

# TOTAL PROTECTION FROM SHOCK, VIBRATION & ENVIRONMENTAL AGENTS



SPACE



AIR



LAND



SEA



ADVANCED  
ENGINEERING  
SOLUTIONS

**POWERFLEX**

ADVANCED  
ENGINEERING  
SOLUTIONS

POWERFLEX



## COMPANY PROFILE

POWERFLEX is an Italian Small Company founded in 1996 at Limatola, a small city at 20km from Caserta and 50km from Naples, with more than 25 years experience in design, environmental qualification and manufacturing innovative turn-key solutions to safely handle, transport and store fragile electronics in most severe scenarios of Defence and Space sectors as well as in the Energy, Rail and Cultural Heritage.

The current portfolio of Powerflex products ranges from wire rope isolators & rubber mounts to 19" ICT racks & containers, all equipped with mechanical isolators for a total protection from shock and vibration.

The 19" ICT racks are also equipped with EMI/RFI shielding solutions and active air cooling of housed electronics (Powerflex Original Design Manufacturer), achieved by fan arrays and heaters or air conditioner.

For the transport of dangerous goods, such as missiles and torpedoes, Powerflex developed and qualified the ONU Series containers, both in Al-alloy or GFRP materials.

## MANUFACTURING

POWERFLEX has a modern factory of 2000m<sup>2</sup> equipped with an automated warehouse, CNC machines, welding machines, semiautomated winding tools for wire rope isolator manufacturing, a Vacuum Infusion Process System for manufacturing GFRP products and an industrial painting booth of 9m x 4m x 2.5m (H).



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## STANDARD PRODUCTS

POWERFLEX Wire Rope Isolators are excellent shock and vibration proof devices for electronics used in Defence (Sea-Land-Air) and Space sectors.

POWERFLEX rubber mounts PWEN Series is excellent to reduce structure-borne noise in noiseless systems as submarines.

POWERFLEX products are:

- PWRN Series, 19" Rack in high strength aluminium or steel alloy
- PWKS Series aluminium alloy containers
- PWKR Series rotomoulded cases and 19" mini-racks.
- PWKF Series Glass Fibre Reinforced Plastic containers
- PWKC Series injection moulded case

All POWERFLEX products are designed to meet the following specifications:

MIL-STD-810, MIL-S-901, NAV 30-A001-A002  
ATA 300, CEI EN 60529.



## CUSTOM PRODUCTS

POWERFLEX can also manage the project development, the prototype manufacturing and environmental qualification, the series manufacturing of custom products on Customers' specs such as rugged displays/videowalls, air cooled ARINC trays for avionics, mine blast proof seats for military land vehicles and seismic isolation solutions for sculptures.

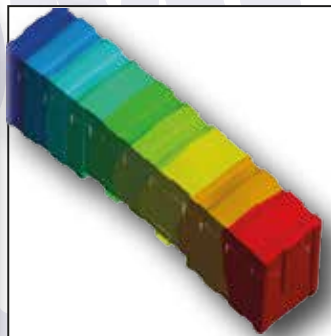
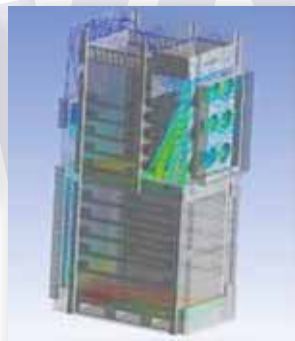
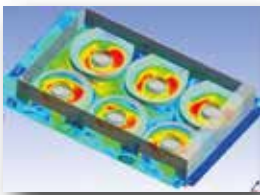


## ENGINEERING SERVICES

To maintain and improve its excellence Powerflex Engineering Dept. cooperates with the most important Italian Universities and Research Centres on topics concerning the shock, vibration and environmental agents proof solutions.

The main engineering services offered are:

- Mechanical & Electronic 3D CAD design and reverse engineering by 3D scanner
- Advanced structural and thermal Finite Element Analyses
- Vibro-acoustic on site measurements and signal analyses
- Environmental tests in Powerflex's Laboratory.



## ENVIRONMENTAL TEST LAB

POWERFLEX Environmental Laboratory is equipped with the following systems and instrumentation:

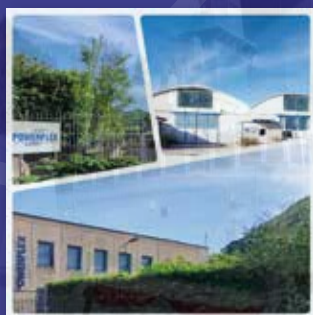
- Electrodynamics vibration exciters with rms forces ranging from 6kN up to 90kN and with head expander/slip-table up to 1.5m x 1.5m for EUT weighing up to 2T.
- Climatic chambers with net volume ranging from 1m<sup>3</sup> to 40m<sup>3</sup> and a modular solar radiation array lamps for cyclic and stationary profiles
- Class 1 Integrating Sound Level Metre
- IPX6 tool according to MIL STD 810
- Fluid contamination tool according to MIL STD 810
- Hydraulic press with load cells up to 10T and a 250mm linear displacement transducer
- LMS Scadas III 48 channels vibration data acquisition system & controller vibration data acquisition
- LMS Scadas Mobile 20 channels vibration data acquisition
- Vibration Research 8 channels vibration data acquisition & controller
- Agilent 20 channels digital multimeter
- Triaxial accelerometers with full scale up to 500g
- Thermocouples and igrometres.





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**POWERFLEX**

BY POWERFLEX  
**KOMBAT**  
CONTAINERS & CASES

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