# **Blast-Resistant Windows**

**Custom Commercial Aluminum** Single-Hung, Horizontal Slider, Projected and Fixed Tested to Minimal Hazard Rating







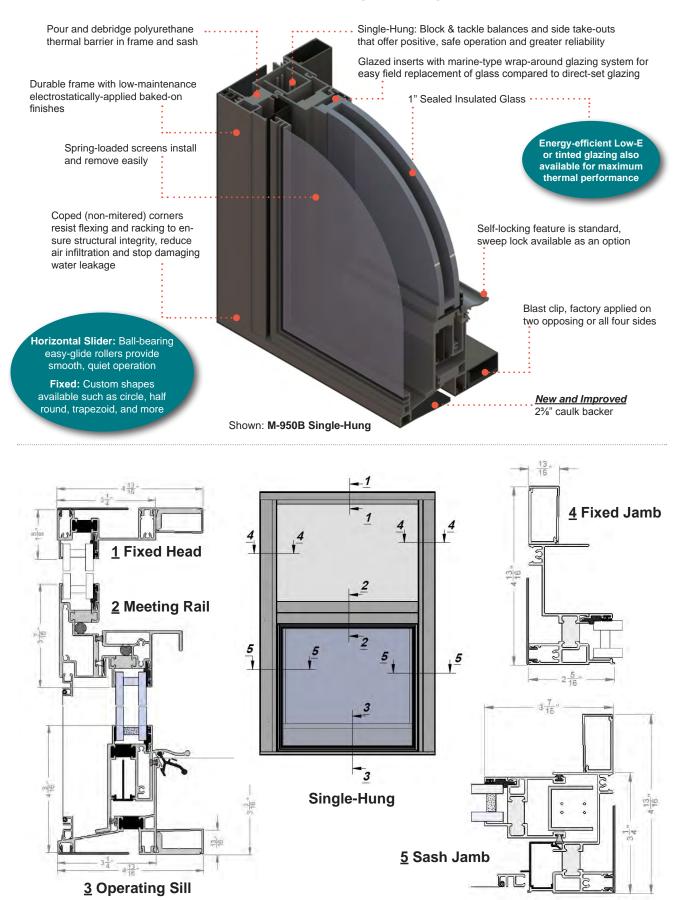
#### **Designed to meet Department of Defense (DoD) Unified Facilities** Criteria (UFC) at conventional standoff

- Meets Anti-Terrorism Force Protection (ATFP) UFC 4-010-01 and 02 at Charge Weight I & II at conventional construction standoff distances
- Fully factory assembled, shop glazed, no field glass installation and aggressive lead times
- Easy, cost-effective installation, minimal anchorage required
- Caulk backer comes standard; additional accessories include nailing fin and face flange on exterior, with blast loads picked up on the interior
- Pour and debridge polyurethane thermal break for better performance, utilizing Azo-Brader<sup>™</sup> technology with a 10-year warranty against failure of the polymer
- M-950B Fixed and Single-Hung models also available as Impact/Hurricane Resistant. Contact us for details.
- 1-year limited warranty on window materials and workmanship
- 1" sealed insulated glass (IGU) with a 10-year limited warranty, and five years against delamination of glass (see supporting document for details)
- Standard finishes include bronze or white (AAMA 2603), bronze or white 2-coat Kynar® (AAMA 2605), and clear or bronze anodized (AAMA 611). Non-standard colors available subject to minimum quantity requirements Kynar<sup>®</sup> is a registered trademark of Arkema Inc. Azo-Brader<sup>™</sup> is a trademark of Azon USA Inc.

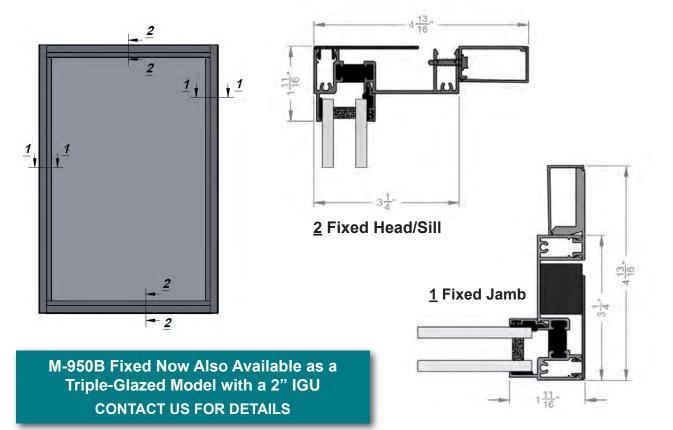
Made in the U.S.A.

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## M-950B Additional Features and Single-Hung Elevations



### M-950B Fixed Elevations



OCAR Facility Ft. Belvoir, VA M-950B Blast-Resistant Fixed Windows

Warrior in Transition Barracks Ft. Stewart, GA M-950B Blast-Resistant Fixed Windows



#### Product Performance Details (AAMA/WDMA/CSA 101/I.S.2/A440-\*)

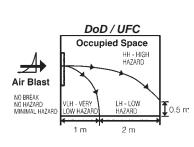
Туре	System Depth	Product Designation*	Structural/Water/ Air Test Size (W x H)	Air Infiltration (cfm/sq ft)	Water Resistance (psf)	Deflection (psf)	Structural (psf)	Simulated U-Value♥
M-950B Single-Hung	4¾" with clip, factory applied	AW-PG50	60" x 99"	.10	12	50	75	.35 ● .38 ♠ .48 ♦ .60 ■
M-950B Horizontal Slider Single Vent		CW-PG50	72" x 62"	.10	8	50	75	.35 ● .40 ♠ .46 ♦ .58 ■
M-950B Fixed		AW-PG80	60" x 99"	< .01	15	80	120	.35 ● .40 ♠ .46 ♦ .58 ■
4500 Fixed	3 <sup>7</sup> /8" with clip, factory applied	AW-PG70 (NAFS '11)	60" x 100"	< .01	15	70	105	.34 <b>∳</b> .50 ♦ .54 ∎
4600 Project-out Awning		AW-PG65 (NAFS '11)	60" x 36"	.02	12	65	97.5	.47 <b>♣</b> .52 ♦ .64 ∎
4600 Project-out Casement		AW-PG70 (NAFS '11)	36" x 60"	.01	12	70	105	.48 <b>♣</b> .52 ♦ .63 ∎
DEFCON Series is receptor based installation. Contact us for details.								
DEFCON III Project-out Awning	3¼"	AW-PG65	60" x 36"	.02	12	65	97.5	.51 <b>♣</b> .56 ♦
DEFCON V Project-out Casement		AW-PG70	36" x 60"	.01	12	70	105	.56 ♦ .66 ∎
DEFCON II Fixed		AW-PG70	60" x 100"	< .01	15	70	105	.35 <b>≜</b> .41 ♦ .55 ∎

\* The '05 fenestration standard utilized five performance classes: R, LC, C, HC and AW. NAFS-08 and -11 utilize four such classes: R, LC, CW and AW.

 U-Value comparisons - example data represents four typical glass package options (see our website for the latest updates). All simulation values based on <u>1" IGU with ¼" lites</u>. Simulated window sizes based on NFRC 100 at AAMA 1503 sizes.
With optional high-performance "plus" glass package.
With optional high-performance glass package.

 Air-filled IGU with Low-E over clear glass, <u>X</u> aluminum box spacer. (Metric U-Value conversion: coefficient = US value x 5.678263. R-Value = 1 / U-Value.)

## Protection Levels and Attributes



DoD / UFC					
LEVEL OF PROTECTION (4-010-01)	GLAZING HAZARD RATING (4-010-01 / ASTM F 1642)				
High	No Hazard				
Medium	Minimal 🔺				
Low	Very Low (VLH)				
Very Low	Low (LH)				
Below Anti-Terrorism (AT) Standards	High (HH)				

#### All models qualify for Medium Level of Protection and Minimal Glazing Hazard Rating\*

\*as tested

 Provides protection as mandated by Anti-Terrorism Force Protection (ATFP) criteria for Explosive Weight I & II at conventional construction standoff distances
Meets UFC 4-010-01 and 02 w/change 1, Jan 22, 2007

Blast test sizes available upon request

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