

Specifications

02-F1

SECTION 08 41 13 ALUMINUM STOREFRONTS

Blast Resistant Storefronts

Defender Series BR604
Defender Series BR606

SERIES	BLAST LOAD	FACE WIDTH	DEPTH	GLAZING INFILL	GLAZING METHOD
BR604	4.4 PSI	2-1/2" (63.5)	5" (127)	1-5/16" (33)	Exterior
BR606	6.0 PSI	2-1/2" (63.5)	5" (127)	1-5/16" (33)	Exterior

I. GENERAL DESCRIPTION

Work included: Furnish all necessary materials, labor, and equipment for the complete installation of aluminum framing as shown on the drawings and specified herein. (Specifier Note: It is suggested that related items such as aluminum entrance doors, glass, and sealants be included whenever possible).

Work not included: Structural support of the framing system, interior closures, trim. (*Specifier list other exclusions*). Related Work Specified Elsewhere: (*Specifier list*).

QUALITY ASSURANCE

Drawings and specifications are based on the Series BR604/BR606 System as manufactured by U.S. Aluminum. Whenever substitute products are to be considered, supporting technical literature, samples, drawings, and performance data must be submitted 10 days prior to bid in order to make a valid comparison of the products involved. Test reports certified by an independent test laboratory must be made available upon request.

PERFORMANCE REQUIREMENTS

Air Infiltration: Shall be tested in accordance with ASTM E 283-91 (99). Infiltration shall not exceed:

- BR604/BR606 Storefront 1.00 cfm/ft² @ 6.24 psf = (5.08 L/s/m²) (IG500 Test)
- BR604/BR606 Doors 1.00 cfm/ft² @ 6.24 psf = (5.08 L/s/m²) (IG500 Test)

Water Infiltration: Shall be tested in accordance with ASTM E 331-93. No water penetration at test pressure of:

 BR604/BR606 Storefront - 12 psf (IG500 Test)

Structural Performance: Shall be tested in Accordance with ASTM

330-96 and based on:

- Maximum deflection of L/175 of the span. [3/4" (19.1) max.]
- Allowable stress with a safety factor of 1.65. The system shall perform to this criteria under a wind load of (*Specify*) psf

BR604 Storefront (IG500 Test)

- Design 65 psf (1.59)
- Structural +/- 97.5 psf (195 mph)

BR606 Storefront (IG500 Test)

- Design 75 psf (171 mph)
- Structural +/- 112.5 psf (210 mph)

BR604 Doors (IG500 Test)

- Design 65 psf (1.59)
- Structural +/- 97.5 psf (195 mph)

BR606 Doors (IG500 Test)

- Design 75 psf (171 mph)
- Structural +/- 112.5 psf (210 mph)

Forced Entry Resistance: Shall be tested with a 300 lb. force applied to the active door panel simultaneously with a 150 lb. force applied in both perpendicular directions to the 300 lb. force.

Blast Test: Shall be tested in accordance with DoD, GSA, and ASTM test proceeds. Three test units $8' \times 8' (2.4 \times 2.4 \text{ m})$ made up of a $3' \times 7' (.9 \times 2.1 \text{ m})$ door, $5' \times 6'$ $(1.5 \times 1.8 \text{ m})$ sidelite, $5' \times 2' (1.5 \times 6 \text{ m})$ sidelite and transom passed:

BR604

- 4.4 psi
- 32 psi msec impulse
- 19 msec duration
- DoD response High and medium
- GSA response Condition 1 and 2
- ASTM response No hazard and minimal hazard

BR606

- 6 psi
- 45 psi msec impulse
- 19 msec duration
- DoD response Medium and very low
- GSA response Condition 2 and 4
- ASTM response Minimal hazard

Testing Procedures:

ASTM 283, E 331, and E 330 -Laboratory performance testing. AAMA 503-08 - Newly installed storefronts. AAMA 511-08 - Installed storefronts after six months.

II. PRODUCTS MATERIALS

Extrusions shall be 6063-T5 alloy and temper (ASTM B221 alloy T5 temper). Fasteners, where exposed, shall be aluminum, stainless steel or zinc plated steel in accordance with ASTM A 164. Perimeter anchors shall be aluminum or steel, providing the steel is properly isolated from the aluminum. Glazing gaskets shall be E.P.D.M. elastomeric extrusions.



BLAST MITIGATION

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where DOW 995 Silicone is used (see installation instructions). Door seal gaskets shall require small joint sealer.

III. EXECUTION INSTALLATION

All glass framing shall be set in correct location as shown in the details and shall be level, square, plumb, and in alignment with other work in accordance with the manufacturer's installation instructions and approved shop drawings. All joints between framing and the building structure shall be sealed in order to secure a watertight installation.

PROTECTION AND CLEANING

After installation the General Contractor shall adequately protect exposed portions of aluminum surfaces from damage by grinding and polishing compounds, plaster, lime, acid, cement, or other contaminants. The General Contractor shall be responsible for final cleaning.

FINISH

All exposed framing surfaces shall be free of scratches and other serious blemishes. Aluminum extrusions shall be given a caustic etch followed by an anodic oxide treatment to obtain... (Specify one of the following):

#11 Clear anodic coating #22 Dark Bronze anodic coating #33 Black anodic coating

A Fluoropolymer paint coating conforming with the requirements of AAMA 2605. Color shall be (*Specify a U.S. Aluminum standard color*).

FABRICATION

The framing system shall provide for flush glazing on all sides with no projecting stops. Vertical and horizontal framing members shall have a nominal face dimension of 2-1/2" (63.5). Overall depth shall be 5" (127). Entrance framing members shall be compatible with glass framing in appearance. Provide for internal drainage of infiltrated water into an extruded aluminum subsill channel where it is drained to the exterior through weep slots.

GLAZING

- 4.4 psi Blast Load
- BR604 Storefront 1-5/16" (3.3) thick IG unit made up of 1/4" (6) annealed + 1/2" (12.7) air space + 1/2" annealed laminate using .030 butacite by Dupont[®].
- BR604 Entrance Door 1-5/16" (3.3) thick made up of 1/4" (6) tempered + 1/2" (12.7) air space + 1/2" (12.7) laminate using .030 butacite by Dupont[®].

6.0 psi Blast Load

- BR606 Storefront 1-5/16" (3.3) thick IG unit made up of 1/4" (6) annealed + 1/2" (12.7) air space + 1/2" (12.7) annealed laminate using .060 butacite by Dupont[®].
- BR606 Entrance Door 1-5/16" (3.3) thick IG unit made up of 1/4" (6) tempered + 1/2" (12.7) airspace + 1/2" (12.7) annealed laminate using .060 butacite by Dupont[®].

SEALANTS

The framing system shall use DOW 995 Structural Silicone to adhere glass to framing. All metal-to-metal joints shall use DOW 795, except at fillers



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