blast mitigation

Product Selector

Architectural Window: ZS-2750 BlastMax™

27PB BlastMax™

Curtain Wall: Reliance BlastMax™

Entrance: MSD-375 BlastMax™

Storefront: FG-5100/FG-5100T BlastMax™

Window Wall: BRW-500 BlastMax™

Skylight: BMS-3000 BlastMax™
Blast Mitigation: Product Selector

**Architectural Windows ZS-2750 BlastMax™**
After extensive blast arena testing the ZS-2750 project out window system has proven to be a high performance system that meets the most stringent standards of ASTM, GSA and UFC. This system is designed to accommodate the desire for fresh air ventilation without the sightline of a conventional inserted aluminum window.

**Series 27PB BlastMax™**
Innovative, energy absorbing blast mitigation windows help protect against threats during a blast event. We can design blast systems for new construction and retrofit applications, including government buildings and historical preservation projects.

**Curtain Wall Reliance™ BlastMax™**
Reliance™ BlastMax™ series is a 2-1/2’ x 7-1/2” blast resistant curtain wall system designed to meet the demanding test standards of ASTM, GSA and DoD.

**Entrances MSD-375 BlastMax™**
After extensive blast arena testing the MSD-375 Blast Resistant Entrance Door system has proven to be a high performance system that meets the most stringent standards of ASTM, GSA and UFC. The MSD-375 Blast Resistant Entrance Door system performs exceptionally well without the need for reinforcing steel or special anchoring.

**Storefront BlastMax™**
Our heavy-duty flush glazed storefronts have been tested to meet all ASTM, GSA and DoD Blast standards.

**FG-5100 BlastMax™**
FG-5100 is a 2-1/2” x 5” Blast storefront system glazed with insulating laminated glass.

**FG-5100T BlastMax™**
FG-5100T is a 2-1/2” x 5” Blast thermally broken storefront system glazed with insulating laminated glass.
**Window Wall BRW-500 BlastMax™**

After extensive blast arena testing the BRW-500 ribbon window system has proven to be a high performance system that meets the most stringent standards of ASTM, GSA and UFC.

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**Skylight BMS-3000 BlastMax™**

BMS-3000 Skylight systems are customized with design versatility and ultra high performance from Oldcastle BuildingEnvelope™.
Architectural Windows:  
**ZS-2750 BlastMax™**

**Introduction**

After extensive blast arena testing the ZS-2750 project out window system has proven to be a high performance system that meets the most stringent standards of ASTM, GSA and UFC. This system is designed to accommodate the desire for fresh air ventilation without the sightline of a conventional inserted aluminum window.

**Specifications**

For specifications on Project Out Window: ZS-2750 products, go to www.oldcastlebe.com/products/blast-mitigation/architectural-windows-blastmax/zs-2750-blastmax and click on “Specifications”.

**Features and Performance**

**Features**
- System dimensions: 3-1/8" depth
- Interior Sightline: 1-3/8"
- Tubular sash shapes mitered and mechanically fastened
- Frame corners mitered and mechanically fastened
- Equal leg frame inserts into any storefront or wall system
- Sash exterior glazed with spacer gasket and structural silicone
- Factory-painted Kynar 500®/Hylar 5000® finishes, meeting all provisions of AAMA 2605
- Factory-anodized finishing
- ASTM F1642 compliant
- UFC (DoD) 4-010-01 compliant
- GSA/ISC compliant

**Performance**
- Air Infiltration: <.06 CFM/SQ FT (6.24 PSF) per ASTM E283
- Static Water: 15 PSF per ASTM E331
- Deflection Load: +/-45 PSF per ASTM E330
- Structural Load: +/-60 PSF per ASTM E330
- ASTM F 1642: No hazard
- UFC 4-010-01 Level of Protection: Medium
- GSA Performance Condition: 2
Architectural Windows:
ZS-2750 BlastMax™

Detail Scale = 1/4 Size

Detail numbers (e.g., H8801) reference website detail numbers.
For those details not shown in this catalog and for additional information see:
Architectural Windows: **BlastMax™—Series 27PB**

**Introduction**

The Blast Series 27PB provides blast mitigating architectural performance.

**Specifications**

For specifications on Architectural Window Blast Series 27PB products, go to www.oldcastlebe.com/products/blast-mitigation/architectural-windows and click on “Specifications”.

**Window Size Guidelines**

<table>
<thead>
<tr>
<th>MIN (width x height)</th>
<th>1MAX (width x height)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outward Projected (Hand Operated)</td>
<td>15’ x 15’</td>
</tr>
<tr>
<td>Outward Projected (Roto)</td>
<td>15’ x 18’</td>
</tr>
<tr>
<td>Out-swinging Casement (Hand Operated)</td>
<td>19’ x 19’</td>
</tr>
<tr>
<td>Fixed</td>
<td>19’ x 19’</td>
</tr>
<tr>
<td>Fixed</td>
<td>12’ x 12’</td>
</tr>
</tbody>
</table>

1Please consult your Oldcastle BuildingEnvelope™ representative if window sizes outside these guidelines are required.

**Performance**

| Design Uniform Load Allowable No Water U-Value CRF Pressure Structural Air Infiltration Leakage Class Class (PSF) (PSF) (CFM/SQ FT) @__PSF |  |
|---|---|---|---|---|---|---|
| Projected | 65 | 97.5 | 0.10 | 15 | 65 | 55 |
| Fixed | 100 | 150 | 0.10 | 15 | 65 | 55 |

Oldcastle BuildingEnvelope™ architectural window products commonly outperform the AAMA certification requirements shown above. Optional higher performance requirements can be accommodated to satisfy specific project conditions; please consult your Oldcastle BuildingEnvelope™ representative if such conditions are encountered.

**Features and Benefits**

**Features**

- 3-3/4” frame depth, .090” min. wall thickness
- Structurally glazed and blast bead protective glazing system
- Fixed and operable option
- Tubular sash, frames and meeting rails
- Sealing return and equal frame legs
- Flush sash-to-frame design
- 1/4” thermal barrier framing
- All frame and sash are corner-keyed
- Replaceable, high quality compression seals
- Stainless steel four-bar hinges or 5 knuckle butt hinges
- High quality multi-point locks
- In-house anodized and organic finishes

**Benefits**

- Blast mitigating architectural performance
- DOD UFC 4-010-01 anti-terrorism standard compliant
- Strength and durability
- Superior weeping and drainage capability
- Clean aesthetics
- Increased energy efficiency hairline tight frame intersections
- Structurally performing larger vents
- Easy and cost-effective maintenance
- Corrosion resistant, lifecycle stability and smooth operation
- Secure and effortless engagement versatility to meet short lead requirements
Architectural Windows: BlastMax™—Series 27PB

AAMA CLASS: AP-AW65, C-AW65, FW-AW65

TYPICAL CONFIGURATIONS

HAND OPERATED SASH
OUTWARD PROJECTED
OUT-SWINGING CASEMENT

ROTO OPERATED SASH
OUTWARD PROJECTED
OUT-SWINGING CASEMENT

STANDARD HARDWARE

<table>
<thead>
<tr>
<th>HAND OPERATED SASH</th>
<th>OUTWARD PROJECTED</th>
<th>OUT-SWINGING CASEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS 4-Bar Hinges, Euro-groove Multi-point Locks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butt Hinges, Euro-groove Multi-point Locks, Friction Adjusters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS 4-Bar Hinges, Locking Handles, Roto Operator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butt Hinges, Locking Handles, Roto Operator</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Details shown are not to scale.
For additional detail and configurations, log on to www.oldcastlebe.com
Architectural Windows: BlastMax™—
Series 27PB

Details shown are not to scale.
For additional detail and configurations, log on to www.oldcastlebe.com
Curtain Wall: Reliance™ BlastMax™

**Introduction**

After extensive blast arena testing the Reliance™ Blast Resistant Curtain Wall system has proven to be a high performance system that meets the most stringent standards of ASTM, GSA and UFC. In addition, this system offers ease of fabrication and installation with exceptional water control and outstanding thermal performance. The Reliance™ Blast Resistant Curtain Wall System performs exceptionally well without the need for reinforcing steel or special anchoring.

**Specifications**

For specifications on Curtain Wall: Reliance™ BlastMax™ products, go to www.oldcastlebe.com/products/curtain-wall/blast-mitigation/blastmax-reliance and click on “Specifications”.

**Features and Performance**

<table>
<thead>
<tr>
<th>Features</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>System dimensions 2-1/2&quot; x 7-1/2&quot;</td>
<td>Air Infiltration: &lt;.06 CFM/SQ FT (6.24 PSF) per ASTM E283</td>
</tr>
<tr>
<td>1-1/4&quot; laminated insulating glass</td>
<td>Static Water: 15 PSF per ASTM E331</td>
</tr>
<tr>
<td>Exterior glazed</td>
<td>Dynamic Water: 15 PSF per AAMA 501.1</td>
</tr>
<tr>
<td>Thermally broken</td>
<td>Deflection Load: 40 PSF per ASTM E330</td>
</tr>
<tr>
<td>Wet-glazed</td>
<td>Structural Load: 60 PSF per ASTM E330</td>
</tr>
<tr>
<td>No exposed fasteners</td>
<td>ASTM F 1642: Minimal hazard</td>
</tr>
<tr>
<td>Integration of MSD-375 entrances with sub-frame</td>
<td>UFC 4-010-01 Level of Protection: Low</td>
</tr>
<tr>
<td>Factory-painted Kynar 500®/Hylar 5000® finishes, meeting all provisions of AAMA 2605</td>
<td>GSA Performance Condition: 3b</td>
</tr>
<tr>
<td>Factory-anodized finishing</td>
<td></td>
</tr>
<tr>
<td>ASTM F1642 compliant</td>
<td></td>
</tr>
<tr>
<td>UFC (DoD) 4-010-01 compliant</td>
<td></td>
</tr>
<tr>
<td>GSA/ISC compliant</td>
<td></td>
</tr>
</tbody>
</table>
Introduction

After extensive blast arena testing the MSD-375 Blast Resistant Entrance Door system has proven to be a high performance system that meets the most stringent standards of ASTM, GSA and UFC. The MSD-375 Blast Resistant Entrance Door System performs exceptionally well without the need for reinforcing steel or special anchoring.

Specifications

For specifications on Entrances: MSD-375 BlastMax™ products, go to www.oldcastlebe.com/products/blast-mitigation/entrances/blastmax-msd-375 and click on “Specifications”.

Features and Performance

Features
- 1" laminated insulating glass or 9/16" laminated
- Wet-glazed
- No exposed fasteners
- Can be integrated into FG-5100 and FG-5100T and Reliance™ BlastMax™ systems
- Factory-painted Kynar 500®/Hylar 5000® finishes, meeting all provisions of AAMA 2605
- Factory-anodized finishing
- ASTM F1642 compliant
- UFC (DoD) 4-010-01 compliant
- GSA/ISC compliant

Performance
- Structural Load: +70 / -80 PSF per ASTM E330
- Forced Entry Resistance Test: Passed at 300 lbs per SFBC 3603.2
- ASTM F 1642: No hazard
- UFC 4-010-01 Level of Protection: Medium
- GSA Performance Condition: 2
Entrances: MSD-375 BlastMax™

Reliance™ Curtain Wall Framing

Detail numbers (e.g., H8801) reference website detail numbers.
For those details not shown in this catalog and for additional information see:
Entrances: MSD-375 BlastMax™

Reliance™ Curtain Wall Framing

FG-5100 Monolithic Storefront Framing
Entrances: MSD-375 StormMax™

FG-5100 Insulating Storefront Framing Monolithic Door Glazing

VD6145

HD6184

HD6186

FG-5100 Insulating Storefront Framing Insulating Door Glazing

H7869

HD6159
Entrances: MSD-375 BlastMax™

FG-5100 Insulating Storefront Framing
Storefront: **FG-5100 BlastMax™**

**Introduction**

The FG-5100 BlastMax™ system is a blast-resistant storefront system for 1-1/4" insulating laminated glass. This system meets the most demanding requirements of ASTM, GSA and UFC. Exterior and structural silicone glazed, the FG-5100 offers ease of fabrication and installation. The FG-5100 Storefront System is unique in that it exceeds all blast as well as hurricane standards.

**Specifications**

For specifications on Storefront: FG-5100 products, go to www.oldcastlebe.com/products/storefronts/blast-mitigation/blastmax-fg-5100 and click on “Specifications”.

**Features and Performance**

**Features**
- System dimensions: 2-1/2" x 5"
- 1-1/4" laminated insulating glass
- Exterior glazed
- Structural silicone glazed
- No exposed fasteners
- Screw spline joinery
- EZ punch capability
- Integration of MSD-375 BlastMax™ entrances
- Use of energy absorbing anchor technology
- Optional glazing and fastening to meet both blast and hurricane test standards
- Factory-painted Kynar 500®/Hylar 5000® finishes, meeting all provisions of AAMA 2605
- Factory-anodized finishing
- ASTM F1642 compliant
- UFC (DoD) 4-010-01 compliant
- GSA/ISC compliant

**Blast Resistance Performance (with EAA)**
- Air Infiltration: <.06 CFM/SQ FT PSF and 6.24 PSF per ASTM E 283
- Static Water: 15 PSF per ASTM E 331
- Deflection Load: 30 PSF per ASTM E 330
- Structural Load: 45 PSF per ASTM E 330
- ASTM F 1642: Minimal hazard; UFC 4-010-01 Level of Protection: Low; GSA Performance Condition: 3b

**Blast and Hurricane Resistance Performance**
- Air Infiltration: <.06 CFM/SQ FT PSF and 6.24 PSF per ASTM E 283
- Static Water: 15 PSF per ASTM E 331
- Structural Load: +70 / -80 PSF per ASTM E 330
- ASTM F 1642: No hazard; UFC 4-010-01 Level of Protection: High; GSA Performance Condition: 2
- Large Missile and Cycling: + /-70 PSF per TAS-201, TAS-203 and ASTM E1886, E1996
Storefront: FG-5100 BlastMax™

Detail Scale = 1/4 Size

Detail numbers (e.g., H8801) reference website detail numbers. For those details not shown in this catalog and for additional information see: http://www.oldcastlebe.com/products/storefronts/blast-mitigation/blastmax-fg-5100
Storefront: FG-5100 BlastMax™
Introduction

The FG-5100T BlastMax™ system is a thermally broken blast-resistant storefront system for 1-1/4" insulating laminated glass. This system meets the most demanding requirements of ASTM, GSA and UFC. Exterior and structural silicone glazed, the FG-5100T offers ease of fabrication and installation. The FG-5100T Storefront System is unique in that it exceeds all blast as well as hurricane standards.

Specifications

For specifications on Storefront: FG-5100T products, go to www.oldcastlebe.com/products/storefronts/blast-mitigation/blastmax-fg-5100t and click on “Specifications”.

Features and Performance

Features

- System dimensions: 2-1/2" x 5"
- 1-1/4" laminated insulating glass
- Exterior glazed
- Structural silicone glazed
- No exposed fasteners
- Screw spline joinery
- EZ punch capability
- Integration of MSD-375 BlastMax™ entrances
- Optional glazing and fastening to meet both blast and hurricane test standards
- Factory-painted Kynar 500®/Hylar 5000® finishes, meeting all provisions of AAMA 2605
- Factory-anodized finishing
- ASTM F1642 compliant
- UFC (DoD) 4-010-01 compliant
- GSA/ISC compliant

Blast Resistance Performance

- Air Infiltration: <.06 CFM/SQ FT PSF and 6.24 PSF per ASTM E 283
- Static Water: 15 PSF per ASTM E 331
- Deflection Load: 50 PSF per ASTM E 330
- Structural Load: 50 PSF per ASTM E 330
- ASTM F 1642: No hazard; UFC 4-010-01 Level of Protection: Medium; GSA Performance Condition: 3b

Blast and Hurricane Resistance Performance

- Air Infiltration: <.06 CFM/SQ FT PSF and 6.24 PSF per ASTM E 283
- Static Water: 15 PSF per ASTM E 331
- Deflection Load: +/-50 PSF per ASTM E330
- Structural Load: +/-50 PSF per ASTM E 330
- ASTM F 1642: No hazard; UFC 4-010-01 Level of Protection: Medium; GSA Performance Condition: 3b
- Large Missile and Cycling: +/-50 PSF per TAS-201, TAS-203 and ASTM E1886, E1996
Storefront: **FG-5100T BlastMax™**

Detail numbers (e.g., H8341) reference website detail numbers. For those details not shown in this catalog and for additional information see: http://www.oldcastlebe.com/products/storefronts/blast-mitigation/blastmax-fg-5100t
Window Wall: **BRW-500 BlastMax™**

**Introduction**

After extensive blast arena testing the BRW-500 ribbon window system has proven to be a high performance system that meets the most stringent standards of ASTM, GSA and UFC.

**Specifications**

For specifications on Window Wall: BRW-500 products, go to www.oldcastlebe.com/products/blast-mitigation/window-wall-blastmax and click on “Specifications”.

**Features and Performance**

<table>
<thead>
<tr>
<th>Features</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>System dimensions: 3&quot; x 5&quot; mullion, 1-3/4&quot; x 5&quot; jambs, 1-5/16&quot; laminated</td>
<td>Air Infiltration: &lt;.06 CFM/SQ FT (6.24 PSF) per ASTM E283</td>
</tr>
<tr>
<td>insulating glass</td>
<td>Static Water: 15 PSF per ASTM E331</td>
</tr>
<tr>
<td>Front set, exterior glazed configurations</td>
<td>Deflection Load: +/-40 PSF per ASTM E330</td>
</tr>
<tr>
<td>Preglazed for ease of installation</td>
<td>Structural Load: +/-60 PSF per ASTM E330</td>
</tr>
<tr>
<td>Structural silicone glazed</td>
<td>Thermal Performance per AAMA 1503 for clear 1-5/16&quot; insulated glazing – U Factor 0.55 – CRF Frame 66</td>
</tr>
<tr>
<td>Optional SSG mullion</td>
<td></td>
</tr>
<tr>
<td>No exposed fasteners</td>
<td></td>
</tr>
<tr>
<td>Screw spline joinery</td>
<td>NFRC Certified</td>
</tr>
<tr>
<td>Factory-painted Kynar 500®/Hylar 5000® finishes, meeting all provisions of AAMA 2605</td>
<td>Thermal Performance Characteristics per AAMA 507</td>
</tr>
<tr>
<td>Factory-anodized finishing</td>
<td></td>
</tr>
<tr>
<td>ASTM F1642 compliant</td>
<td>ASTM F 1642: No hazard</td>
</tr>
<tr>
<td>UFC (DoD) 4-010-01 compliant</td>
<td>UFC 4-010-01 Level of Protection: Medium</td>
</tr>
<tr>
<td>GSA/ISC compliant</td>
<td>GSA Performance Condition: 2</td>
</tr>
</tbody>
</table>
Window Wall: BRW-500 BlastMax™

Elevation Sample A-2:

Storefront

Window Wall: BRW-500 BlastMax™

Detail Scale = 1/4 Size

Detail numbers (e.g., H8301) reference website detail numbers.
For those details not shown in this catalog and for additional information see:
http://www.oldcastlebe.com/products/blast-mitigation/window-wall-blastmax
Custom Skylights: BMS-3000 BlastMax™

Introduction

Our BlastMax™ series custom skylights provide natural daylighting while offering outstanding blast protection which meets or exceeds the most rigorous anti-terrorism performance requirements. Interior spaces are enhanced with energy-saving daylighting while building occupants are shielded from flying glass and debris. Our high performance skylight systems work together as a unit to absorb the energy of the blast while retaining their structural integrity.

We can design blast systems for new construction and retrofit applications including government buildings, military facilities, hotels, museums, historical preservation projects and public gathering places.

Specifications

For specifications on Custom Skylights: BMS-3000 BlastMax™ products, go to www.oldcastlebe.com/products/skylights/custom and click on “Specifications”.

Features

- Screw glazed, two-sided glazing available (dependent upon blast threat) for lower pitches
- Typically designed for either insulating laminated or monolithic laminated infill
- Unit size and configuration open to design parameters
- Silicone inboard gaskets, full tensile bead on the inboard glass perimeter secures glazing to framing
- Factory extruding and finishing to your choice of colors
Custom Skylights: BMS-3000 BlastMax™

Detail numbers (e.g., H8801) reference website detail numbers. For those details not shown in this catalog and for additional information see: http://www.oldcastlebe.com/products/skylights/custom
Custom Skylights: BMS-3000 BlastMax™