Protective Glazing Systems

Custom Anchoring Systems for FRF

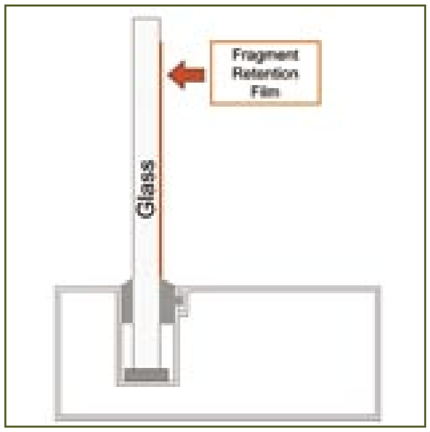
GlassLock offers two anchoring systems: a mechanical system that uses an aluminum batten for anchoring the fragment retention film to the window frame, and a structural adhesive system.

Often fragment retention window film is applied directly to glass to reduce fragmentation hazards, but it also can be anchored to existing window frames to increase the overall performance of the glass. Anchoring to the frames helps keep the glass shards and the FRF within the window opening (depending on the size of the blast) and significantly reduces glass fragment hazards.

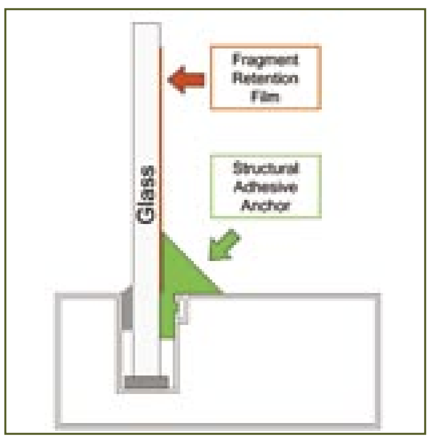
Mechanical Anchoring

The mechanical anchoring system has been awarded two patents and has been tested to ISC/GSA Blast Security Criteria using various anchoring configurations and various types of glass and window units. In this system the FRF is applied to the glass and wrapped onto the existing window frame. The film is anchored there with an aggressive transfer adhesive. The batten is bolted to the window frame, mechanically securing the film in place.

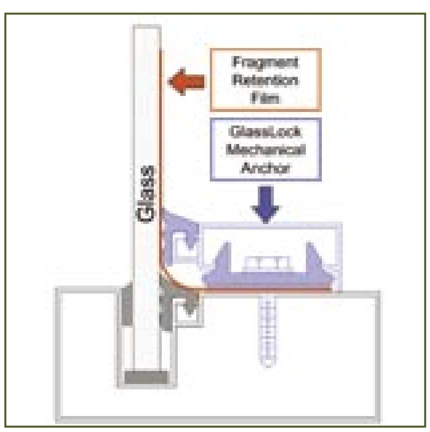
A cosmetic cap (anodized or painted to match the frame) is installed to cover the screws, batten and film, and a vinyl gasket is added to provide a clean, sharp appearance. The finished installation becomes part of the window system and is virtually invisible to building occupants.



Daylight FRF



Structural Adhesive



Mechanical Anchor

Structural Adhesive

With the structural adhesive system the gaskets on the existing window unit are removed or cut to allow adhesive to extrude into the frame rebate (the gap between the glass and the frame). The FRF is applied to the glass and allowed to dry. Next, a black architectural structural hardening adhesive is applied over the film, over the existing window frame, and into the frame rebate. The adhesive is strictly applied following GSA standards to achieve the anchoring performance necessary to meet ISC/GSA Blast Security Criteria.

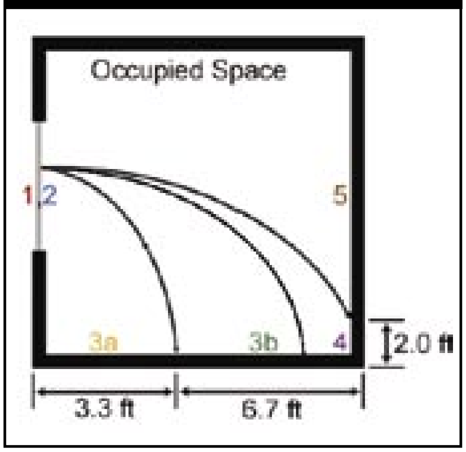
Typically, GlassLock clients specify the anchoring system and installation configuration preferred based on their needs. All clients are encouraged to have a qualified structural engineer with blast experience evaluate the existing frames, glazing unit assemblies, and the substrata of the existing windows before specifying an anchoring system.

Every installation configuration is specific to the requirements of the site.

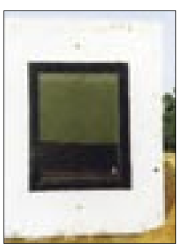
DEFENDER FORCE™
Protective Glazing Systems

GlassLock has the technical expertise and project experience to provide custom protective glazing options to its customers seeking to improve physical security of existing window systems.

ISC/GSA Blast Criteria Threat Level Matrix



GlassLock is dedicated to continual investment in research, development, and live testing of its products. They have passed the rigorous ISC/GSA Security Criteria Blast Tests and can be tailored to meet required blast specifications.


Level 1


Level 2


Level 3a


Level 5

Blast Tests

Unprotected (no FRF) and protected (GlassLock Anchored FRF) annealed glass exposed to 4 PSI, 28-30 PSI msec blast pressures.

The Situation: The National Park Service at the Mount Rushmore National Monument was receiving threats from eco-terrorists on their newly constructed visitor's center and

Protecting the Homeland

museum. The building had more than 35,000 square feet of glass cladding that provided an expansive vista of the Monument.

The Solution: Working with the National Park Service security department and the building architects, GlassLock fabricated and installed an attached Glass Fragment Retention System that secured the building and meeting the safety needs of its occupants.

The Situation: After 9/11 the Smithsonian Institute needed to significantly upgrade the security of its many buildings that line the National Mall in Washington, DC.

These major public venues host millions of visitors, house priceless national treasures, and are architectural monuments in and of themselves.

The Solution: GlassLock worked closely with the architects, facility engineers, blast consultants and curators to custom design and install a unique protective glazing system solution for each of the Smithsonian buildings. This work was accomplished with minimal impact on public access to the museum collections.

GlassLock — industry leader in the design and installation of Protective Glazing Systems

GLASSLOCK®
DESIGNED PROTECTION™

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GSA Schedule
Contract GS-07F-0621N