



An Award-Winning Company Helping  
Manufacturers Design and Test  
Award-Winning Products



EMC



Shielding Effectiveness



Climatics



Dynamics



Ingress Protection



Package

# Introduction to Keystone Compliance

# Inc. 5000

America's Fastest  
Growing Companies



Founded in 2007, Keystone Compliance has helped hundreds of manufacturers across numerous industries certify their products. Balancing customer service, growth and employee satisfaction, the company is routinely recognized as one of the fastest growing and best places to work in Western Pennsylvania.



# Competitive Advantages

Keystone Compliance has enjoyed substantial growth by offering manufacturers:

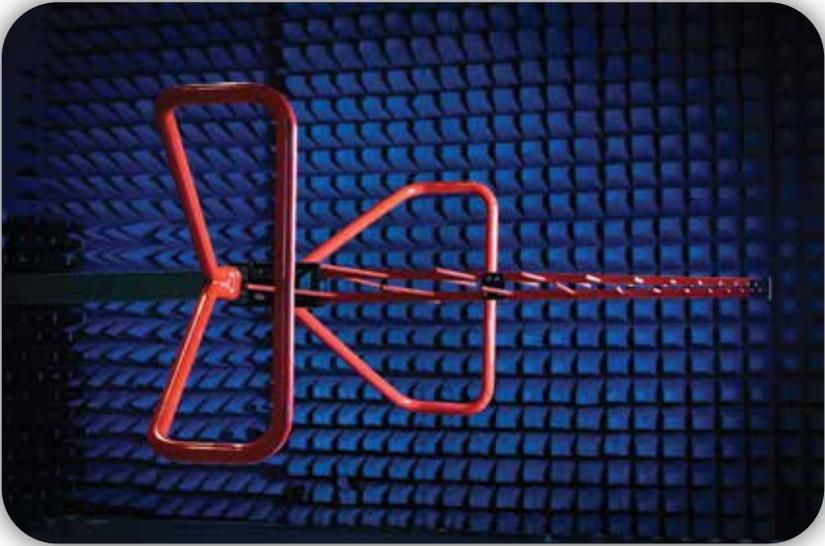
- **Value Engineering:** When failures occur, our staff works with customers to identify the root cause and determine necessary corrections.
- **Quick Report Turnaround:** The typical turnaround time for a detailed report is less than two weeks.
- **Comfortable Testing Experience:** Our 23,000 square foot facility provides a temperature controlled, well-lit and clean environment to work in.
- **Custom Solutions:** Our engineering team excels in solving complex testing setups and requirements. Some recent examples include automated keyboard stroke testing, operational cycling and impact testing.
- **Fully-Accredited:** As an A2LA-accredited lab, our test reports are recognized throughout the world, reducing the need for American manufacturers to obtain testing internationally for foreign certifications.



# A2LA ilac

Please see our website to view our scopes of accreditation.

# EMC Testing



Keystone Compliance's EMC/EMI/RF testing capabilities include radiated emissions measurements in the frequency range of 30Hz to 40 GHz and radiated immunity/susceptibility capabilities of 30Hz to 40GHz up to 200 volts per meter.

We offer a full scope of commercial and military testing. Some of our testing capabilities include:

- EMC Site Surveys
- EMP Testing
- Conducted Emissions
- Conducted Susceptibility
- Radiated Emissions
- Radiated Susceptibility
- Shielding Effectiveness
- ESD



# EMC Test Chambers

Our EMC/EMI lab is highlighted by five test chambers, including three semi-anechoic/ferrite-lined 3-meter chambers and two semi-anechoic EMC mil-aero chambers.

The three 3-meter chambers have:

- Measurements of 18' high by 20' wide by 30' long.
- Exhaust systems that permit the testing of engines.
- Oversized doors with the largest being 10' by 10'.
- Eight-foot turntables capable of turning 8,000 pounds.
- HVAC capabilities and ventilation to dissipate heat loads.
- Dedicated control rooms.



## Site Surveys

In addition to testing in our chambers, Keystone Compliance has expertise completing site surveys to determine EMC shielding, equipment compliance and employee safety.

# Shielding Effectiveness & ESD Testing

## Shielding Effectiveness

As a shielding effectiveness test lab, Keystone Compliance works with engineers to not just measure the shielding effectiveness of their product, but suggest potential improvements. Our capabilities include dynamic range to 40GHz.

Some of the most popular standards we test to include the following:

- MIL-C-85485
- MIL-STD-188-125-1
- MIL-STD-285
- IEC 60096-1
- IEEE 299
- MIL-DTL-83528C



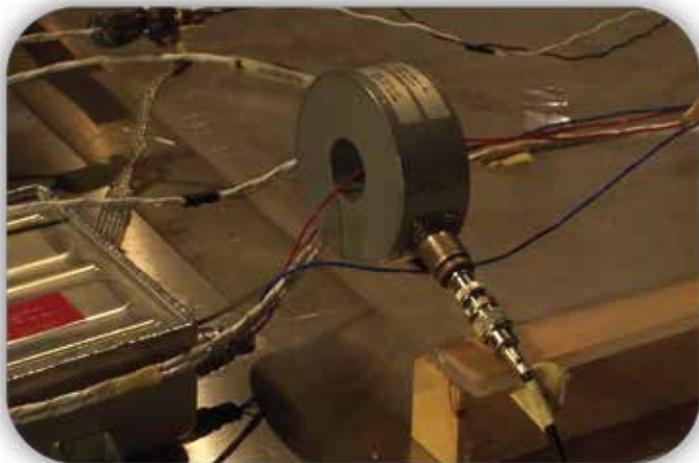
## Electrostatic Discharge (ESD) Testing

With multiple test stations and equipment, our specific ESD capabilities include testing up to 30kV.



# Lightning & Surge Testing

Lightning testing can be completed in single-stroke, multiple-stroke and multiple-burst testing. Indirect lightning simulates secondary currents and voltages that travel through circuitry and cabling. Keystone Compliance provides surge testing to 200,000 kA This testing is also referred to as a surge immunity test.



# Climatics Testing



With multiple chambers and capabilities, Keystone Compliance can meet a majority of the climatics-related testing requirements. Our testing capabilities include the following:

- Accelerated Aging
- Altitude
- Fluid Contamination
- Humidity
- Icing & Freezing Rain
- Immersion
- Salt-Fog
- Solar Radiation
- Temperature
- Thermal Shock
- Wind & Rain



# Dynamics Testing



Our dynamics lab features a pneumatic shock machine and three electrodynamic shakers, with the largest being 11,000 lbf and having a three-inch displacement.



Dynamics testing capabilities include:

- Custom Shock/Vibration Fixturing
- Drop
- Impact Code (IK)
- Shock
- Vibration
  - Random
  - Sine Swell
  - Sine Dwell
  - Sine on Random
  - Mixed Mode
- Vibration at Temp./Humidity

# Ingress Protection & ISTA Package Testing



Keystone Compliance's ingress protection (IP Code) testing capabilities include all IP Codes up to and including IP69K. Our equipment includes a large dust chamber, several immersion tanks and spray nozzles.



As an ISTA-certified lab, we can meet nearly any package testing need. Our package testing experience includes testing enclosures, shipping containers, packaging materials, packaging components and unit loads. Keystone Compliance is also Wal-Mart and Sam's Club certified.



# Custom Engineering & Testing

Keystone Compliance has developed a niche in the market to find solutions to complex problems. From designing custom fixtures and test apparatus in our in-house machine shop to creating temporary test chambers to test oversized items, our team prides



itself on successfully accomplishing projects that others refuse to take on. Some specific examples of past jobs requiring customization include:

- Design and fabrication of a 1,000-gallon immersion tank to test products in four meters of 5°C degree sea water.
- Fabrication of a five meter wide by six meter long by five meter tall dust chamber at customer facility to test the ingress protection characteristics of a large generator.
- Design and creation of a fixture, exhaust system and HVAC system to permit the testing of a propeller-powered UAV within an EMC test chamber.



## What our customers are saying about us:

"Keystone really helped us out of a jam. We had a test house lined up that couldn't perform so you guys were behind the eight ball when you started. You set a schedule, performed to it, and kept us notified so we could keep our customer happy. Thanks again!"

"Really appreciated the quickness of the quotation, your patience when we had to make some last second adjustments and your familiarity with our products."

"We are extremely pleased with the exceptional customer service and quality of services provided. I would highly recommend Keystone Compliance to anyone in need of these services. Fantastic staff, and a great overall experience."

"Over the past 10 years I have had to deal with several different test facilities, and Keystone Compliance is heads and tails above all of them in comparison. Testing is conducted in a timely, efficient manner, and if any issues arise during testing, the staff is always very helpful in resolving the problem."



131 Columbus Inner Belt  
New Castle, PA 16101  
724.657.9940 phone  
724.657.9920 fax  
[www.keystonecompliance.com](http://www.keystonecompliance.com)