

ISTA TESTING EQUIPMENT

Our scientific, data-driven approach to packaging testing allows us to optimize, standardize, and validate your packaging for transit to minimize product damage and packaging spend.

Packaging testing conducted on our equipment complies with industry-standard specifications, including ASTM and ISTA.

1. Multi-Axis Vibration Table

Recreates real-world transit conditions experienced by unitized loads or single parcels with an emphasis on truck and train transportation to test and validate packaging performance

- An 8,500lb capacity and customizable attachments simulate the cross-sectional width of a trailer.
- Vibration, magnitude, frequency range, and duration are adjusted to ensure your unique product and packaging have consistent load containment during transit.
- Standard vibration equipment only moves up and down, while Atlantic's table vibrates loads by moving in multiple directional combinations.

Vibration Direction Combinations:

- Roll: Rotation around the front-to-back (X) axis
- Pitch: Rotation around the side-to-side (Y) axis
- Vertical: Movement up and down the Z axis

2. Horizontal Impact Sled

Realistically simulates the impacts of acceleration, braking, truck docking, rail switching, and railcar coupling on unitized loads or single parcels during transportation

- Impact velocity and acceleration levels are adjusted to ensure your unique product and packaging are up to protection standards.
- Sensors and cameras collect data for analysis to determine where a load is shifting or failing during stability and shock events.

Acceleration & Impact Events:

- Simulates low-g-force, long-duration braking events
- Configurable to provide high-g-force, short-duration shock impacts



3. Drop Tester

Determines how a product and package reacts to flat, edge, and corner impacts of varying amplitude, frequency, and height

- The drop leaf quickly moves down and out from under the package allowing for its free fall.
- Drop Height Range: 12" to 72"
- Product Weight Limit: Up to 177lbs
- Baseplate Width: 36:
- Baseplate Length: 55.5"



4. Compression Tester

Evaluates the performance of unitized loads or single parcels under compressive force applied from above

- Provides a realistic simulation of the compression packaging experiences when stacked during transit or storage
- Load Height Capability: 110"
- Compression Capability: 30,000lbs



5. Environmental-Testing Chamber

Conditions products and packaging to varying temperatures and replicates any humidity level

- Temperature Range: -99.4°F to 392°F
- Chamber Dimensions: 25" x 24" x 21"



6. Field Data Recorders

Collects shock, vibration, temperature, and humidity data from real-world delivery routes to simulate transit conditions on your unitized loads

- Attach to any vehicle or vessel to replicate the transportation conditions your product and packaging will experience during travel
- We partner with Lansmont, a shock and vibration equipment company, to create transportation profile with three degrees of freedom that can then be simulated on our Multi-Axis Vibration Table and Horizontal Impact Sled.
- Can record up to 90 days of transit



7. Load Containment Cells

Cells mounted to the edge of a palletized load measure the force generated by stretch film as it wraps around the unit

- Accompanying software records a force profile based on the height of the unitized load

Applications:

- Comparing force profiles and wrapper settings
- Comparing various films and settings
- Measuring load containment
- Determining if the force generated by film application will deform the internal packaging

