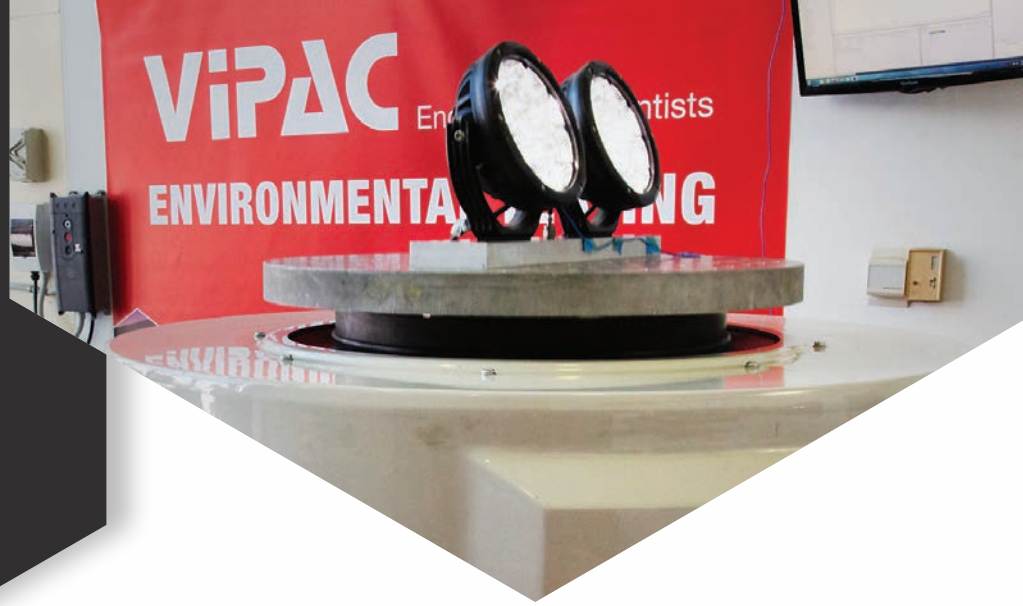


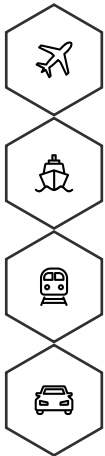
# VIPAC

Engineers & Scientists

Leading Commercial  
Qualification Testing  
Services Australia



# Environmental Testing



Established in 1973, Vipac Engineers & Scientists has organically grown to become one of Australia's leading engineering testing laboratories and consultancies. Proudly Australian owned and operated, Vipac specialises in environmental testing for commercial and the defence & space industry.

Vipac's A2LA (Certificate #5677.01) accredited qualification services are compliant with a broad range of standards as per **ISO/IEC 17025** for Infrastructure & Asset Integrity and Manufactured Goods. The company provides testing to essential international commercial, military, and packaging standards.

These services include, but are not limited to acceleration, high altitude, high amplitude

shock, hydrostatic pressure, inclination, ingress protection, salt spray, temperature & humidity, and vibration & shock testing.

Vipac offers the ability to custom design and build rigs for the cyclic testing of a wide range of components. These can be built to customer specifications and are able to apply up to 20 tonnes of force.

The company hosts a large, walk-in climatic chamber offering temperatures from -30 to 90°C. It is ideal for large equipment.

By specifying Vipac you will receive a consistent, high-quality service, with facilities in Melbourne plus onsite consulting from Brisbane, Adelaide, and Sydney. The company offers a complete suite of vibration & shock testing options in Melbourne.

**Top:** Vipac's cutting-edge shaker putting vehicle components through their paces. **Left:** Vipac performed essential vibration & shock testing on the Collins-class submarine.



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### Vibration & Shock Testing

- > Electrodynamic shakers up to 60kN force, and with a maximum displacement of 76mm peak-to-peak.
- > Hydraulic shakers for payloads up to 2,000kg and with a maximum displacement of 150mm peak-to-peak.
- > Multiple medium high-force shakers up to 32kN force.
- > Vibration controllers include sine, random, classical, sine-on-random (SOR), random-on-random (ROR), shock response spectra (SRS), and resonance track & dwell.
- > 1Hz to 3kHz vibration.
- > Up to 120kN shock.



### Acceleration Testing

- > Up to 30g acceleration with 130kg payloads (including fixtures).
- > Slip rings enable functional testing whilst rotating.
- > 750mm<sup>2</sup> test bed footprint.
- > Max. vertical clearance of 560mm and max. horizontal clearance 110mm.



### High Altitude Testing

- > Up to 21,000m (70,000ft) and <5kPa (absolute).
- > Controlled pressure ascent and descent ramp rates.
- > Can be combined with high and low temperatures.
- > Suitable for both commercial and defence & space assets.



### Temperature & Humidity Testing

- > A wide temperature range from -70 to +180°C; Relative humidity from 2 to 99%.
- > Fast ramp rates exceeding 6°C/min.
- > Variety of chamber sizes from 1m<sup>2</sup> to over 50m<sup>2</sup>.
- > Suitable for both commercial plus defence & space assets.
- > Liquid testing.



### High Amplitude Shock Testing

- > For payloads up to 450kg, with a table size of 1200 x 1200mm.
- > Up to 600g and 2ms high amplitude shock acceleration levels.
- > High velocity SRS testing (suitable for naval assets).
- > All common shock pulse shapes catered for.





Left: Vipac provides vital salt spray & corrosion resistance testing.



### Salt Spray/Corrosive Atmosphere Testing

- > Assessment of equipment in harsh atmospheres.
- > Ideal for the comparison of coatings or anodizing on hardware.
- > For marine assets or the evaluation of materials.



### Mechanical Load & Fatigue Testing

- > For static and cyclic load ranges up to 20 tonne.
- > Programmable servo-hydraulic controller for extended duration fatigue testing.
- > Force, displacement, and strain gauging measurements available.
- > Common for the testing of automotive, rail, mining, and defence industry assets.



### Applicable Standards

- > **Defence & Space**
  - > DEF(AUST)5000
  - > DEF-STAN 00-35
  - > MIL-STD 167
  - > MIL-STD 810
  - > MIL-STD HP BK
  - > NASA & NATO
  - > SpaceX
  - > RTCA/D0-160F
- > **Commercial**
  - > ISO/IEC 17025
  - > ASTM B117
  - > AS 1170.4
  - > AS IEC 60068
  - > AS IEC 60529
  - > IEC 61373
  - > BS EN 50125
  - > BS EN 50155
  - > ISO 16750

## Official ELO2 Consortium Partners

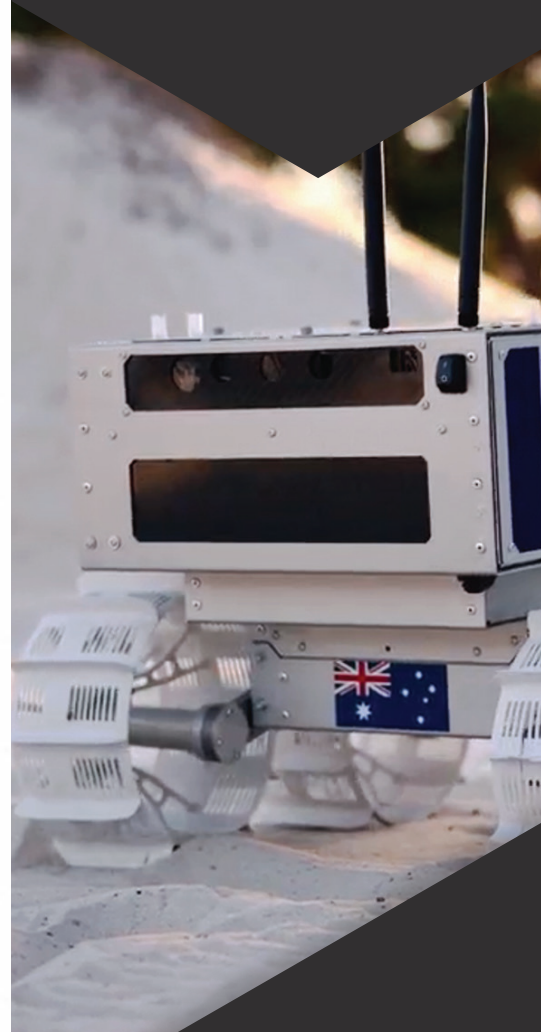
Vipac is official partners of the ELO2 Consortium: winners of the federal grant to design, construct, and operate the Australian-made "Roo-ver" that is heading to the moon.

The Roo-ver is a lunar rover on a mission to explore the surface of the moon and contribute to Australia's involvement in the Artemis Program.

The program encompasses the creation of groundbreaking technology, such as the rover, using this technology to collect resources from space, then to ultimately

create a carbon-neutral future for the heavy and mining industries.

Vipac joins BHP, Northrop Grumman, RMIT University, Melbourne Space Laboratory, The University of Adelaide, Inovor Technologies, Element Robotics, Colorado School of Mines, Saber Astronautics, Australian National University Institute for Space, Titomic, and One Giant Leap Australia Foundation in support of the ELO2.





Proudly Australian owned & operated since 1973.



Qualifications & Certifications

- > A2LA (Certificate #5677.01) Accredited
- > NATA Accredited Ingress Protection Testing
- > BSI ISO 45001, ISO 9001, and ISO 14001



Companies We Work With

