



ESL LABS

TESTING YOUR LIMITS



Full Range of Environmental Testing



Full range of environmental testing

ESL Labs is a leading provider of environmental, mechanical and chemical testing of military and commercial products.

Our facility is a centre of excellence for testing capabilities, and we have served our clients in the defence industry for the last 25 years.

Testing for the defence industry

RELIABLE TESTING FOR LAND, AIR AND SEA

With ESL Labs, you benefit from MIL-STD testing for extreme environments, reliable testing for any altitude, and specialized support for the marine industry. Our testing has supported gear that has gone into many major defense programs.

WHAT WE DO

- Simulate a variety of **transportation or vibration scenarios** to test performance and operational capability of both military wheeled and tracked vehicles.
- With a wide range of sizes and configurations, ESL's **thermal chambers** can meet military climatic and altitude testing requirements.
- Take your gear from **hot, humid conditions of the tropics to the cold dry conditions of the arctic** in seconds. We can determine how well it will survive a driving rainstorm, an ice storm or the effects of blazing persistent sunshine.
- Test a wide-range of **EMI/EMC scenarios** emulating radiated/conducted emissions and susceptibility.



Capabilities

ESL Labs offers standard and tailored tests to best match environmental conditions for your products. We are also able to design, manufacture and adapt test fixtures to ensure your product can be appropriately tested.



CLIMATIC TESTS

Low & high temperature thermal soak | thermal shock | humidity | blowing rain | icing/freezing rain | water immersion | enhanced solar radiation



ELECTROMAGNETIC TESTS

Conducted susceptibility | conducted emissions | radiated susceptibility | radiated emissions



MATERIAL TESTS

Tension | compression | fatigue cycling | viscosity | hardness | bend and shear | resin content | fiber volume | gel time



DYNAMIC TESTS

Vibration (sine, random, mixed mode, loose cargo, transport) | classical shock (half-sine, sawtooth trapezoidal) | shock response spectrum | navy high impact



CORROSION TESTS

Salt fog/spray | accelerated weathering (i.e., UV) | fluid susceptibility



PRESSURE TESTS

Hydrostatic pressure testing (internal and external) | depth testing | altitude testing

SUBSET OF MIL AND RUGGED TEST STANDARDS PERFORMED

MIL-STD-461
MIL-STD-810
MIL-STD-167

MIL-STD-1275
MIL-STD-1399
MIL-STD-704

MIL-DTL-901
MIL-STD-108
MIL-E-5400T

RTCA/DO-160
MIL-STD-2164
UN TDG

ASTM B117
ASTM G53
ASTM D4169

SAE
FCC
ICES

CISPR
Lloyd's Register
NATO:STANAG



Choose ESL Labs for:

- ✓ One-stop, full service, comprehensive testing facility.
- ✓ Test to industry standards.
- ✓ Observe tests real-time.
- ✓ Collaborative customer engagements.
- ✓ Canadian Content Value for ITBs.
- ✓ Flexible scheduling.
- ✓ Experienced team.





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Kanata Location (HQ)

4015 Carling Avenue
Ottawa, ON
K2K 2A3

Nova Scotia Location

221 Joseph Zatzman Drive
Dartmouth, Nova Scotia
B3B 1M6

Centre for Ocean Ventures and Entrepreneurship (COVE)

27 Parker Street
Dartmouth, Nova Scotia
B2Y 4T5



ESL Labs is a division
of J-Squared Technologies Inc.

Web

esl-labs.com

Email

info@esl-labs.com

Phone

+1 (902) 464-9220