



NEED A TESTING LABORATORY?

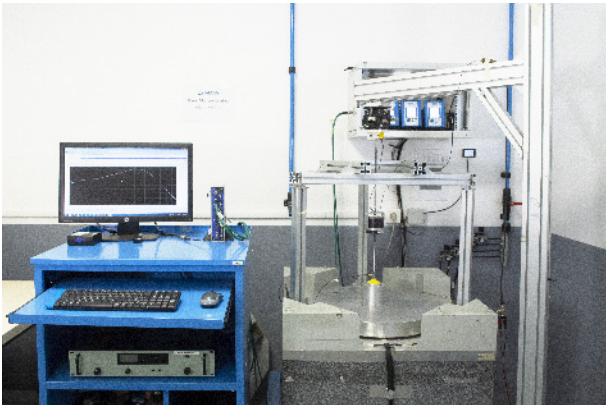
SMAC offers a wide range of tests such as thermal, quasi-static, dynamic, vibration, shock and modal analysis.

OUR TEST FACILITIES TO CHARACTERIZE, VALIDATE AND QUALIFY YOUR EQUIPMENT IN VARIOUS ENVIRONMENTS

- ▶ **Climatic (Hot, Cold, Humidity, Vacuum)**
Enclosures with a maximum volume of 0.23 m³, from -40 °C to +300 °C.
- ▶ **Vibration (Sine, Random, Sine/Noise, ...)**
Electrodynamic shakers LDS V8, V824, V721 (driving force: up to 60 kN, stroke: up to 2,5 inches, testable equipment: up to 250 Kg).
- ▶ **Vibration under thermal environment**
Thermal enclosure of 0.09 m³, from -55 °C to +90 °C combined with our electrodynamic shakers for your vibration tests in controlled temperature.
- ▶ **Shock**
SRS and classic shock (half sine, saw tooth, ...) on electrodynamic shakers, pyrotechnic type SRS (simulation by metal/metal impact).

FACILITIES MATCHING YOUR NEEDS

- ▶ MTS tension/compression testing machines (10 kN and 20 kN).
- ▶ Electrodynamic shaker with a capacity of 60 kN equipped with table and 16 time and frequency measurement channels. Tests can be performed in climatic chamber with controlled temperature (between -55°C and +90°C).
- ▶ Mini vibrating shaker with a capacity of 40 N for modal analysis (temperature measurement from -40°C to +40°C) with 4 measuring channels.
- ▶ A shock generating device of pyrotechnic type ("Ringing plate").
- ▶ A high sensitivity dynamometer for the measurement of microvibration (Kistler sensor).
- ▶ A non-contact 3D measurement Micro-Vu machine.
- ▶ Classic ovens of different capacities to perform thermal aging (max 300°C). 2 ovens with 10 mbar vacuum (max 250 °C).



SMAC has established close links with various university laboratories. As a result, SMAC is able to carry out specific physico-chemical analyses analysis (DMA, DSC, ATG, FTIR, NMR, GC-MS) as well as dynamic stiffness measurements on parts with the help of hydraulic cylinders.



During your mechanical tests, acceleration measurements on your equipment are possible (up to 16 frequency and time measurement points).

In case of failure of qualification of your equipment, our technical experts are available to analyze your test results and identify solutions for damping and protection.



SMAC is located in Toulon and has been designing since 1947 your solutions in terms of sealing, noise, shock and vibration in the sectors of in application fields such as Defense, Space, Aviation, Racing & Sports.

For more information: contact@smac.fr