

## ACTIVE NOISE & VIBRATION CONTROL SYSTEM FOR HELICOPTERS



Our Active Noise & Vibration Control System for Helicopters can reduce helicopter cabin noise reduction up to 20dB and helicopter cabin structure vibration reduction up to 30 dB.

Our Active Noise and Vibration Control System reduces vibrations and radiated noise and includes:

- Sensors to measure vibrations and noise.
- Actuators to intervene in the system.
- A control unit that analyzes disruptions and coordinates the actuators in real time to offset vibrations.

It can also include a human-machine interface that allows the pilot to set the operating mode.

- Products Family: **Active Noise & Vibration Control Systems for Helicopters**

## **TECHNICAL FEATURES**

- Our extensive expertise in designing and approving active systems includes assessing and analyzing vibrations and noise in simple and complex systems, determining and designing the corresponding active systems and installing and approving systems.
- Versatile solutions to ensure best trade-off between performance, weight, cost, energy consumption.
- Developed in compliance with aerospace standards : ARP-4761 for safety, DO178 for software, DO254 for hardware.
- ITAR-free design.

## **BENEFITS**

- Comfort
- Durability
- Safety

## **MARKET AND EXPERTISE**



AEROSPACE



## **ALL PRODUCTS FAMILIES**

# **Aerospace Vibration Control Systems**



### **Engine Mounts**

Our Engine Mounts are designed for jet engines (piston engines, turboprops and turbofans ) and auxiliary power units. Thanks to their excellent vibration and acoustic insulation, they enhance passenger comfort and safety.



### **Elastomer Motion Control Products for Helicopters**

We develop all types of elastomer/metal laminated bearings for main and tail helicopter rotorheads. Stiff in some directions while flexible in others, our solutions comply with stringent life and safety OEM requirements.



## **Lead-lag dampers for helicopters**

We design, develop, and product both the visco-elastic and hydro-elastic models of our lead-lag dampers for helicopters. Our solutions ensure dynamic stability in all operating conditions for helicopters.



## **Avionic racking systems**

Our Avionic Racking Systems are containers that protect black boxes. They protect electronic components from very high temperatures, powerful vibrations and shocks. Compliant with standards (ARINC 404 and 600; MIL...)



## **Health & Usage Monitoring Systems**

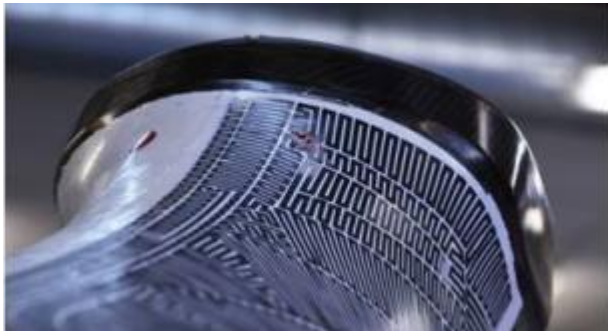
Sensing and health control systems are embedded into parts to allow key data measurement for the health assessment of components or systems.

Maintenance operations based on actual operating conditions are optimized.



## **Active Noise & Vibration Control System for Helicopters.**

Active noise & vibration control systems measure and analyze noise and vibrations and generate optimized dynamic forces in real time. They reduce vibrations by up to 30 dB and noise within helicopter cabins.



## **Electro-thermal ice protection products**

Heating mats are made of heating elements (electrically resistive materials like metal or carbon) embedded in a thin electrical insulating multilayer composed of polymers.



## **Control & Display**

In the cockpit, the need for information through control panels is essential, namely for communication, warning, advisory, flight and engine systems. CLAROPAN multidisciplinary team means a fully developed, cost effective, plug-and-play solution.

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