



SPACE AND SATELLITE TESTING

Element Los Angeles (104th Street) offers extensive capabilities to support the space industry, providing space and satellite testing in Southern California. Our facility and expert staff of highly experienced engineers and technicians provide a full range of qualification, compliance, and reliability testing. We support a wide range of industries including aerospace, military, and defense.

TESTING FOR SATELLITES, REFLECTORS, SOLAR ARRAYS AND OPTICAL PAYLOADS

We're considered a leader in testing for the space industry, with the internal capabilities to custom-engineer chambers and design- fixtures to conduct a complete range of space-related testing, including:

- Spacecraft and spacecraft subsystems
- Fuel cells and solar panels
- Composite antennas and batteries
- Full qualification and acceptance testing of propellant tanks
- Various mechanical and electronic devices



TV-25: 15' DIAMETER BY 25' DEEP THERMAL VACUUM SYSTEM

This state-of-the-art system is the largest TVAC system within the Element organization. TV25 is equipped with a fully automated 500kVA, 3 phase emergency backup power generator. The pumping system includes four (4) roughing pumps, two (2) blowers, four (4) 52" cryopumps along with a 10" turbo pump. This allows quick pump down capabilities to the 10⁻⁷ Torr range. This system has a 3-ton crane located in a class 100,000 (ISO 8) high bay cleanroom area for product unpacking. Facility has an air bearing ride system for safe product transport from high bay to class 10,000 (ISO 7) room located in front of thermal vacuum system.

DELIVERING INNOVATIVE PRODUCT TESTING AND CERTIFICATION SOLUTIONS

ENVIRONMENTAL & DYNAMIC TESTING AT ELEMENT LA (104TH ST)

The Element Los Angeles (104th Street) Team are experts in environmental, thermal, shock, vibration, proof, leak and precision cleaning. We have a large selection of temperature, thermal shock, thermal vacuum and overpressure chambers as well as electrodynamic shakers for sine, random, sine on random and shock testing.

Other services include:

- Vacuum Bake-out with TQCM outgassing measurements, FTIR (Fourier-transform infrared spectroscopy and NVR (Non-Volatile Residue) analysis
- Proof Testing hydraulically to 60,000Psig and pneumatically to 20,000Psig
- Helium Leak Testing with a range from 10⁻⁵ SCCS/Helium to 10⁻⁹ SCCS/Helium
- Nitric and citric acid passivation, hydrofluoric acid pickle/etching and aluminum deoxidation
- Primary specifications include MIL-STD 810, MIL-STD 202, RTCA DO160, ISTA, ASTM and NEMA

PRECISION CLEANING CAPABILITIES AT ELEMENT LOS ANGELES (104TH ST)

As the preferred precision cleaning supplier for many of our nation's aerospace and defense contractors, Element is an active participant in Space, National Security and Homeland Defense Programs. These programs require the strict process and cleanliness controls that only a company with over 50 years' experience can provide.

Working closely with our client partners, we developed and implemented the cleaning processes necessary to meet the demanding level of process control and system cleanliness required for mission success. We continue to develop processes and techniques as new commercial space programs grow. The need to reduce costs and deliver products that meet stringent requirements on time, every time is now more important than ever.

Element Los Angeles (104th St) performs precision cleaning and testing for in-process parts and finished products including:

- Valves and related items
- Piping and tubing
- Tanks and cylinders
- Heat exchangers
- Gauges and instruments
- Fittings and fasteners
- Transducers and sensors
- Fuel and oxidizer ducts
- Cryogenic and vacuum jacketed piping
- Cleaning Capabilities
- Propellant systems (fuel and oxidizer)
- Hydraulic components and systems
- Purge panels
- Cryogenic components and systems
- Breathing air systems
- Hydrogen peroxide components and systems
- Nitric and citric acid passivation
- Nitric and hydrofluoric acid pickle
- Hydrofluoric acid etching
- Aluminum deoxidation
- NASA, AMS, SAE, ARP, ASTM NAS and IEST; Industrial cleaning and compressed gas association.