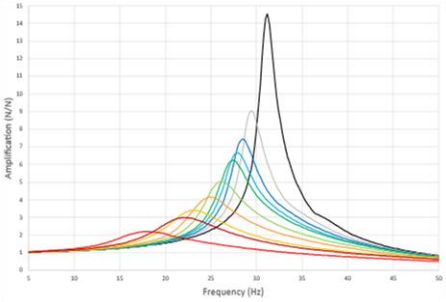
Wire Rope Isolators

Robust vibration and shock isolation

- Wire rope isolator is a robust solution for mechanical isolation
  - Works in challenging environments
  - Reduces disturbing high frequency vibrations while being ready to isolate extreme shock-like excitations caused by transportation, transients and explosions
  - All-metal structure - Works in 3 directions - High temperature range
- Wire rope isolator is used in industry and military applications
  - Used in machines and structures to the smallest of electronics
  - Isolator payload can be varied from 0.1 kg to more than 1 000 kg
  - Manufactured in EU
  - Tailored made solutions for special cases
  - Standard stock isolators for mass products



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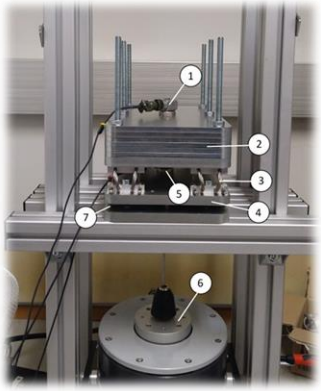
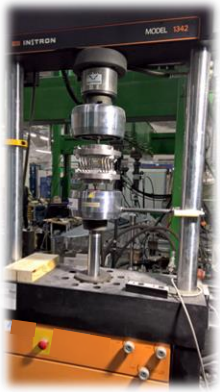
Robust vibration and shock isolation

Wire Rope Isolator - Offering

- ✓ Robust isolation for challenging environment
  - Shock / transient loading
    - Civil application – impacts, transport
    - Military usage – UNDEX, IED, explosions
    - Enables the use of COTS products
  - Vibration isolation
    - Robust environments
    - High damping -> low resonance peak (see test results)
- ✓ Laboratory tests
  - Modern dynamic laboratory for dynamic isolator studies
    - Modal analysis of structures
    - Field measurements – application studies if needed
    - Hydraulic tests for high loading studies
    - Electromagnetic shaker for high frequency studies
- ✓ Design phase tool
  - Solution for challenging dynamics during design phase
    - Mathematical models of wire rope isolators available
    - Finite element analysis for special cases
- ✓ ADDI is an improvement tool for wire rope isolator
  - Removes the tension challenge of wire rope isolator during shock





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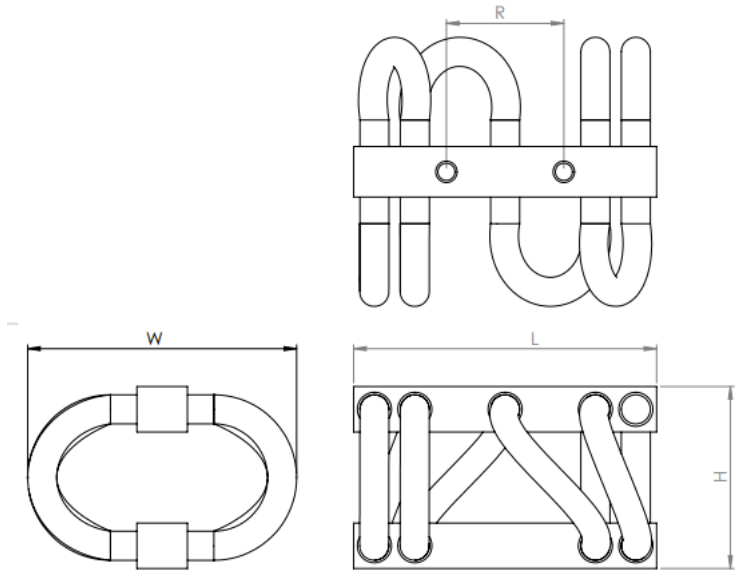
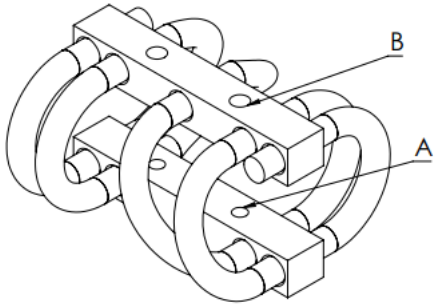
Wire Rope Isolator Technical Example & Info

Identifier	Height Width Length	-	1 - 32 mm	Bolt / thread fixture	-	-

MODEL / ORDER CODE	H [mm]	W [mm]	L [mm]	R [mm]	WIRE THICKNESS [mm]	A	B	UNIT WEIGHT [kg]	NOTE

MANUFACTURER / REPRESENTATIVE	Vibrol Oy Sulantie 18 04300 TUUSULA Finland VAT:2699985-2 www.vibrol.fi





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A	9.4.2021	Vehviläinen	First Revision	Kinnunen	Keinänen
Rev.	Date	Prepared	Details of Revision	Checked	Approved

Scale 1:1,5	Size A3	Page 1/1	Rev. A made 9.4.2021
			Drawing ID: xxxxxx

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Properties
Robust maintenance free solution
3D isolation (all axes)
Temperature range: - 100 C to + 250 C
Excellent corrosion resistance
High damping: loss factor from 0.3 to 0.5
(low resonance peaks)
Tailored and standard stock isolators
Payload: 0.1kg – 1 000 kg

Materials
Wire: stainless steel
Bars: aluminium alloy
Coating standards/method: MIL-DTL-5541F /
Surtec650
MIL-A-8625F
Fixture options: threads or countersunk bolt
Special cases: contact Vibrol

Test standards
ISO 10846
MIL901
BV0230

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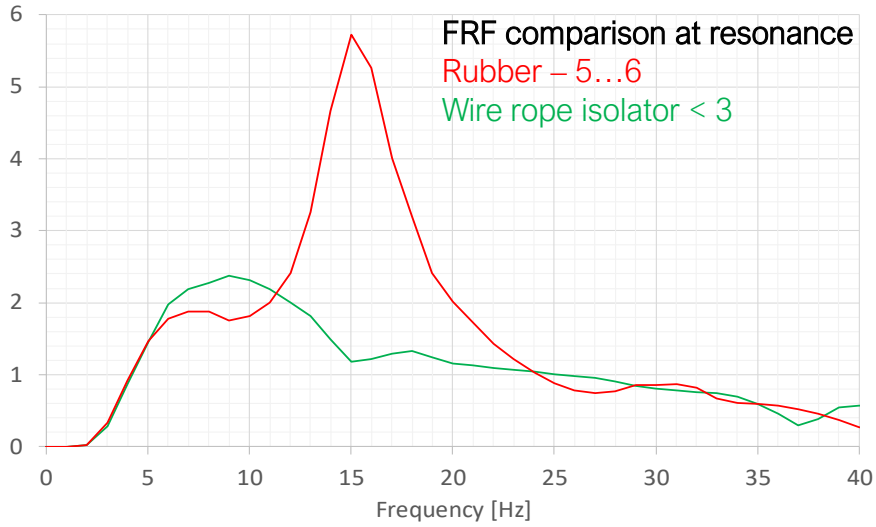
Case example: wire rope vs rubber isolation



Customer's Challenges :

Isolation target has a broadband vibration excitation and occasionally shock loading

Rubber isolator gives high vibration level at resonance and during shock loads

Our solution :

Wire rope isolator was tested

Benefit :

Customer can run the target without limitations

Wire Rope Isolators

Robust vibration and shock isolation

Vibrol is your partner in vibration and shock control

- More than 20 years of experience working with wire rope isolator
  - Tested using ISO-10846 standard / MIL901 / BV0230 …
- State of the art solutions
  - ReKi™ broadband mass damper
  - ADDI for wire rope isolators
- Dynamic measurements and FEA
  - Structures, laboratory studies for components
  - Strain gauge, modal analysis
  - Drop test method for navy qualifications and pre-tests

Premises in Tuusula, Finland
15 minutes from the airport
Founded 2015
www.vibrol.fi

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Interested?

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