



# Glass Garage Doors & Entry Systems, Inc.

FACTORY DIRECT – WORLD WIDE SHIPPING

## **Understanding How A “ Glass Garage Door ” Meets The Energy Code**

Be mindful of the misconception; that installing any door with “Insulated Glass” makes it code compliant... ***In Fact... It Does NOT!*** *If you can't keep “Air” or Water from leaking in or out of a frame, what's the point? Fenestration products must be tested “as a whole system” vs. relying on the data of glass or glazing panels alone... These test results must be certified by an independent third party such as “AAMA”, and adhere to a rigorous quality assurance procedure. Proof is provided by “NFRC” Labels. Anything else, is false advertising!*

**IECC - (INTERNATIONAL ENERGY CONSERVATION CODE)** Where the IECC energy code applies to sealing the building envelope, or HVAC spaces, only the “bp - Glass Garage Door” (US & Intl. Pat.) can comply with IECC.C402.4.3 Maximum Air Infiltration Rate for Fenestration Assemblies of 0.40 CFM/SQ.FT. (at 1.57 PSF [25 MPH]). Currently, no other manufacturer of aluminum and glass sectional doors can comply with the air infiltration requirements of IECC; without infringing on our Patent Rights. bp - Glass Garage Doors are NFRC rated, and can provide required labeling for US & Intl. code compliance. This proves to all building officials, plan checkers, inspectors, and energy analyst; that our product complies with the New Energy Code.

**bp - Glass Garage Doors & Entry Systems, Inc.** is THE ONLY OEM Manufacturer of Glass Garage Doors that is Licensed by the NFRC, with certified results; for air leakage resistance (NFRC-400), and U-factors (NFRC-100). These results comply with the General Notes of the building plan requirements, and meet the adopted code. You can find these results along with certified ratings for U-factor, SHGC, and VT in the “Certified Products Database” (CPD) on the NFRC website - [www.nfrc.org](http://www.nfrc.org). We can also provide certified testing results from our Architectural Testing Lab, if needed. Be prepared to show your Building Inspector / Plan Checker, that a compliant building product is being used to seal the building envelope! [www.GlassGarageDoors.com](http://www.GlassGarageDoors.com)

Energy efficiency and conservation; (from California’s “Title 24”, “ASHRAE” - American Society of Heating, Refrigerating and Air-Conditioning Engineers, to the World Wide “IECC” Energy Code) are major key issues affecting the design and construction industry today. We want to educate, and make sure that the final Building Materials actually meet code. The requirements for enclosing the building envelope are dictated by the IECC & NFRC, which are the governing bodies mandating an energy efficient shell. Openings that require certified Air Infiltration Rated Products to be easily identified by the following Examples:

1. Any door and/or window that is **“enclosing the building’s envelope”** must comply with the applicable building code requirements and energy efficiency standards. **Examples:** If you ever find a glass garage door in an Office, Storefront, Commercial Space, Restaurant or Patio, Work Shop, Bar Top, Living Rm., or Loft Space, they must have certified air leakage resistance ratings. Another would be **any space that has an HVAC system in place, and a Glass Garage Door is sealing the Exterior Building Envelope.**
2. A temporary label (for inspection purposes; with certified results ) demonstrates compliance to the building inspector or enforcement agency. Below is a sample of **bp – Glass Garage Doors & Entry Systems** temporary label, for your reference. A permanent label is also required. **Permanent labels are issued for Certified Products directly from the NFRC Licensing Agreement, and placed on the bottom interior of the building product. So, if there is no label, the product does not comply.**

We would like to make sure that the Stated Building Code requirements; adopted by your City, are being understood by your Building Inspectors. We wish to assist you in complying with inspectors; in that effort. Below is a copy of the Code section which Building Inspectors should be aware of. We hope this helps educate.



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**NOTE: The IECC – Energy Code “PRESCRIPTIVE” or “PERFORMANCE” approach can be used to manipulate the energy load for a Residential or Non-Residential structure; regarding U-Factors, SHGC, & VT, however, there is NO EXEMPTION for “MANDATORY REQUIREMENTS” REGARDING FENESTRATION PRODUCTS AND EXTERIOR DOORS; such as “AIR INFILTRATION”!**

## CA 2016 Building Energy Code Efficiency Standards Sec 110.6 Mandatory Requirements for Fenestration and Exterior Doors

**Section 110.6 -1 (a) Certification of Fenestration Products and Exterior Doors other than Field-fabricated.** Any fenestration product and exterior door, other than field-fabricated fenestration products and field-fabricated exterior doors, may be installed only if the manufacturer has certified to the Commission, or if an independent certifying organization approved by the Commission has Certified, that the product complies with all of the applicable requirements of this subsection.


- **Air infiltration / leakage.** Manufactured fenestration products and exterior doors shall have air infiltration rates not exceeding 0.3 cfm/ft<sup>2</sup> of window area, 0.3 cfm/ft<sup>2</sup> of door area for residential doors, 0.3 cfm/ft<sup>2</sup> of door area for nonresidential single doors (swinging and sliding), and 1.0 cfm/ft<sup>2</sup> for nonresidential double doors (swinging), when tested according to NFRC-400 or ASTM E 283 at a pressure differential of 75 pascals (or 1.57 pounds/ft<sup>2</sup>), incorporated herein by reference.
- **Labeling Requirements** Fenestration products shall:
- Have a **temporary label** (or label certificate for site-built fenestration) meeting the requirements of Section 10-111(a) 1, not to be removed before inspection by the enforcement agency, listing the certified U-factor and SHGC, and certifying that the air leakage requirements of Section 116(a)1 are met for each product line; and
- Have a **permanent label** (or label certificate for site-built fenestration) meeting the requirements of Section 10-111(a) 2 if the product is rated using NFRC procedures.

Respectfully,

**bp** - Glass Garage Doors & Entry Systems, Inc.  
TF: 877-442-1716  
Web: www. GlassGarageDoors.com

**Sample: Temporary Label for Inspection: →**

**This label must appear on each unit for Inspector to verify a system meets code! →**

	<p><b>bp - Glass Garage Doors &amp; Entry Systems, Inc.</b>  <b>Aluminum Frame Models:</b>  <b>BP-350/ BP-450 HD / BP-550 SHD</b>  <b>Product Type: Aluminum and Glass Sectional Overhead Door</b></p>
<b>ENERGY PERFORMANCE RATINGS</b>	
<p><b>U-Factor</b> (Thermal Transmittance)</p>	<p><b>(SHGC) Solar Heat Gain Coefficient</b></p>
<p><b>.56</b> (U.S./I-P)</p>	<p><b>.25</b></p>
<b>ADDITIONAL PERFORMANCE RATINGS</b>	
<p><b>(VT) Visible Transmittance</b></p>	<p><b>Air Leakage</b></p>
<p><b>0.11 - 0.40</b> <b>Varies on Glass</b></p>	<p><b>0.3</b> (U.S./I-P)</p>
<p>Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org</p>	

# bp - GLASS GARAGE DOORS & ENTRY SYSTEMS

## INSULATED GLASS UNIT PERFORMANCE DATA

			<u>Notes</u>
NFRC	BP 350 - BPC-A-1-00211-00002		
CPD#	BP 450 HD - BPC-A-1-00213-00001		
	BP 550 SHD - BPC-A-1-00215-00001		
<u>ID #</u>			
Outboard Lite:	<b>5281</b> 1/8" PPG Solarban 60 Clear Low-E		a
Krypton Space:	1/4" Spacer, (Krypton Filled)		
Inboard Lite:	<b>5009</b> 1/8" Clear (same data as 1/8" Matte Glass)		a
Overall Nominal Thickness:	<b>0.508 Inches</b>		f

<u>Performance Properties</u>	<u>COG Results*</u>	<u>Units</u>
<u>Transmittance</u>		
Visible Light	72	%
Solar Energy	35	%
Ultraviolet	21	%
<u>Reflectance</u>		
Visible Light (Exterior)	11	%
Visible Light (Interior)	13	%
Solar Energy (Exterior)	35	%
<u>Thermal</u>		
<i>Winter Nighttime</i>		
U-factor/U-Value	0.22	Btu/hr-ft2 -oF
<i>Summer Daytime</i>		
U-factor/U-Value	0.23	Btu/hr-ft2 -oF
Shading Coefficient	0.46	-
Solar Heat Gain Coefficient	0.40	-
Light to Solar Gain	1.85	-

**\*Vertically Glazed Center Of Glass (COG) Results Calculated Using LBNL Window 5.2 Software.**

- Notes:** a) NFRC certified spectral data file  
 b) Data generated by LBNL Optics 5.1  
 c) Average solar data  
 d) Simulated with LBNL Optics 5.1  
 e) Vendor supplied spectral data file  
 f) Please reference ASTM C1036 and C1172 for allowable glass thickness variations



# NFRC Product Certification Authorization Report

**Manufacturer:** BP - Glass Garage Doors & Entry Systems    **Product Series:** BP-350 / BP-450 / BP-550 Glass Garage Door  
**Street:** 1511 W. 2nd St.    **Product Type:** VAGD  
**City/State/Zip:** POMONA, CA 91766    **Air Leakage:** NFRC Certification: .3cfm (Actual Results: .06cfm)

CPD Number: BPC-A-1

IA: American Architectural Manufacturers Association

CPD #	U-factor	SHGC	VT	Condensation Resistance	Air Leakage
BPC-A-1-00211-00002	.52	.25	.40		.3cfm

Close

Group ID	Manufacturer Product Code	Frame/Sash Type	Glazing Layers	Low-E	Gap Widths	Spacer	Gap Fill	Grid	Divider	Tint
1	BP-350 Glass: SB60 / Krypton / Clear (DS) 1/2"	AL/AL	2	0.035(2)	0.25	A1-D	Fill 1: KRY/AIR(90/10)	N	-	CL

CPD #	U-factor	SHGC	VT	Condensation Resistance	Air Leakage
BPC-A-1-00213-00001	.56	.25	.40		.3cfm

Close

Group ID	Manufacturer Product Code	Frame/Sash Type	Glazing Layers	Low-E	Gap Widths	Spacer	Gap Fill	Grid	Divider	Tint
1	BP-450 Glass: SB60 / Krypton / Clear (DS) 1/2"	AL/AL	2	0.035(2)	0.25	A1-D	Fill 1: KRY/AIR(90/10)	N	-	CL

CPD #	U-factor	SHGC	VT	Condensation Resistance	Air Leakage
BPC-A-1-00215-00001	.58	.25	.40		.3cfm

Close

Group ID	Manufacturer Product Code	Frame/Sash Type	Glazing Layers	Low-E	Gap Widths	Spacer	Gap Fill	Grid	Divider	Tint
1	BP-550 Glass: SB60 / Krypton / Clear (DS) 1/2"	AL/AL	2	0.035(2)	0.25	A1-D	Fill 1: KRY/AIR(90/10)	N	-	CL



**Insulated Line (US & Intl. Pat. System)**

**bp** - Glass Garage Doors "Fully Insulated Frame Technology" (US & Intl. Patented) is the key factor for eliminating air leakage, when using this type of door to seal the building envelope, or enclose any "climate controlled space". What is the point in having insulated glass panels, if the frame leaks Air or Water? Our Insulated Frame System also enhances acoustical performance: STC = 36±

**bp - Insulated Line** glazing options consists of: **bp** insulated frames with 1/2" Air filled IG units. Each glass panel is sealed during fabrication and are available in: transparent, obscured, with or without low-E glass, and in a variety of colors to suit your design. Every glass type has a unique set of energy ratings: U-Values of ± .52-.99, SHGC of ±.15-.45, and VT 0.02-.46; which is determined by the glass specified on the project; to match adjacent materials.

→ (Keep in mind that IG units (Insulated Glass) are ineffective if the frame leaks air!)

The NFRC Certified Air Resistance Package provides an airtight system for any wall opening (24ft wide max); where building code compliance is required. **bp** doors have been tested and certified as a whole, with "Insulated Frames". Testing reports and CPD #'s (Certified Products Database) for various glass types can be found at: [www.NFRC.org](http://www.NFRC.org)



Note: --> The "bp - Water Resistant Option" Per ASTM E331 & E547 [SOLD SEPARATELY], must be combined with the "bp - Air Infiltration Option" to function as tested; and **CAN NOT BE INSTALLED AFTERWARDS!**

Note: Doors or Windows without Certified "NFRC" labels = FALSE ADVERTISING, are ILLEGAL PER ENERGY CODE, and will Leak Air through the Frame System! Insulated Glass Alone WILL NOT make a Door or Window Insulated, Unless a **bp - Insulated Frame System** is also integrated! (US & Intl. Pat)



**24ft width max. x 16ft height max.**

→

Air Leakage Resistance Package*	
Air Leakage Resistance Results (Per NFRC 400 / ASTM E283 / DASMA 105)	
Residential Standard	0.3 CFM
Commercial Standard	0.4 CFM
<b>bp - Glass Garage Doors results</b>	<b>0.06 CFM</b>

\*Note: The lower the CFM = Better Air Leakage Resistance. Thermal ratings for U- factor, SHGC, and VT available upon request, per NFRC 100 / 200.

- Air Infiltration package is available in combination with any type of glazing.

