



VACUUM TECHNOLOGY

Vacuum Technology covers production and test systems that rely on controlled low-pressure environments to improve performance, repeatability, and product quality. Torontech's Vacuum Technology lineup includes ToronTVAC™ for thermal vacuum (TVAC) space simulation.

What Vacuum Technology Supports in Industry

Vacuum systems remove air and contaminants so processes stay stable and measurable. This helps reduce heat transfer through gases, improves sealing consistency, and creates test conditions that match real operating environments. Many teams use vacuum methods to control variation, confirm reliability, and document compliance-driven results.

ToronTVAC™ Series

Thermal vacuum (TVAC) test chambers simulate low pressure and controlled thermal loading to validate hardware in space-like conditions. These systems help reveal temperature-driven drift, thermal interface problems, and vacuum-dependent failure modes before deployment.

Why Choose Torontech Vacuum Technology

Vacuum Technology systems are selected when repeatability, stable operating boundaries, and process confidence matter. Teams benefit from predictable vacuum behavior, practical fixture space, and configurations that scale from production lines to test programs without changing the core workflow approach.

APPLICATIONS

Where ToronTVAC™ fits

- Unit-level and component verification
 - Supports repeatable pump-down, stable thermal boundaries, and controlled cycling for aerospace and advanced electronics.
- Thermal cycling and thermal balance testing
 - Helps teams validate thermal interfaces, boundary conditions, and comparable results across repeated runs.
- Subsystem to full-satellite programs
 - Scales chamber envelope and capability for larger hardware, higher instrumentation density, and program-level workflows.

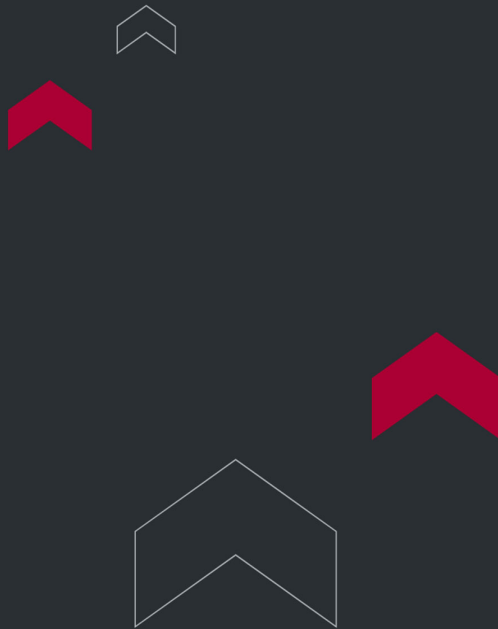
FEATURES

What TVAC Testing Evaluates

A vacuum chamber reduces convective heat transfer, so heat flow is dominated by radiation and conduction. Heat sinks and cold plates establish stable thermal boundaries for thermal cycling or thermal balance profiles, while controlled pressure supports consistent long-duration runs.

Programs that Often Pair with TVAC Programs

Many programs combine TVAC validation with electric propulsion and micro-force testing, especially when background pressure control and low-noise measurement are part of the requirement. The lineup includes electric propulsion performance platforms, a ground ignition system, and a micro-force/actuator measurement platform.



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