

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION DR-304

Effective Date: January 1, 2014
Reevaluation Date: **November 2016**

The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**.

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

Wood Thoro-Hung Westar Glazed Outswing Single and Double Doors, Impact Resistant,
manufactured by

Buffelen Wood Working Company
1901 Taylor Way
Tacoma, Washington 98421
Telephone: (253) 627-1191

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

The Wood Thoro-Hung Westar doors are wood outswing single and double hinged doors. The wood outswing hinged doors are glazed. The wood outswing hinged doors evaluated in this report are impact resistant doors. This product evaluation report is for wood outswing hinged doors based on the following tested construction:

General Description:

System	Description	Label Rating
1	Wood Thoro-Hung Westar Outswing Hinged Doors (XX)	DP ±50 Maximum Size Tested: 8'-2" x 10'-1"
2	Wood Thoro-Hung Westar Outswing Hinged Doors (XX)	DP ±50 Maximum Size Tested: 8'-2" x 10'-1"

Product Dimensions:

Doors

System	Overall Size	Active Leaf Size	Inactive Leaf Size
1	98" x 120 $\frac{7}{8}$ "	47 $\frac{3}{4}$ " x 119"	48 $\frac{1}{2}$ " x 119"
2	98" x 120 $\frac{7}{8}$ "	47 $\frac{3}{4}$ " x 119"	48 $\frac{1}{2}$ " x 119"

Daylight Opening

System	Active Full Lite	Active Top Lite	Active Bottom Lite	Inactive Full Lite
1	NA	37" x 72"	37" x 22 ½"	37" x 102 ½"
2	37" x 102 ½"	NA	NA	37" x 102 ½"

Glazing Description:

System	Glass Construction ¹	Glazing Method ²
1	SG-1	GM-1
2	IG-1	GM-2

Note: ¹ See the "Glass Construction Key" for the glazing construction.

² See the "Glazing Method Key" for the glazing method description.

Glass Construction Key:

SG-1: The door contains a laminated glass unit. The laminated glass unit is comprised of two ⅜" annealed glass lites with a 0.090" thick PVB interlayer by DuPont.

IG-1: The door contains a sealed insulating glass unit. The sealed insulating glass unit is comprised of a double strength (⅛") fully tempered glass lite at the exterior and a laminated glass unit separated by an Intercept spacer system. The laminated glass unit is comprised of two ⅜" annealed glass lites with a 0.090" thick PVB interlayer by DuPont.

Glazing Method Key:

GM-1: The doors are interior glazed into the panel with Dow 995 sealant and a wooden glass stop. The glass stop is secured to the frame with screws.

GM-2: The doors are interior glazed into the panel with Dow 995 sealant and a wooden glass stop. The glass stop is secured to the frame with Duo-Fast DA17EPB finish nails.

Frame Construction: The frame head and side jambs consist of one of the following: Mahogany-African, Sapele, Cherry, White Oak, Red Oak, Douglas Fir, Cypress, Alder, Walnut, Teak, or Spanish Cedar. The frame corners are coped and butted. The frame head is secured to each frame side jamb with three screws per corner. The Mahogany threshold is secured to each frame side jamb with four screws per corner.

Panel Construction: The door panel hinge and lock stiles are constructed of LVL using one of the one of the following type woods: Mahogany-African, Sapele, Cherry, White Oak, Red Oak, Douglas Fir, Cypress, Alder, Walnut, Teak, or Spanish Cedar LVL. The top rail, the bottom rail, and the lock rail are constructed of one of the following: Mahogany-African, Sapele, Cherry, White Oak, Red Oak, Douglas Fir, Cypress, Alder, Walnut, Teak, or Spanish Cedar LVL. The rails are secured to the stiles adhesive and dowels.

Hardware:

- Lockset; Hoppe HLS9000 five point locking system; Located on both the active and inactive panels.
- Butt hinges: Five required per door; Four (4) No. 9 x ¾" screws secure the hinges to the door panel. Four No. 9 x 2 ¼" screws secure the hinges to the jamb.
- Surface bolt: 12" Rockwood 580-12; Located at each end of the astragal and lock stiles.

Product Identification: A certification program label (NAMI) will be affixed to the door. The certification program label includes the manufacturer's name: (Buffelen Woodworking Company); product name: **Wood Thoro-Hung Westar High Impact Glazed Outswing Single and Double Door**; design pressure rating; the approved inspection agency (NAMI); and the applicable standards: ASTM E 330-02, ASTM E 1886-99, and ASTM E 1996-02.

LIMITATIONS

Design pressures (DP):

System	Maximum Width (in.)	Maximum Height (in.)	Design Pressure (psf)
1	98	120 $\frac{7}{8}$	±50
2	98	120 $\frac{7}{8}$	±50

Impact Resistance: These door assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in both the **Inland I** zone and the **Seaward** zone. The door assemblies passed Missile Level D specified in ASTM E 1996-02. The door assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded. These door assemblies will not need to be protected with an impact protective system.

Acceptance of Smaller Assemblies: Door assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

INSTALLATION INSTRUCTIONS

General: The door assembly shall be prepared and installed in accordance with the manufacturers recommended installation instructions. Detailed installation instructions and drawings are available from the manufacturer.

Installation: The door shall be secured to minimum Southern Pine lumber dimension lumber. The door frame head and side jambs shall be secured to the wall framing with minimum No. 9 x 2 $\frac{1}{4}$ " long flat head screws. All fasteners shall be long enough to penetrate a minimum of 1 $\frac{1}{2}$ inches into the wall and floor framing members.

Head and sill: Eight fasteners located 6 inches from each end and spaced 12 $\frac{1}{4}$ inches on center thereafter.

Jambs: Seven located 8 $\frac{1}{2}$ inches from each end and spaced 16 inches on center thereafter.

Note: The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.