If needed ATI can run the full gambit of mockup tests on a single mockup. Air, water, and structural can be performed on site, and then a full scale arena test can take place which saves you from having to build two separate performance mockups.

Minimizing glass fragmentation caused by explosion is the fenestration industry’s most demanding challenge. During a blast event, almost 75 percent of damage and injury is due to flying and falling glass and related shrapnel. Consequently, building owners, tenants, and building codes require a level of blast resistance for new and renovation projects.

Architectural Testing provides engineering analysis and physical testing of fenestration and protective glazing products. This information is used by designers, architects, consultants, and manufacturers to mitigate glass fragmentation propensity in their designs, projects, and products. Architectural Testing’s Professional Engineers have worked closely with AAMA to develop relevant test standards for Blast Hazard Mitigation for Fenestration Systems and for standards under the jurisdiction of ASTM Committee F12 on Security Systems and Equipment.

ATI brings nearly three decades of experience in fenestration performance testing to blast-hazard analysis and testing. Our experience with fenestration products helps us understand the interaction between the system and the overall building enclosure.
Blast Resistance Testing

Capabilities

Shock Tube
We have two shock tubes with fixtures that can accommodate specimens up to 8’ x 8’6”. We can accommodate larger specimens upon request. The shock tubes can produce pressure loads up to 15 psi/96 psi-msec.

Arena
We have four arena fixtures capable of handling up to 20’ wide x 12’ tall specimens and one 20’ x 26’ fixture for larger specimens. These openings can be adjusted to allow for multiple samples in each fixture. Larger fixture openings can be erected as well upon request. The arena can produce a wide range of pressures and impulse combinations, anywhere from 4 psi to 500 psi and beyond.

Test Methods

- ASTM F1642
- ASTM F2927
- ASTM F2912
- AAMA 510-06
- ISO 16933
- GSA TS01
- UFC4-010-01

Tested Products

Architectural Testing regularly performs blast testing on windows, doors, skylights, curtain walls and other building envelope elements. Specialty testing has been conducted on vehicle components, personal protective equipment and new and innovative materials subjected to extreme loads.

Other Related Services

SECURITY RESEARCH SERVICES
SAFETY GLAZING
PERFORMANCE MOCKUP TESTING
FIRE TESTING
AIR WATER STRUCTURAL TESTING

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