



# Product Evaluation

DR694 | 0914

Engineering Services Program

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.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

**Evaluation ID:** DR-694

**Effective Date:** September 1, 2014

**Re-evaluation Date:** November 2015

**Product Name:** Ultra Aluminum Clad Wood Glazed Hinged Folding Doors, Non-impact Resistant

**Manufacturer:** Kolbe & Kolbe Millwork Co., Inc.  
1323 South Eleventh Avenue  
Wausau, WI 54401  
(715) 842-5666

### General Description:

System	Description	Label Rating	Design Pressure Rating	Hallmark Certification
1	Ultra Aluminum Clad Wood Glazed Hinged Folding Doors	PG30 147 x 101 – SP	+30 / -30 psf	413-H-1213.00 413-H-1213.01
2	Ultra Aluminum Clad Wood Glazed Hinged Folding Doors	PG65 147 x 101 – SP	+65 / -65 psf	413-H-1212.00 413-H-1212.01

### Component Dimensions:

System	Overall Size	Panel Size	Panel Glass Daylight Opening Size
1	146.94" x 101.13"	Four: 35.75" x 96"	27.69" x 84.88"
2	146.94" x 101.13"	Four: 35.75" x 96"	27.69" x 84.88"

### Hardware:

- **Top Pivot Hinge:** Two (2) required; located at the top side frame and folding panel hinge stile and entrance panel hinge stile. Secure with two (2), No. 9 x 2" screws and two (2), No. 9 x 3/4" screws.
- **Bottom Pivot Hinge:** Two (2) required; located on the bottom side frame and folding panel hinge stile and entrance panel hinge stile. Secure with two (2), No. 9 x 2" screws and two (2), No. 9 x 3/4" screws. Secure to the sill wall framing with two (2) No. 9 x 2-1/2" screws.
- **Jamb Pivot Hinge:** Four (4) required; located on the side frame and folding panel hinge stile and entrance panel hinge stile. Secure each into the wall framing with two (2) No. 9 x 3" screws.

- **Offset butt hinge:** Two (2) required; located at the top and bottom folding panel hinge stile panel 1 and 2. Secure to each door panel with two (2) No. 9 x 3/4" screws and two (2) No. 9 x 2" screws.
- **Offset butt hinge with handle:** Two (2) required; located at the center panel hinge stile panel 1 and 2. Secure to each door panel with two (2), No. 9 x 3/4" screws and two (2), No. 9 x 2" screws.
- **Butt hinge:** Two (2) required; located at the center panel hinge stile panel 2 and 3. Secure to each door panel with two (2), No. 9 x 3/4" screws and two (2), No. 9 x 2" screws.
- **Top Butt Hinge with Intermediate Hanger:** One (1) required; located at the top folding panel hinge stiles panel 2 and 3. Secure to each door panel with two (2), No. 9 x 3/4" screws and two (2), No. 9 x 2" screws.
- **Bottom Butt Hinge with Intermediate Hanger:** One (1) required; located at the bottom folding panel hinge stiles panel 2 and 3. Secure to each door panel with two (2), No. 9 x 3/4" screws and two (2), No. 9 x 2" screws.
- **Flush Bolts:** Two (2) required; located at the top stiles, folding panels 1 and 3. Secure with eight (8), No. 8 x 1-1/2" screws at the top.
- **Flush Bolts:** Two(2) required; located at the bottom stiles, folding panels 1 and 3. Secure with four (4), No. 8 x 1-1/2" screws.
- **Flush Bolt Strike Plates:** Four (4) required; located at the frame head and sill. Secure with two (2), No. 10 x 2-1/2" screws at the head and two (2), No. 9 x 3" screws at the sill.
- **3-point Lock with Dead Bolt:** Located on the active outswing entrance door.
- **Latch strike plates:** Two (2) required; located on the intermediate panel astragal. Secure with two (2) No. 9 x 1-1/2" screws.
- **Dead Bolt Strike Plate:** One (1) required; located on the intermediate panel astragal. Secure with three (3), No. 9 x 1-1/2" screws.

#### Product Identification (Certification Agency Label on Door):

System		
1, 2	Certification Agency	WDMA
	Manufacturer's Name or Code Name	Kolbe & Kolbe Millwork Co., Inc.
	Product Name	Ultra Folding Door
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-11 AAMA/WDMA/CSA 101/I.S.2/A440-08

#### Impact Resistance:

System	Impact Resistant	Requirement
1,2	No	Impact protective system required when product is installed in areas where windborne debris protection is required.

#### Installation:

- **Option 1 (Installation Clips):** Fasten door assembly to minimum Southern Yellow Pine lumber. Secure door assembly to wall framing using Kolbe & Kolbe metal installation clips. Secure installation clips (1-5/8" x 10-1/16" x 0.04") to doorframe side jambs, head, and sill. Secure clips to the doorframe with two (2), No. 8 x 3/4" screws, and to the wall framing with one (1), No. 8 x 1-3/4" screw. Fasteners shall be long enough to penetrate a minimum of 1-1/2" into the framing. Spaced clips 8-5/8" from each corner and 8-5/8" on center along the head and 16-7/8" from each corner and 16-7/8" on center along the side jambs.

**Sill:** Secure sill to wall framing with minimum No. 10 x 3" screws. Locate fasteners approximately 4" from each door corner and 11-1/2" on center. Fasteners must be long enough to penetrate a minimum of 1-1/2" into the framing.

- **Option 2 (Screws through Frame):** Fasten door assembly to minimum Southern Yellow Pine lumber. Secure door assembly to the wall framing using the doorframe with minimum No. 10 x 2-1/2" screws. Fasteners shall be long enough to penetrate a minimum of 1-1/2" into the framing. Space fasteners 4" from each corner and 11-1/4" on center along the head and side jambs.

**Sill:** Secure sill is to wall framing with minimum No. 10 x 3" screws. Locate fasteners approximately 5" from each corner and 14" on center. Fasteners must be long enough to penetrate a minimum of 1-1/2" into the wall framing.

- **Nailing Fin (Options 1 and 2):** Secure nailing fin to wall framing with minimum 11-gauge smooth shank roofing nails spaced approximately 7" on center along the head and side jambs.

**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.