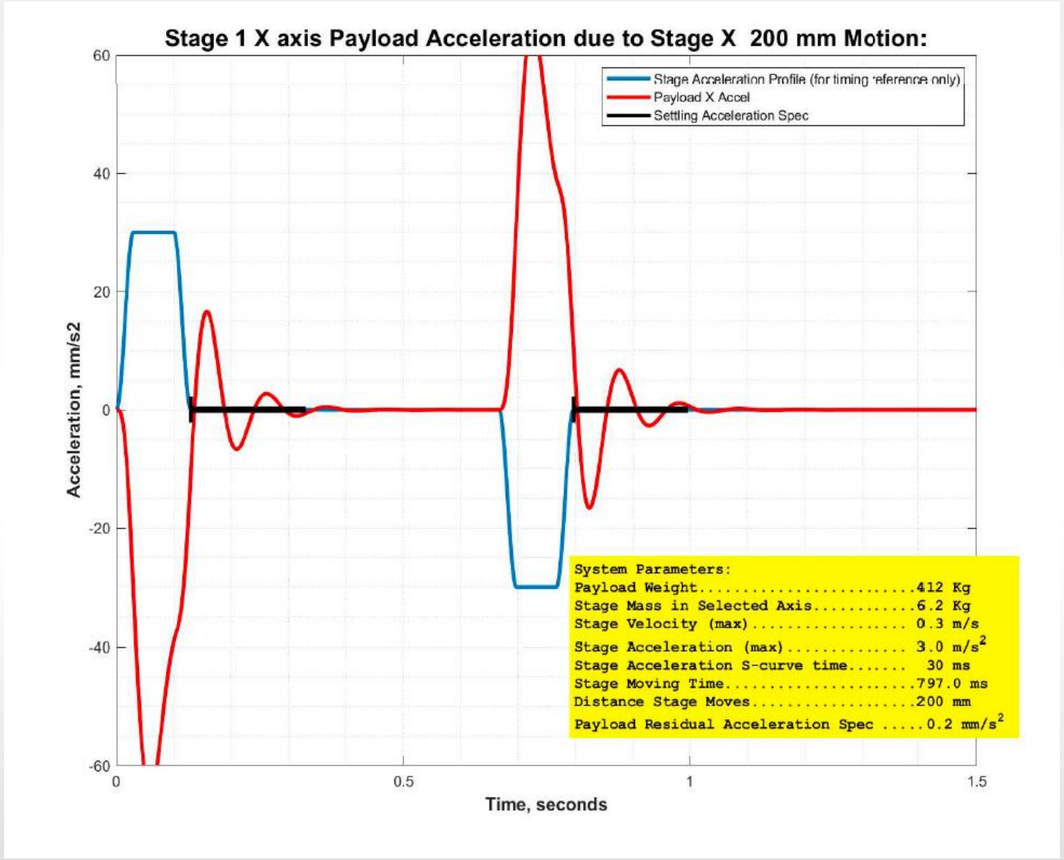


Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

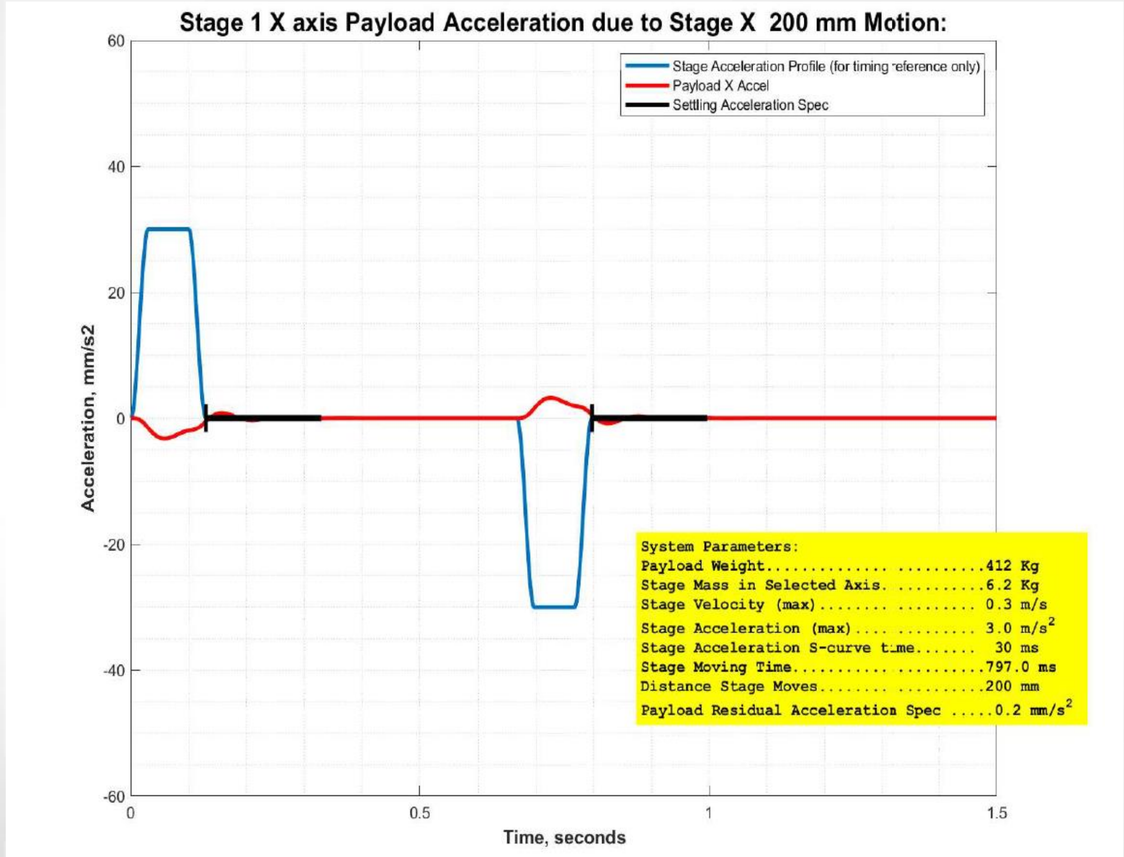
Stage Motion Compensation – Simulation Example

Stage Motion solution followed by Simulation report, which simulating performance and settling time

Machine Active Vibration Isolation

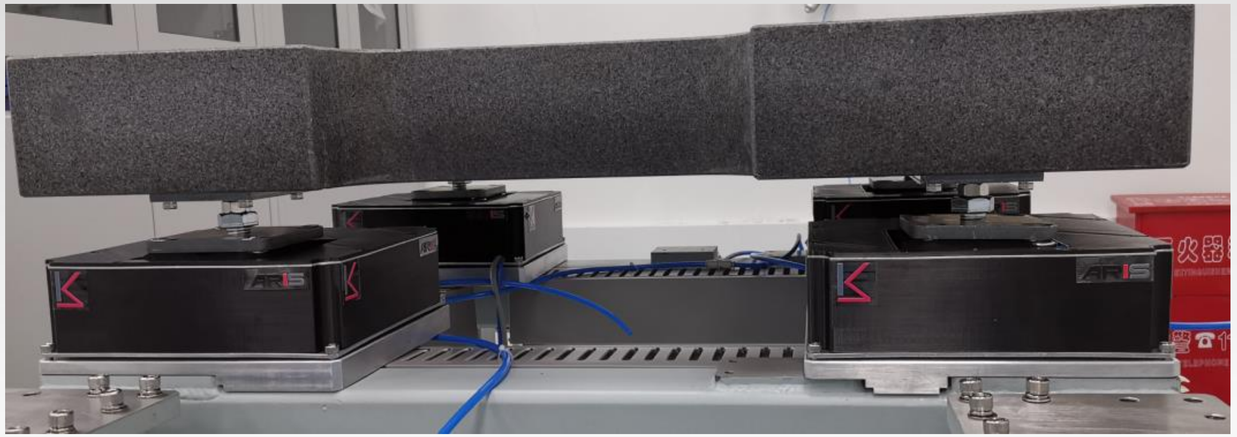


Active Vibration Isolation with Feed Forward Control



Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

OEM Examples - Integrated Solutions



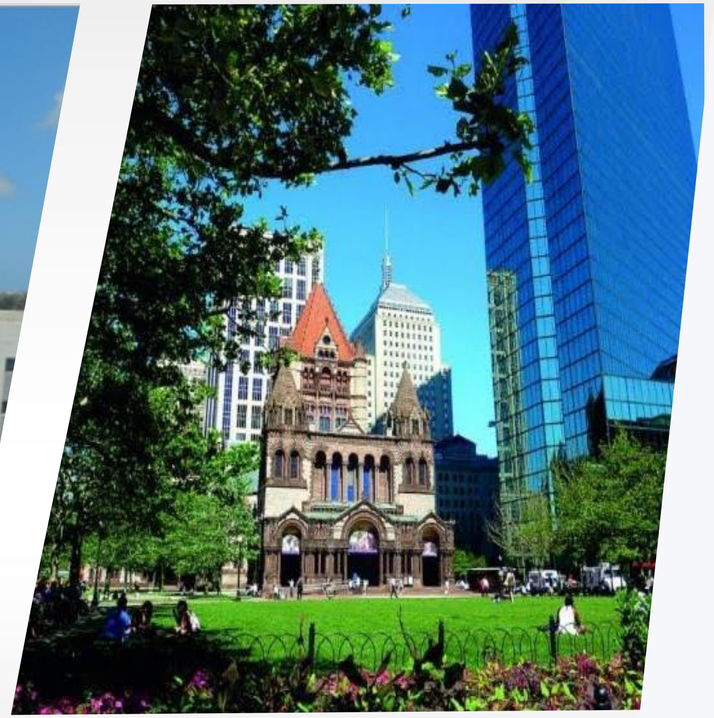
Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

Our Locations

Contact us at sales@kns-systems.com
Visit us at www.kns-systems.com

K&S China
CHANGZHOU INNOVATION PARK

K&S Israel Headquarters
Rehovot Horovitz Science Park



K&S Massachusetts - USA

K&S Korea & APAC
Seoul, South Korea

Copyright K&S Advanced Systems Ltd. All rights reserved | **www.kns-systems.com**

Advanced Vibration Isolation

Thank you

Copyright K&S Advanced Systems Ltd. All rights reserved
www.kns-systems.com