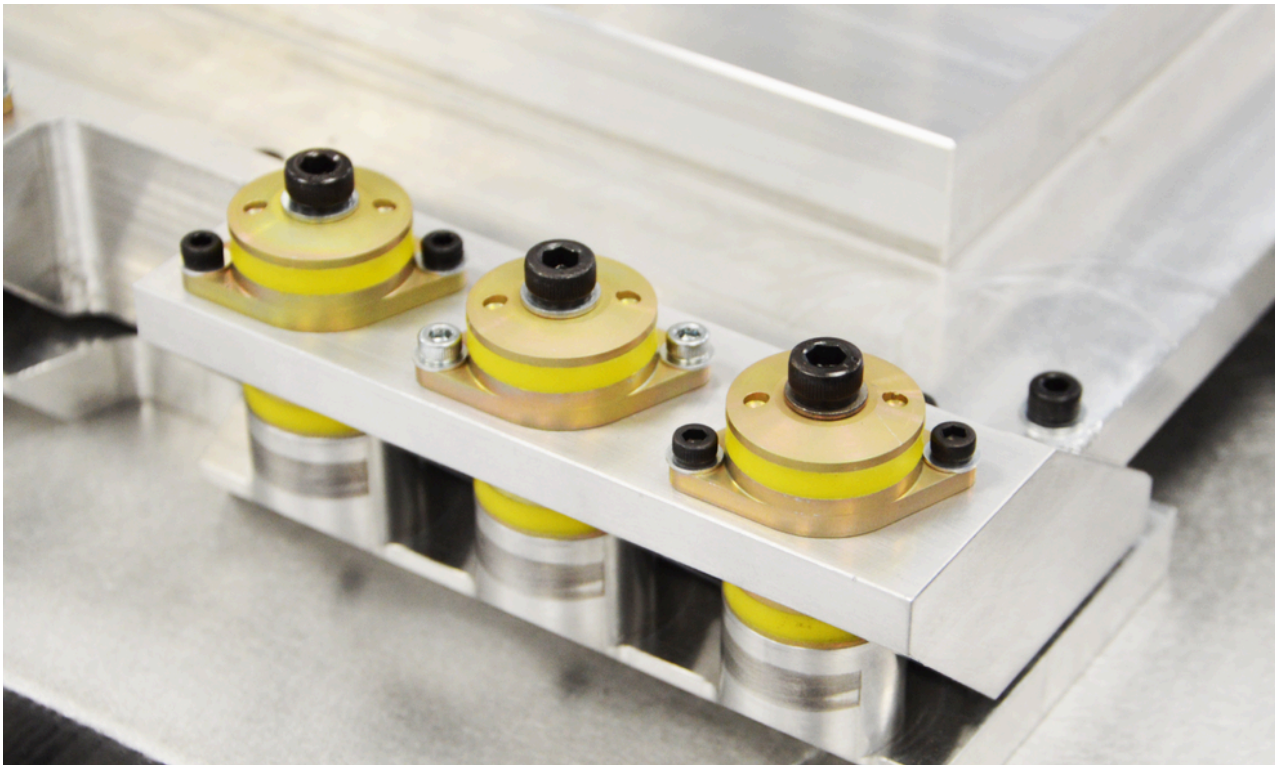
SMAC
GROUPE GEFICCA TECHNOLOGIES

PRECISION SOLUTIONS FOR SHOCK AND VIBRATION PROTECTION

We design and manufacture high-performance rubber-based solutions, from material formulation to engineering, production, and testing, for demanding environments.



Make your mission a success

FROM CONCEPTION TO TESTING, ALL WITH ONE PARTNER

Formulation

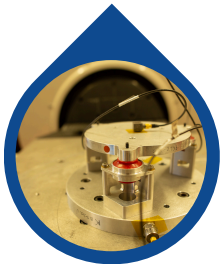
Expertise in developing materials tailored to demanding environments such as aerospace and defense.

Engineering

Design of robust mechanical solutions with advanced simulation capabilities

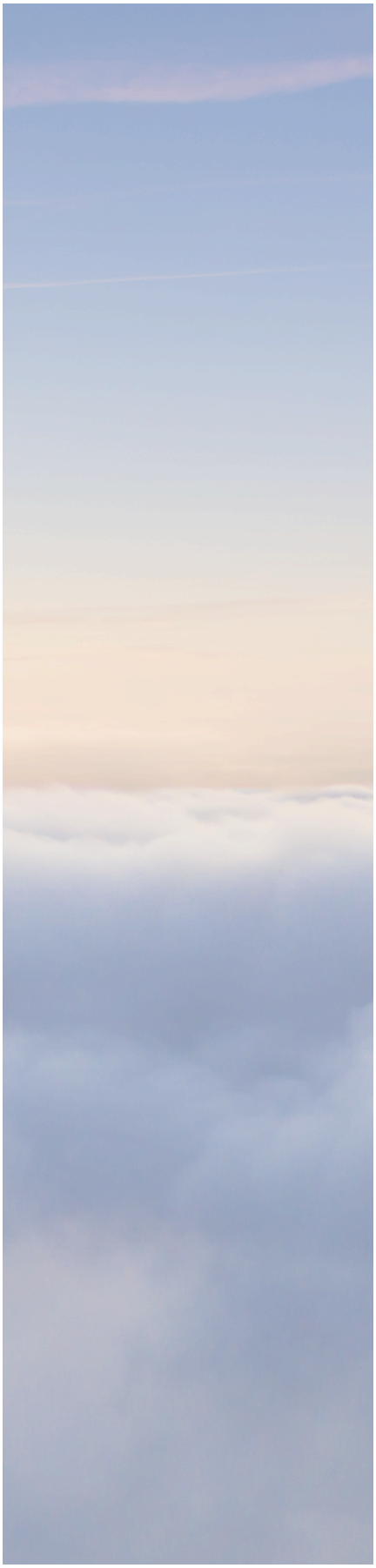
Manufacturing

Precision manufacturing from small to medium series



Testing

Testing for shock, vibration, and environmental conditions



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SASU with a capital of 1 000 000€
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PRELIMINARY SPECIFICATION FORM
ISOLATOR SELECTION

Please fill out this form to provide key details about your project. Include your specific requirements and any challenges you face. This will help our engineering team review your needs and offer the best solution along with an accurate quotation. We're here to support you every step of the way.

EQUIPMENT PHYSICAL DATA :

- Mass : .....
- Number of interface points.....
- Is the COG aligned with the interface points ? .....
- Maximum mounting size (if any) : .....

MECHANICAL ENVIRONMENT DATA :

- Rootcause description (Vibration isolation, shock cancellation, filtering objectives ...) :

.....

- Applicable mechanical environment (Sinus, Random, Shock) : Please provide information in a separate document

ENVIRONMENTAL DATA :

- Operating temperature :.....
- Non-Operating temperature :.....
- Special requirements (fluid susceptibility, saltspray, outgassing ...) :.....

PROGRAMMATIC DATA :

- Project name:.....
- Number of prototype models required :.....
- Milestone date :.....

- Qualification models (QM) :.....
- Milestone date :.....

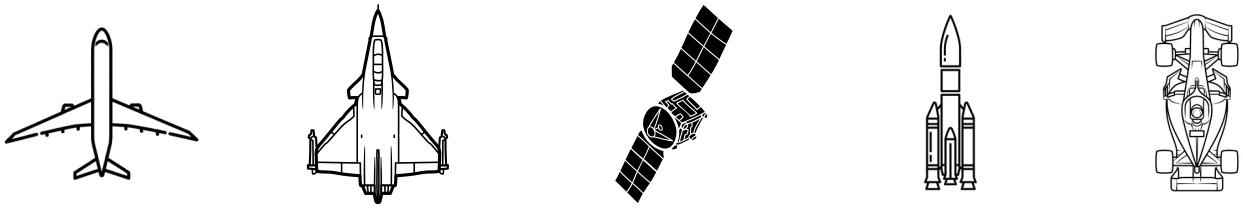
- Estimated Production / Flight models (FM) :.....
- Milestone date :.....

- Expecting starting date :.....

- Contact:
  - Name :.....
  - Company :.....
  - Country:.....
  - Telephone :.....
  - E-mail :.....

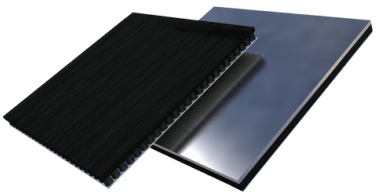
PRECISION SOLUTIONS FOR SHOCK AND VIBRATION PROTECTION

Discover our comprehensive range of precision-engineered solutions designed to address the challenges of shock and vibration across various industries. From aerospace & defense to automotive racing, our products ensure optimal performance, safety, and reliability. Our expert team is dedicated to providing tailored solutions that meet your specific needs, ensuring your projects achieve the highest standards of excellence.



MITIGATING STRUCTURAL VIBRATION WITH CONSTRAINED DAMPING LAYERS

SMACSONIC® solutions greatly reduce unwanted vibrations and resonances, which can lead to mechanical fatigue and noise in lightweight structures. Utilizing shear deformation within a viscoelastic layer, they dissipate energy as heat, providing effective damping across a broad frequency range. These solutions offer an exceptional damping-to-weight ratio, ideal for vibration attenuation in fuselages, walls, and cabin interiors.



SMACSONIC®

Surfacic Weight : From 1.4 kg/m² (0.29 psf) to 4.4 kg/m² (0.90 psf)

Applications :

- Ideal for use on aircraft fuselage
- Suitable for interior cabin applications

Features :

- Provided with an adhesive on one side for easy installation
- Available with different constraining layers : Aluminum & CFRP
- Fire resistant following FAR 25.853 and FAR 25.856

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ENHANCING COMPOSITE DAMPING AND ACOUSTIC PERFORMANCE

SMACWRAP® is an advanced unconstrained damping layer solution designed to enhance the performance of composite structures. Designed to be embedded inside composite parts, composed of a lightweight and high-damping viscoelastic material, SMACWRAP® is engineered to significantly improve behavior under impact and reduce sound characteristics and structural vibrations.

Surface Weight : From 0.13 kg/m² (0.03 psf) to 2.41 kg/m² (0.49 psf)
Applications :

- Damping for composite structures
- Noise & Fatigue Reduction
- Impact and splintering protection for composite parts
- Hinges and flexible flaps inserted inside composite parts

Features :

- Available with an adhesive on one side for easy installation
- Compatible with CFRP, GFRP, thermoplastics, and metals
- Invisible when embedded inside composite layers

SMACWRAP®

OPTIMIZING VIBRATION CONTROL WITH HIGH-PERFORMANCE DAMPING PADS

Our damping pads are designed to absorb and dissipate vibrational energy, providing superior protection and stability. Ideal for a wide range of applications, these pads ensure enhanced performance and longevity of your equipment.

DAMPING PADS

Material Properties : High Damping Elastomers
Applications :

- Damping for composite structures
- Noise & Fatigue Reduction
- Impact and splintering protection for composite parts
- Hinges and flexible flaps inserted inside composite parts

Features :

- Available with an adhesive on one side for easy installation
- Durablen, easy to install, resistant to environmental factors

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ENHANCING PERFORMANCE WITH RACING BUMP RUBBERS

Specially designed for racing applications, our bump rubbers provide exceptional shock absorption and vibration damping. They ensure optimal performance and safety, even in the most demanding racing conditions.

Material properties :
- High-Damping & High-resilience rubber compounds

Applications :
- Racing Vehicles
- Suspension systems

Features :
- High durability
- Superior absorption

BUMP RUBBERS

OPTIMIZING STRUCTURAL STABILITY WITH PRECISION-TUNED VIBRATION CONTROL

Tuned Mass Dampers (TMD) are precision-engineered devices designed to reduce vibrations in structures by counteracting resonant vibrational energy. They consist of a mass, a rubber spring and a fixing plate, all tuned to the specific frequency of the structure to which they are attached.

TUNED MASS DAMPER

Material properties :
- Customizable mass and stiffness to target specific frequencies

Applications :
- Ideal for reducing vibrations in aircraft structures
- Suitable when specific frequencies needs damping

Features :
- Precision-engineered for effective vibration control
- Durable construction for long-term reliability
- Easy integration with various structural designs

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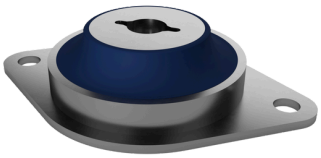
VERSATILE ISOLATION SOLUTIONS FOR VIBRATION CONTROL

Our standard and adapted isolators are designed to provide effective vibration isolation across a wide range of applications. Whether you need a standard solution or a custom adaptation, our isolators ensure reliable performance and durability.

Material properties :
- Various stiffnesses and designs, from micro-mounts, low profile isolators to heavy shock absorbers

Applications :
- Electronics onboard Aircrafts, Helicopters, launchers and satellites

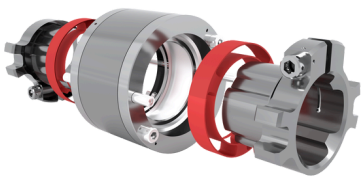
Features :
- Specific space grade materials SMACTANE SP & SMACSIL
- Superior absorption



ADAPTED ISOLATORS

TAILORED SOLUTIONS FOR UNIQUE VIBRATION CHALLENGES

Our custom vibration isolation systems are designed to meet the specific needs of your project. With a focus on precision and performance, we provide tailored solutions that ensure optimal vibration control and enhanced operational efficiency.



CUSTOM VIBRATION ISOLATION SYSTEMS

Material properties :
- Customizable materials and designs

Applications :
- Ideal for reducing vibrations in aircraft structures
- Suitable when specific frequencies needs damping

Features :
- High Performance
- Durable
- Tailored to specific requirements

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Our company specializes in developing innovative solutions for vibration damping and acoustic insulation in the aerospace, space, defense, mobility and automotive sports sectors.

Our mission is to provide high-performance products that enhance the safety, comfort, and efficiency of land, space, air or sea vehicles.

By collaborating closely with our clients, we meet their expectations by offering tailored solutions, superior quality materials, and expert technical support for every project.

Find out more capabilities on our brochures :

Transforming cabins into quiet spaces

Expertise in molding and overmolding for reliable sealing

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Corporate Video

www.smac-sas.com