SOLID TECH

Date: Septemer 2022

VIBRATION MEASURMENT

Pupose of the analysis

Vibration measurment on Solid Tech racks and isolators (object) in order to demonstrate the efficiency of the vibration cancellation perfomance. Vibration cancellation is direct linked to achieve best audion playback experience.

Measurment performance

Measurment was conducted at 50Hz (hearable frequency range where noice disturbances will affect the audio playback quality). The sensor was located different pending the object to be tested. The load was adapted to the maximum prescribed load for each tested object.

Equipment:

- Tone generator
- Vibration Source: REL Base T/ZERO MKIII
- Vibration sensor: Geophone, Texas
- Data logger: C-CARD-DAS16/16AO, Measurement Computing
- Software: DASY Lab

Environment:

- Floor: Wood floor
- Room size: 50 cubic meters
- Temperature: 21 degrees celcius
- Sound Pressure: 70-80dB

Tested objects:

Isolators

- Base of Silence
- Feet of Silence
- Disc of Silence
- IsoBlack

Racks

- Rack of Silence Reference
- Hybrid Standad with Hybrid Isolators
- Hybrid Wood with integrated isolation in corner pillars

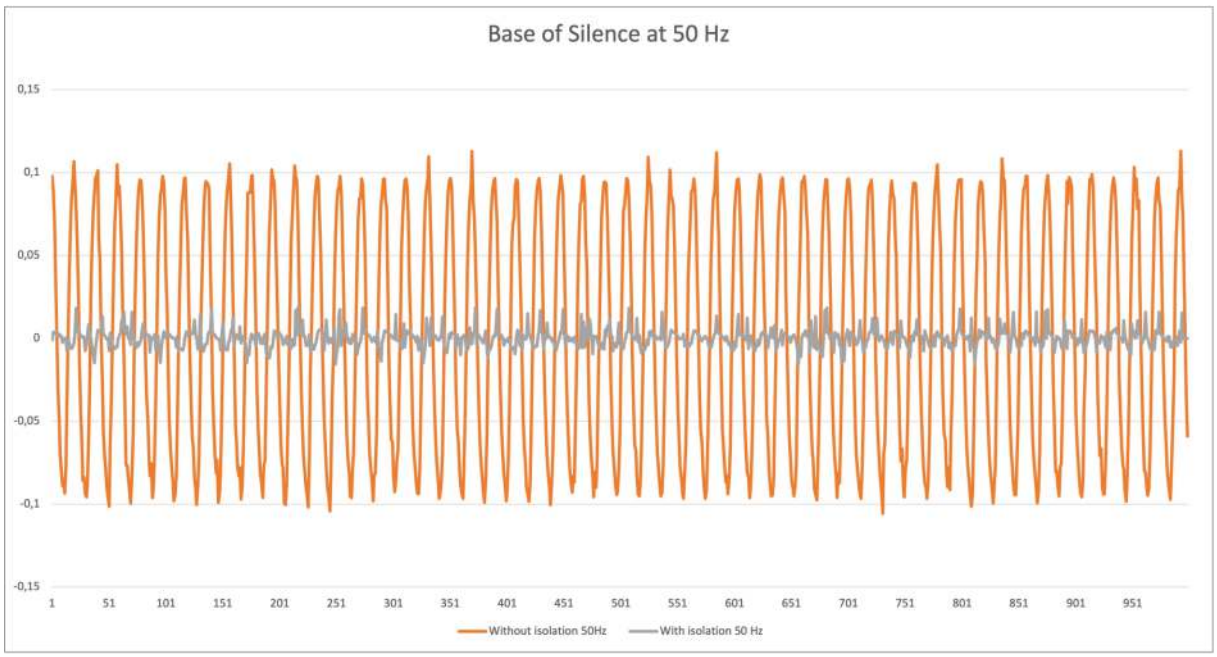
Shelves with integrated isolation

- Hybrid Isolation shelf-kit HD
- Hybrid isolation shelf-kit

Object	Isolation points	Springs in each isolator	Prescribed max load with the amount of springs used	Load used in measument	Measured Isolation efficincy
Base of Silence	4	3	45Kg	30Kg	87%
Feet of Silence	4	3	25Kg	25Kg	92%
Disc of Silence	4	3	45Kg	30Kg	86%
IsoBlack	4	3	25Kg	20Kg	81%
Rack of Silence	4	3	25Kg	25Kg	96%
Hybrid Standad with Hybrid Isolators	4	3	45Kg	20Kg	89%
Hybrid Wood with integrated isolation	4	3	45Kg	30Kg	92%
Hybrid Isolation Shelf-Kit HD	4	3	45Kg	30Kg	90%
Hybrid Isolation shelf	4	3	25Kg	30Kg	88%

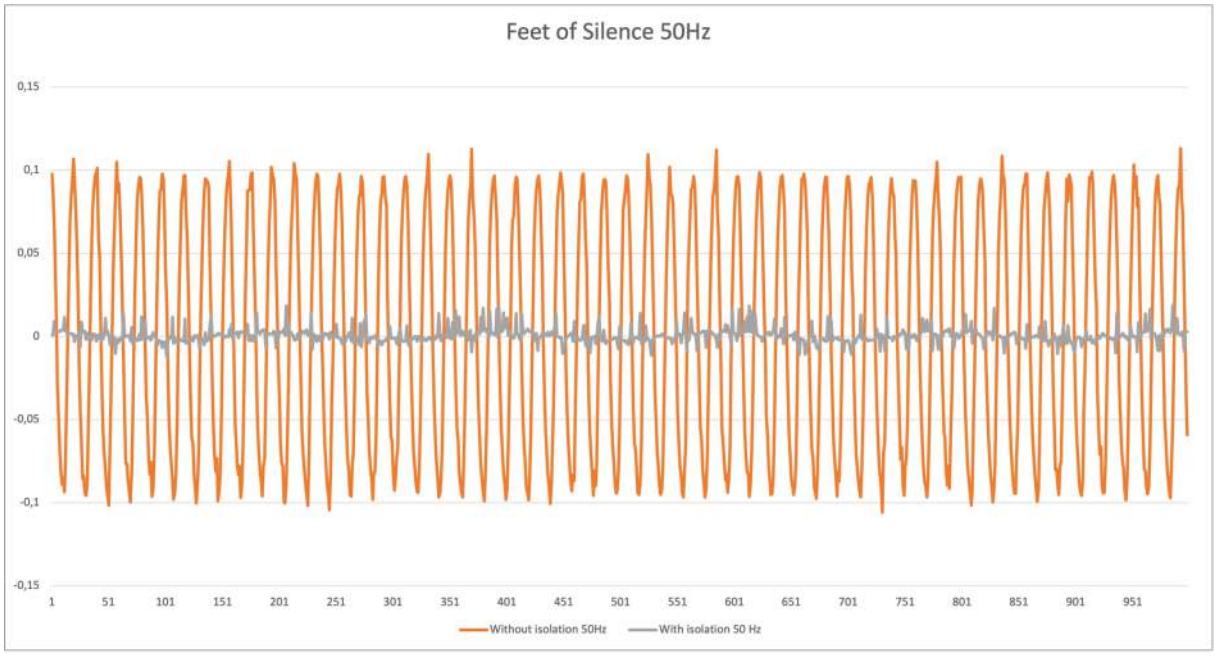
Base of Silence

- 30kg loaded on the isolated shelf. The shelf has 4 isolators with 3 springs per isolator.
- Peak improvement with isolation: 87%
- Vibration source is situated below the object and the sensor is situated above the object.



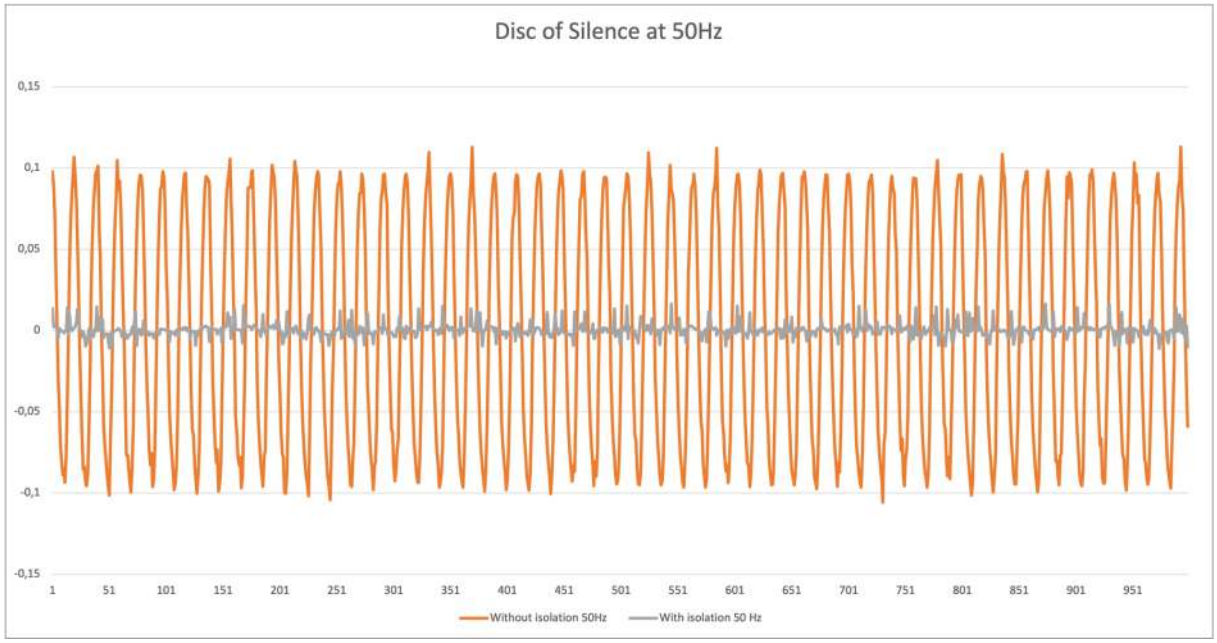
Feet of Silence

- 25kg loaded on 4 isolators with 3 high density (HD) springs per isolator.
- Peak improvement with isolation: 92%
- Vibration source is situated below the object and the sensor is situated above object with a shelf in-between.



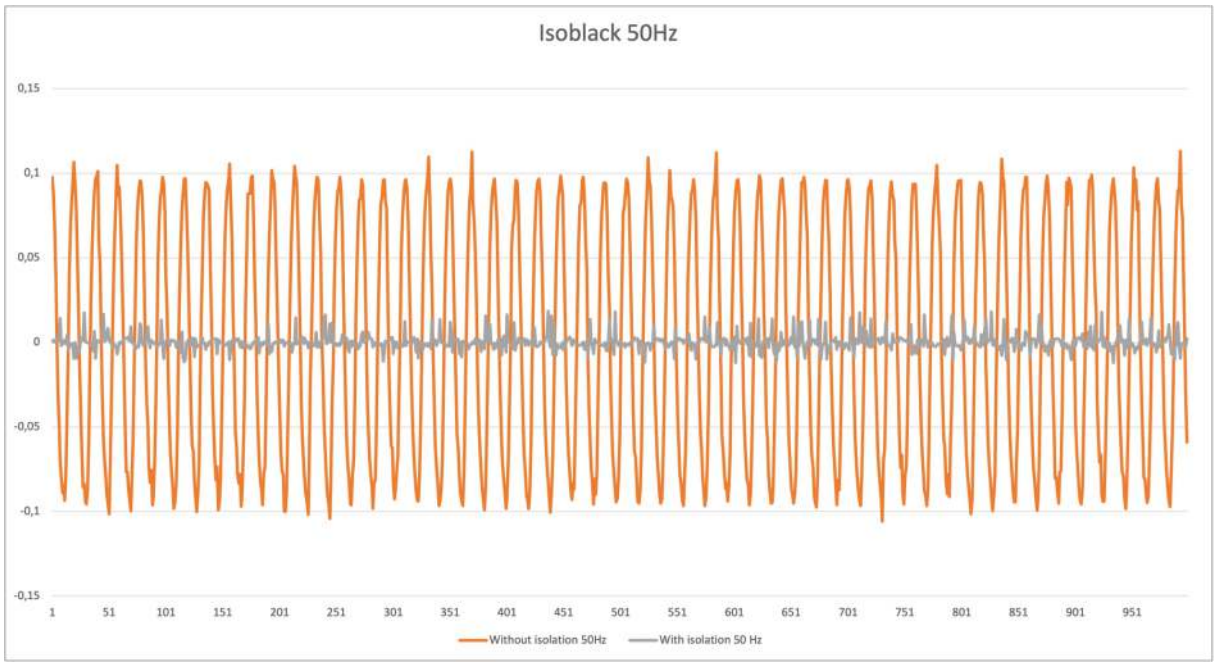
Disc of Silence

- 30kg loaded on 4 isolators with 3 springs per isolator.
- Peak improvement with isolation: 86%
- Vibration source is situated below the isolated object and the sensor is situated above the object with a shelf in-between.



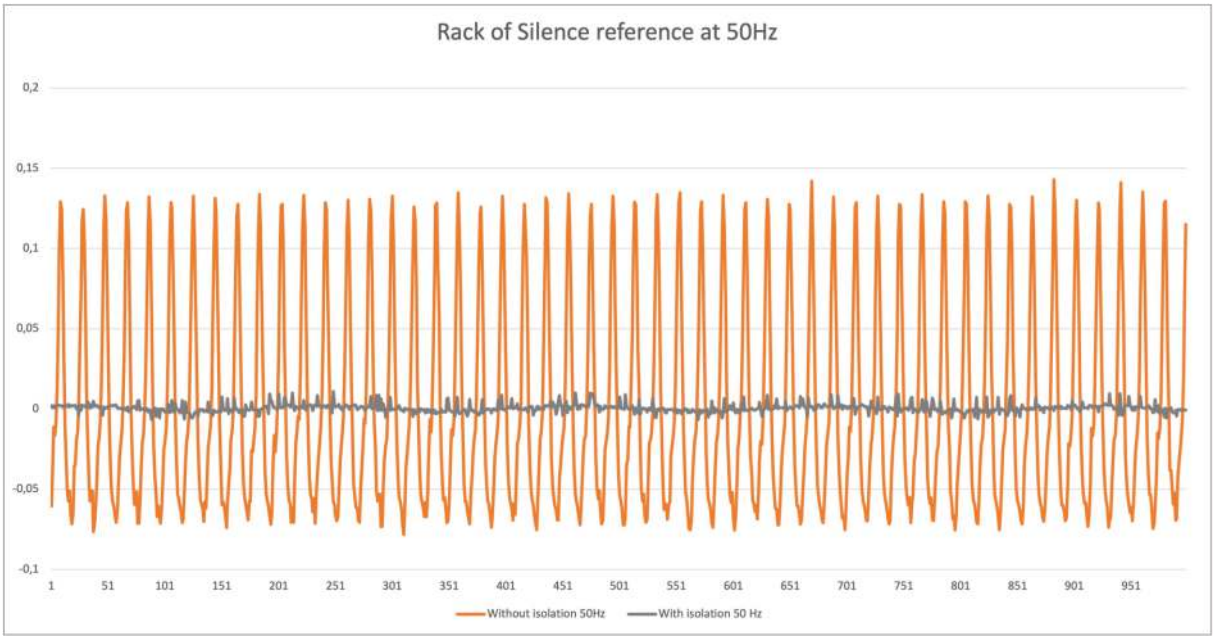
Isoblack

- 20kg loaded on 4 isolators with 3 springs per isolator.
- Peak improvement with isolation: 81%
- Vibration source is situated below the isolated object and the sensor is situated above the object with a shelf in-between.



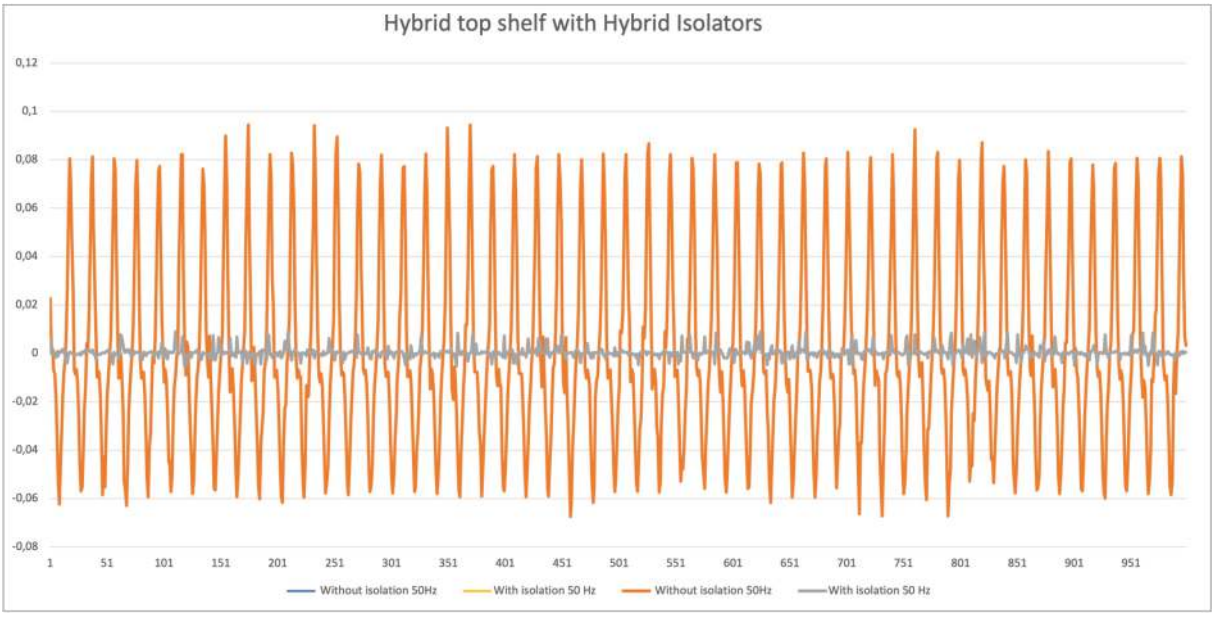
Rack of Silence reference

- 25kg loaded on 4 isolator spots with 3 high density (HD) springs per isolator.
- Peak improvement with isolation: 96%
- Vibration source is situated below the isolated object and the sensor above the isolated rack shelf.



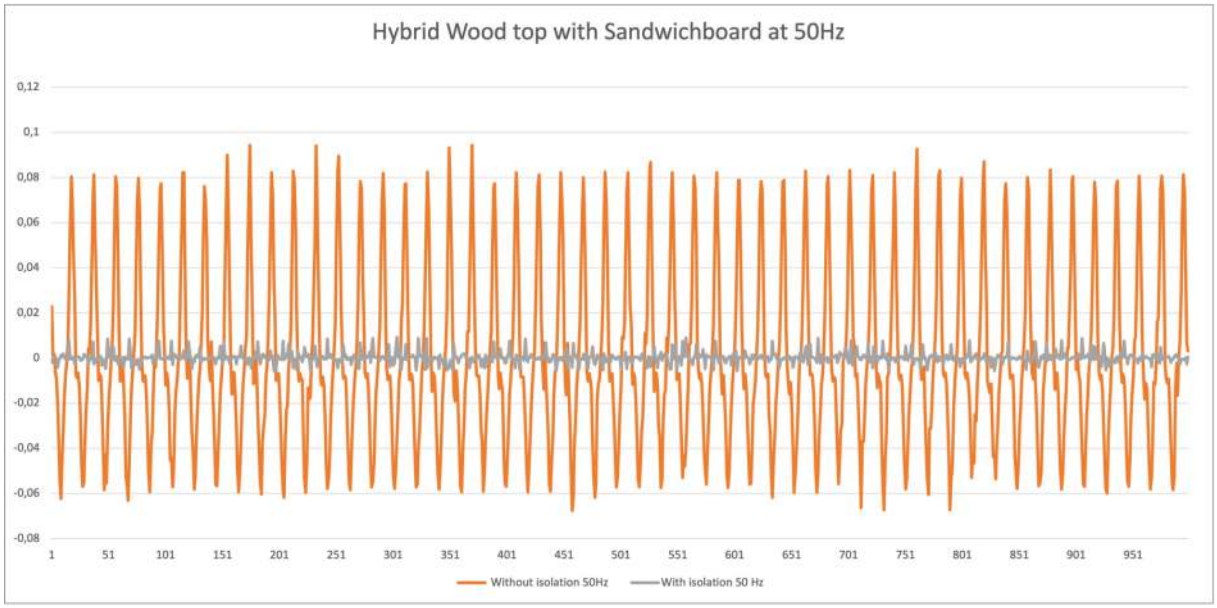
Hybrid Standad shelf with Hybrid isolators

- 30kg loaded on 4 isolator spots with 3 springs per isolator
- Peak improvement with isolation: 89%
- Vibration source is situated below the object and the sensor above the isolated rack shelf.



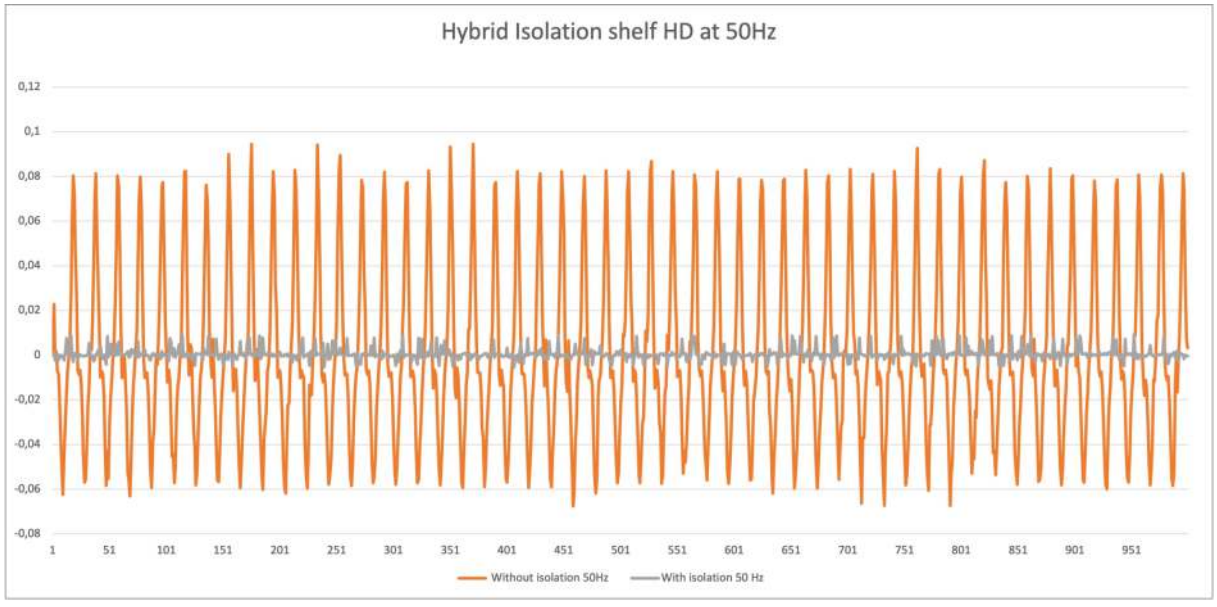
Hybrid Wood with integrated isolation

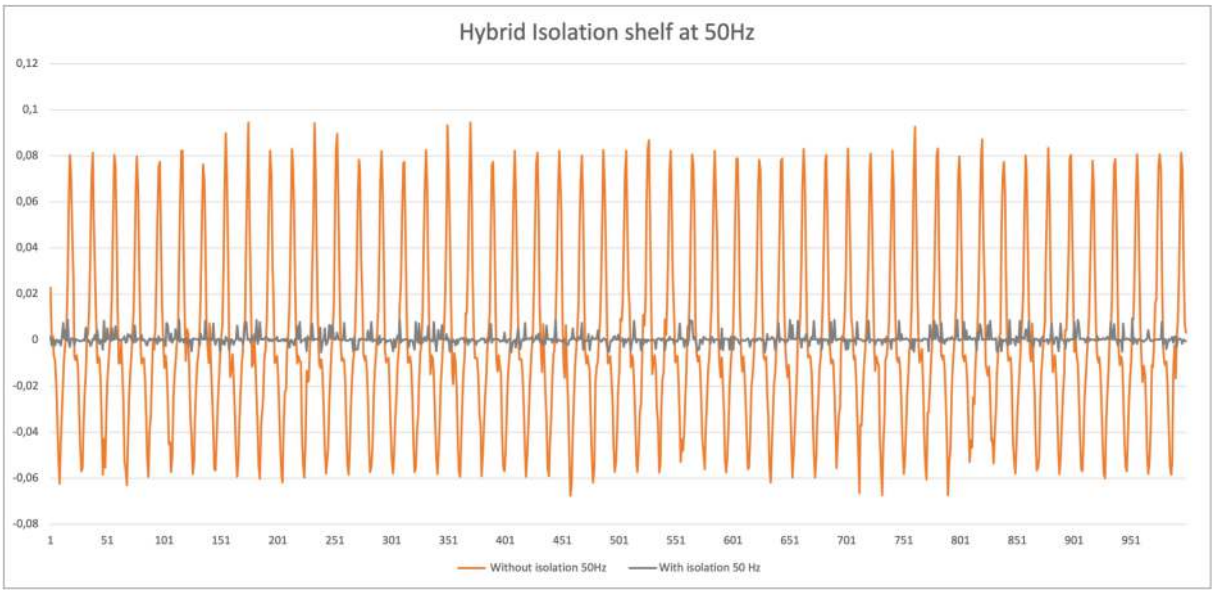
- 30kg loaded on 4 isolator spots with 3 springs per spot
- Peak improvement with isolation: 92%
- Vibration source is situated below the object and the sensor above the isolated rack shelf.



Hybrid Isolation shelf-kit HD

- 30kg loaded on 4 isolator spots with 3 springs per spot
- Peak improvement with isolation: 90%
- Vibration source is situated below the object and the sensor above the isolated rack shelf.



Hybrid Isolation shelf-kit

- 20kg loaded on 4 isolator spots with 3 springs per spot
- Peak improvement with isolation: 88%
- Vibration source is situated below the object and the sensor above the isolated rack shelf.