

This Specifications Sheet utilizes the Construction Specifications Institute (CSI) MasterFormat™. The 1995 edition numbers are listed first; *numbers in italics are from the 2004 edition*. Options and dimensions are indicated by brackets []. Specifier Notes precede specification text; edit for project requirements or delete in final copy. Metric conversion is calculated by multiplying: Number of Inches x 25.4 = Millimeters, rounded off. Manufactured by Kolbe & Kolbe Millwork Co., Inc., Wausau, Wisconsin.

SECTION 08552 FORGENT SERIES CASEMENT, AWNING & CASEMENT PICTURE WINDOWS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Casement or awning windows [fixed picture] complete with hardware, [glazing], weatherstripping, and standard anchorages, attachments, and accessories.

1.02 APPROVED WINDOW PRODUCTS

- A. Kolbe and Kolbe Forgent Glastra Series Casements or windows equal in construction, performance value and warranty.

1.03 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 1. ASTM E283-04' - Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors.
 2. ASTM E330-02' - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
 3. ASTM E547-00' - Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Cyclic Static Air Pressure Differential.
 4. ASTM E1425-07' or AAMA 1801-97 - Certification of Acoustical Performance.
 5. ASTM F588-04' (Windows).
 6. ASTM E 1996-04' - Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Storm Shutters Impacted by Windborne Debris in Hurricanes.
 7. ASTM E 1886-04' - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors and Storm Shutters Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.
 8. ASTM E2190-08' - Standard Specification for Insulating Glass Unit Performance and Evaluation.
- B. American Architectural Manufacturers Association/Window and Door Manufacturers Association (AAMA/WDMA), American National Standards Institute/Window and Door Manufacturers Association (ANSI/WDMA), Canadian Standards Association (CSA).
 1. AAMA/WDMA/CSA 101/I.S.2/A440-05', 101/I.S.2/A440-08' - Standard / Specification for Windows, Doors and Skylights.
 2. WDMA I.S. 4-07'A Water Repellant Preservative Treatment for Millwork.
- C. National Fenestration Rating Council (NFRC)
 1. NFRC 100-2004' & 2010' - Determining Fenestration U-Factor.
 2. NFRC 100-2004' & 2010' - Test Procedure for Thermal Transmittance of Fenestration.

3. NFRC 200-2004' & 2010' - Determining Fenestration SHGC & Tv.
 4. ASTM E1423-06' - Determining Thermal Transmittance of Fenestration Systems.
 5. NFRC 500-2010' - Determining Fenestration Product Condensation Resistance.
- D. WDMA Hallmark Program
1. WDMA Hallmark Program Procedural Guide C.S.-1.
- E. Consumer Product Safety Commission (CPSC)
1. CPSC 16 CFR 1201 - Safety Glazing Standards.
 2. ANSI Z-97.1 - Safety Glazing Standards for Tempered Glass.

1.04 SYSTEM DESCRIPTION

See the Technical Information section at the beginning of this manual for Air, Water, Structural Test Reports and Energy Rating Reports. For updated reports, please visit our website at <http://www.kolbewindows.com>.

- A. Design and Performance Requirements
1. Applications of windows include:
 - a. Light commercial application (design pressure required _____psf).
 2. Air, water, structural, and forced entry resistance shall be at levels which meet the specified design pressure as per AAMA/WDMA/CSA 101/I.S.2/A440-05', 101/I.S.2/A440-08'.
 3. Unique, non-listed unit's performance, when not tested, may be addressed by a manufacturer's Statement of Qualification.
 4. Mullion design can be adequate for specified design pressure.
- B. Energy Ratings
- All units tested are one-lite, residential, LoE²-270, argon filled, with Kolbe ID No. as listed on the NFRC label adhered to each unit. Values are certified per NFRC and units are labeled per state requirements.
1. Unique, non-listed units may have U & SHGC determined by NFRC procedures and listed on a manufacturer's Statement of Qualification.

1.05 SUBMITTALS

- A. Shop Drawings: Submit shop drawings in accordance with Section 01330 Submittal Procedures or Section 01 33 23 – *Shop Drawings, Product Data, and Samples*.
- B. Product Data: Submit catalog data in accordance with Section 01330 Submittal Procedures or Section 01 33 23 – *Shop Drawings, Product Data, and Samples*.
- C. Samples: Submit corner section in accordance with Section 01330 Submittal Procedures or Section 01 33 23 – *Shop Drawings, Product Data, and Samples*. Include glazing system, quality of construction, specified finish, and color.
- D. Installation Instructions.
- E. Quality Control Submittals: Certificates: Submit performance test results reported by independent laboratory or manufacturer's Statement of Qualification indicating compliance with specified performance and design requirements.

1.06 QUALITY ASSURANCE

- A. Insulating Glass – two certification programs: IGCC and IGMAC. Possible IGMA Certification (harmonized IGMAC & SIGMA).
- B. NFRC Certification Program for Energy Rating of Fenestration.
- C. WDMA Hallmark Program. Be sure to check the Air-Water-Structural Test Reports Manual on our website at <http://www.kolbewindows.com>.
- D. IGMAC-Insulating Glass Manufacturer's Association Canada.

- E. [If required: Mock Up: Provide sample installation for field testing unit performance requirements for approval - Contractor to perform tests in accordance with AAMA 502-02 using Method A and/or Method B.]

1.07 DELIVERY, STORAGE AND HANDLING

- A. Proceed in accordance with Section 01650 *or* 01 65 00 – Product Delivery Requirements, Section 01660 *or* 01 66 00 – Product Storage and Handling Requirements, and Installation Instructions.
- B. Deliver in original packaging, store in an upright position off the ground in a clean, dry area. Protect from weather and construction activities.
- C. Prime or seal wood surfaces, including surfaces to be concealed by wall construction if more than 30 days will expire between delivery and installation.

1.08 WARRANTY

- A. Glass: 20 years from the date of shipment from manufacturer for seal failure resulting in visibility obstructions through the glass unit.
- B. Non-Glass parts will be free from material defects in workmanship and material, under normal use, for a period of ten (10) years from the date of shipment.

PART 2 PRODUCTS

2.01 MANUFACTURED UNITS

For Individual and Mulled Window Units Only:

- A. Description: Casement or awning, factory assembled, outward opening window units as manufactured by Kolbe & Kolbe Millwork Co., Inc., Manawa, Wisconsin.
- B. Units available: [Standard Performance

2.02 MATERIALS

<i>Edit for Project Requirements.</i>

- A. Frame: Constructed of proprietary Glastra® multi-chambered fiberglass and UV stable polymer extrusions. The interior of the windows shall be all Glastra®, which consists of uPVC interior stops and mull casings on mulled units. Frames have integrated heavy vinyl nailing fins at head, side jambs, and sill. Drip cap for installation is cut to fit and shipped loose.
 1. Jamb thickness: 5/8 inch (16mm)
 2. Basic jamb width: 2-1/2 inch (64mm).
 3. Exterior: All frame parts are .087 inch (2.2mm) thick.
 4. Corner Construction: Welded mitered corners
- B. Sash: Constructed of proprietary Glastra® multi-chambered fiberglass and UV stable polymer extrusions. The interior of the windows shall be all Glastra®, which consists of uPVC glazing beads. Water repellent, preservative treated glazing beads in accordance with WDMA I.S. 4-07'A.
 1. Thickness: 1-3/4 inch (44.5 mm)
 2. Sash Width/Face Dimension: 1-7/8 inch (47.6mm).
 3. Exterior: Sash parts are .087 inch (2.2mm) thick.
 4. Corner construction: Welded mitered corners
 5. Interior glazed.
- C. Surface Finish:
 1. Exterior Finish – Glastra® with uPVC polymer exterior.
 - a. Standard Integral Colors: Cloud and Sahara
 - b. Acrylic Film Colors: Bronze and Midnight. Exterior acrylic films on frame and sash components. The film has a 100% polyvinylidene fluoride

PVDF laminate top layer. The base layer consists of solar shield technology (SST) to further decrease heat build-up in the film and underlying components.

2. Interior Finish – All Glastra
 - a. Standard integral colors: Cloud and Sahara
 - b. Glastra® with a uPVC polymer interior.
- D. Hardware: All major exposed hardware to be e-coat painted zinc.
 1. Concealed Snubbers: Made of corrosion resistant materials.
 2. On picture (sash set) Fixed Units and Transoms: Retainer clips are used on the head, sill, and sides of the unit.
- E. Weatherstripping: On all units, including Transoms.
 1. Frame: Full perimeter Black bulb EPDM.
 2. Sash: Perimeter EPDM dust fin.

2.03 GLAZING

- A. Glass:
 1. Standard one lite IG is 15/16" (23.8mm) with LoE²-270, argon filled.
 2. All glass is select quality complying with FS-DD-G-451D.
 3. IG complies with IGCC and ASTM E2190-08'.
- B. Glazing Methods:
 1. Units are dry glazed utilizing the EPDM full perimeter gasket.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of conditions: Before installation, verify that openings are plumb and square and of proper dimension. Report frame defects or unsuitable conditions to the General Contractor before proceeding.
- B. Acceptance: Beginning of installation means acceptance of existing conditions.

3.02 INSTALLATION

- A. Install windows according to manufacturer's installation instructions, reviewed shop drawings and in accordance with Section 01730 – Execution *or* Section 01 73 19 – *Installation*.
Note: Certain codes require the use of pressure-treated lumber to line rough openings. Corrosion-resistant materials, such as stainless steel or hot-dip galvanized steel, must be used for fasteners and anchors having direct contact with pressure-treated lumber.
- B. Install sealant and related flashing materials at perimeter of assembly in accordance with Section 07900 Joint Sealers *or* 07 92 00 – *Joint Sealants*.
- C. Install accessory items as required.

3.03 ADJUSTING AND CLEANING

- A. Remove visible labels.
- B. Leave windows in a job clean condition. Final cleaning of glass will be done in accordance with Section 01740 – Cleaning *or* Section 01 74 00 - *Cleaning and Waste Management*.

3.04 PROTECTION

- A. Cover windows, in accordance with Section 01760 or 01 76 00 – Protecting Installed Construction, during spray painting or other construction operations (such as muratic acid washing after completion of masonry) that might cause damage.

END OF SECTION