

TEXAS DEPARTMENT OF INSURANCE

Engineering Services Program / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
Phone No. (512) 322-2212 Fax No. (512) 463-6693

PRODUCT EVALUATION WIN-1480

Effective December 1, 2011

*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 shall be subject to reevaluation **July 2014**.*

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.

Ultra Aluminum Clad Wood Operating Awning Windows, Individual, Impact Resistant,
manufactured by

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

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 aluminum clad wood operating awning windows evaluated in this report are impact resistant. This product evaluation report is for aluminum clad wood operating awning windows based on the following tested constructions:

General Description:

System	Description	Label Rating	Hallmark Certification
1	Ultra Operating Awning; Missile Level D; Wind Zone 4	CW-PG85 48 x 36-AP AP-C85 48 x 36	413-H-1110.00 413-H-1110.01 413-H-1110.02 413-H-1110.03 413-H-1110.04 413-H-1110.05 413-H-1110.06 413-H-1110.07
2	Ultra Operating Awning; Missile Level D; Wind Zone 4	CW-PG85 48 x 36-AP AP-C85 48 x 36	413-H-1109.00 413-H-1109.01 413-H-1109.02 413-H-1109.03

Product Dimensions:

System	Overall Size	Sash Size	Glass Size
1	48" x 36"	46 $\frac{1}{8}$ " x 34 $\frac{1}{8}$ "	42 $\frac{5}{8}$ " x 30 $\frac{5}{8}$ "
2	48" x 36"	46 $\frac{1}{8}$ " x 34 $\frac{1}{8}$ "	42 $\frac{5}{8}$ " x 30 $\frac{5}{8}$ "

Glazing Description:

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

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

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

Glass Construction Key:

SG-1: Single glazed with a laminated glass unit. The laminated glass unit is comprised of two $\frac{5}{32}$ " annealed glass lites with a 0.090" SGP+0.007 PET interlayer. The glass thickness used in the insulating glass units of the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

IG-1: Sealed insulating glass unit. The sealed insulating glass unit is comprised of a double strength ($\frac{1}{8}$ ") annealed glass lite and a laminated glass unit separated by a desiccant-filled stainless steel spacer system. The laminated glass unit is comprised of two $\frac{5}{32}$ " annealed glass lites with a 0.090" SGP interlayer. The glass thickness and type used in the insulating glass units of the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

IG-2: Sealed insulating glass unit. The sealed insulating glass unit is comprised of a double strength ($\frac{1}{8}$ ") fully tempered glass lite and a laminated glass unit separated by a desiccant-filled stainless steel spacer system. The laminated glass unit is comprised of two $\frac{5}{32}$ " annealed glass lites with a 0.090" SGP interlayer. The glass thickness and type used in the insulating glass units of the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

Glazing Method Key:

GM-1: The glass unit is set from the interior against a bed of silicone sealant backbedding. Another silicone bead is run full length at the bottom of the insulating glass unit and a vinyl glazing bracket is installed into a kerf in the sash. Wood glazing stops are utilized along the interior and are secured with brads spaced 1 inch from each end and 5 to 6 inches on center.

Frame Construction: The frame members consist of molded pine. The frame corners are rabbeted, butted, sealed with silicone, and secured with staples. Interior wood stops are secured to the frame with staples. **Aluminum cladding:** The extruded aluminum cladding corners are mitered and joined with a corner key. The aluminum cladding, which is utilized at the head, sill, and side jambs, is snap-fit onto the wood members.

Sash Construction: The sash members consist of molded pine with pine veneer. The sash corners are open mortise and tenon construction, glued, and secured with brads and screws. **Aluminum cladding:** The extruded aluminum cladding is square cut and secured to the sash with T-nails and screws.

Hardware:

- Truth single actuated single-point lock with metal keeper; Two (2) required; Located on the side jambs.
- Concealed Euro hinges; Three (3) required; Located at the head jamb and the sash top rail.
- Truth 106 Encore awning operator with sash bracket; One (1) required; Located on the frame sill and sash.

Product Identification: A certification program label (WDMA Hallmark Certified) will be affixed to the assembly. The certification program label includes the manufacturer's name; product name; performance characteristics; the approved inspection agency (WDMA); and the applicable standards: AAMA/WDMA/CSA 101/I.S.2/A440-05, AAMA/WDMA/CSA 101/I.S.2/A440-08, and ASTM E 1886-05 and ASTM E 1996-09.

LIMITATIONS

Design pressures (DP):

System	Overall Width (in.)	Overall Height (in.)	Design Pressure (psf)
1	48	36	± 85
2	48	36	± 85

Impact Resistance: These assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in the both the **Inland I zone** and the **Seaward zone**. These assemblies passed Missile Level D specified in ASTM E 1996-09. These assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded. These assemblies will not need to be protected with an impact protective system.

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

INSTALLATION INSTRUCTIONS

General: The 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:

Option 1: The window assembly shall be fastened to minimum Southern Yellow Pine lumber. The window assembly is secured to the wall framing using Kolbe & Kolbe metal installation clips. The installation clips (1 5/8" x 10 1/16" x 0.04") are secured to the window frame side jambs, head, and sill. The clips are secured to the window frame with two (2) No. 8 x 3/4" screws. The clips are secured to the wall framing with one (1) No. 8 x 1 3/4" screw. The fasteners shall be long enough to penetrate a minimum of 1 1/2" into the wall framing. The spacing of the clips is specified in the table below.

Installation Clip Spacing:

System	Head and Sill (distance from each end)	Head and Sill (on center spacing)	Side Jambs (distance from each end)	Side Jambs (on center spacing)
1	12"	12"	18"	18"
2	12"	12"	18"	18"

Option 2: The window assembly shall be fastened to minimum Southern Yellow Pine lumber. The window assembly is secured to the wall framing using the window frame with minimum No. 10x 2 ½" screws. The fasteners shall be long enough to penetrate a minimum of 1 ½" into the wall framing. The spacing of the fasteners is specified in the table below.

Fastener Spacing:

System	Head and Sill (distance from each end)	Head and Sill (on center spacing)	Side Jambs (distance from each end)	Side Jambs (on center spacing)
1	9 5/8"	9 5/8"	12"	12"
2	9 5/8"	9 5/8"	12"	12"

Nailing Flange (both options): The perimeter of the window is secured with minimum 12 gauge smooth shank roofing nails spaced 7 inches on center penetrating through the nailing flange. The fasteners shall be long enough to penetrate a minimum of 1 ½" into the wall framing

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.