

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 or 08 52 13.06 ULTRA SERIES EP OGEE DIRECT SET FIXED WINDOWS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Clad Ogee Direct Set complete with glazing, [jamb extensions] [removable grilles] [grilles-in-the-airpace] [performance divided lites] and standard or specified anchorages, trim, attachments, and accessories. [Mulled Transoms] [Stand alone Transoms] are also available.

1.02 RELATED SECTIONS

SPECIFIER NOTE: Revise sections below to suit project requirements and to include desired options.
Consult state and local building codes for specific requirements.

The MasterFormat 1995 edition numbers are listed first; *numbers in italics are from the 2004 edition*.

- Section 01330 or 01 33 00 – Submittal Procedures.
- Section 01620 or 01 62 00 – Product Options.
- Section 01630 or 01 25 00 – Product Substitution Procedures.
(2004 title: *Substitution Procedures*.)
- Section 01650 or 01 65 00 – Product Delivery Requirements.
- Section 01660 or 01 66 00 – Product Storage and Handling Requirements.
- Section 01730 or 01 73 00 – Execution.
- Section 01740 or 01 74 00 – Cleaning.
(2004 title: *Cleaning and Waste Management*.)
- Section 01760 or 01 76 00 – Protecting Installed Construction.
- Section 06100 or 06 10 00 – Rough Carpentry.
- Section 06200 or 06 20 00 – Finish Carpentry.
- Section 07210 or 07 21 00 – Building Insulation.
(2004 title: *Thermal Insulation*.)
- Section 07900 or 07 92 00 – Joint Sealants.
- Section 08800 or 08 80 00 – Glazing.
- Section 09900 or 09 90 00 – Paints and Coatings.
(2004 title: *Painting and Coating*.)

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 F588-07' (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.kolbe-kolbe.com>.

- A. Design and Performance Requirements
 - 1. Applications of windows include:
 - a. Residential application (design pressure required _____ psf).
 - b. 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 on surface #2 with LoE-180 on surface #5, 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.kolbe-kolbe.com>. NOTE: Bows and/or Bays are not tested or rated.
- 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: See Kolbe & Kolbe Glass Warranty for details and exclusions.
 - B. Pre-finishing: See Kolbe & Kolbe Finish Warranty for details and exclusions.
 - C. Product Defects: See Kolbe & Kolbe Product Warranty for details and exclusions.
 - D. International: See Kolbe & Kolbe International Warranty for details and exclusions.
- These warranties are available on our website at <http://www.kolbe-kolbe.com>

PART 2 PRODUCTS

2.01 MANUFACTURED UNITS

For Individual and Mulled Window Units Only:

- A. Description: Ogee Direct Set fixed window units, as manufactured by Kolbe & Kolbe Millwork Co., Inc., Wausau, Wisconsin.
- B. Units available: [Standard Performance] [High Performance]
Website: www.kolbe-kolbe.com.

2.02 MATERIALS

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

- A. Frame: Constructed of kiln-dried pine, with pine interior stops and mull casings on mulled units, water repellent, preservative treated in accordance with WDMA I.S. 4-07'A. Clad assembled frames have factory installed heavy vinyl nailing fins at head, side jambs, and sill. Nailing fin at head has integral drip cap. Transom head drip cap to be field applied to frame. Units with brickmould or casing do not have a vinyl nailing fin factory applied as standard.
 - 1. Jamb thickness: 1-1/16 inch (27mm).
 - 2. Basic jamb width: 2-7/16 inch (62mm).
 - 3. Standard overall jamb with extensions applied: 4-9/16 inch (116mm).
 - 4. Sill thickness: 1-1/16 inch (27mm).
 - 5. Exterior: All frame parts are .050 inch (1.3mm) thick 6063 extruded aluminum alloy with accessory grooves, press fit and fastened onto the wood frame. [Optional Anodized Aluminum Clad Finish].
 - 6. Corner Construction: Mitered corners use internal corner key and sealer.
 - 7. Other wood species available: [Pine (standard)] [Alder] [Fir] [Maple] [Oak] [Cherry] [Mahogany] [Walnut] [Bamboo] [other] on exposed wood frame components.
 - 8. [FSC Certified wood requiring Chain of Custody (COC) label].
 - 9. Prep for stool.
 - 10. Interior stops: [standard-beveled] [square]
- B. Surface Finish:
 - 1. Exterior Finish – Aluminum
 - a. Standard Paint Colors: Exterior aluminum frame components, and PDL bars are to have a 70% fluoropolymer based coating in compliance with AAMA 2605-05 specifications. Color is to be [Abalone] [Alabaster] [Antique Red] [Basil] [Bay Leaf] [Beige] [Butterscotch] [Camel] [Cape Cod] [Chutney] [Coal Black] [Frosted Jade] [Gingersnap] [Green Tea Leaf] [Hartford Green] [Kiwi] [Manchester] [Merlot] [Mudpie] [Mystic Ivy] [Natural Cotton] [Patriotic Blue] [Pumpkin Spice] [Rustic] [Sand] [Slate] [Spiced Vinegar] [Timberwolf] [Truffle] [Ultra Pure White] [Waterford] [White]. (Some limitations apply for radius PDL bars.)
 - b. Aluminum Anodized: Exterior Components: Exterior aluminum frame components are to have an anodized finish in compliance with AAMA 611-98 specifications. The anodized finish is to be [Clear] [Champagne] [Light Bronze] [Medium Bronze] [Dark Bronze] [Black] [Auburn].
 - c. [Specify a custom paint color.]
 - 2. Interior Finish - Wood:
 - a. [Interior wood is to be treated bare wood without stain or top coat.]
 - b. [Interior wood is to be treated bare wood with an acrylic based double clear coat.]

- c. [Interior wood is to have a water based stain with a clear water based top coat. Stain color is to be [Cherry] [Chestnut] [Coffee Bean] [Library Red] [Light Oak 998] [Red Wheat] [Spiced Walnut] [Sunset Oak] [Wheat].
- d. [Specify a custom stain color]
- e. [Interior wood is to have a primer coat only.]
- f. [Interior wood is to have acrylic type paint applied. The interior paint color is to be [Abalone] [Beige] [Bright White] [Ivory Tusk] [Natural Cotton] [Silk] [Ultra Pure White].]
- g. [Specify a custom paint color.]

The following are optional materials and accessories. Edit for project requirements.

- C. Jamb Extensions: Provide factory installed jamb extensions up to 12 inches (305mm) for wall thickness indicated or required. Jamb extensions over 12 inches (305mm) are sent loose to be field installed.
 - 1. Finish: match interior frame finish.
 - 2. Other wood species available: [Pine (standard)] [Alder] [Fir] [Maple] [Oak] [Cherry] [Mahogany] [Walnut] [Bamboo] [other]
- D. Removable Grilles:
 - 1. Surround: full, constructed of kiln-dried pine [7/8 inch (22mm)] [1-1/8 inch (29mm)].
 - 2. Pattern: [rectangular] [custom lite layout].
 - 3. Finish: bare wood.
 - 4. Profile: [beveled-standard] [ovolo].
 - 5. Other wood species available: [Pine (standard)] [Alder] [Fir] [Maple] [Oak] [Cherry] [Mahogany] [Walnut] [Bamboo] [other]
- E. Grilles-in-the-Airspace: Installed inside the hermetically sealed glass unit.
 - 1. Material: [aluminum flat bars, 5/8 inch (16mm) wide] [aluminum profiled bars, 3/4 inch (19mm) wide, available for units with 7/8 inch (22mm) or 9/16 inch (14mm) insulating glass] [Brass pencil bars, 5/16 inch (8mm) wide, available for units with 7/8 inch (22mm) insulating glass] [Pewter pencil bars, 5/16" (8mm) wide, available for units with 7/8 inch (22mm) insulating glass].
 - 2. Color options: [3/4 inch Profiled bars: White, Beige, Sand, Rustic, Hartford Green, Chutney, Light Wood & Dark Wood faux finishes] [5/8" Flat bars: White, Beige, Sand, Rustic, Hartford Green, Chutney, Light Wood & Dark Wood faux finishes, Brass] [Two-tone contour or flat grilles available with light or dark wood faux finishes to the interior and White to the exterior.
- F. Performance Divided Lites (PDL): PDL system utilizes a permanently adhered wood grille bar to the interior and a permanently adhered aluminum grille bar to the exterior glass.
 - 1. Material: Muntin is constructed of .050 inch (1mm) thick 6063 extruded aluminum alloy on exterior, pine on interior [5/8 inch (16mm) wide] [7/8 inch (22mm) wide] [1-1/8 inch (29mm) wide] [1-3/4 inch (44mm) wide] [2-1/4 inch (57mm) wide] [4-1/2 inch (114 mm)]. On some radius units and units with special grid patterns, muntin is made of composite material; this is optional on other units.
 - 2. Pattern: [rectangular] [custom lite cuts-subject to approval of Kolbe & Kolbe Millwork Co., Inc.].
 - 3. Spacer bar between the glass. Finish: Standard [Champagne]. Optional [Aluminum mill-finish] [Black finish].
 - 4. Exterior surface finish: To match frame exterior. (Some limitations apply for PDL bars on radius and special grid patterns.)
- G. Accessories & Trim
 - 1. Casings
 - a. [1-15/16 inch (49mm) brickmould] [3-1/2 inch (89mm) profiled brickmould] [3-1/2 inch (89mm) flat casing] [3-1/2 inch (89mm) flat casing]

- with backband, 4-1/4 inch (108mm) overall face dimension] [3/4 inch (19mm) Ogee casing] [1-15/16 inch (49mm) bull nose casing] [2 inch (49mm) flat casing] [1-13/16 inch (46mm) historic trim] [1-1/2 inch (38 mm) pavilion brickmould] [2-3/16 inch (56mm) stucco casing] [1-5/8 inch (41mm) brickmould] [3-1/2 inch (89mm) beaded casing]
2. Nosings
 - a. [1-7/16 inch (37mm) traditional sill nosing] [1-9/16 inch (40mm) sill drip] [1-5/8 inch (41mm) projected sill nosing with end caps] [2-1/8 inch (54mm) projected sill nosing with end caps] [2-1/8 inch (54mm) projected sill nosing with 2 inch (51mm) overall face dimension, with end caps] [3-3/16 inch (81mm) stucco trim sill nosing] [5-3/16 inch (132mm) extended sill nosing]
 3. Frame Expanders
 - a. [1 inch (25mm)] [2-1/2 inch (64mm)] [4 inch (102mm)] [6 inch (152mm)] [7 inch (178mm)]
 4. Mull Covers
 - a. [1/2 inch (13mm)] [1 inch (25mm)] [1-1/2 inch (38mm)] [2 inch (51mm)] [2-1/2 inch (64mm)] [3 inch (76mm)] [3-1/2 inch (89mm)] [4 inch (102mm)] [5-1/2 inch (140mm)] [6 inch (152mm)]

2.03 GLAZING

- A. Glass:
 1. Standard one lite IG is 1-3/8 inch (35mm) with LoE²-270 on surface #2 and LoE 180 on surface #5, argon filled.
 2. Standard IG or single glazed has standard design pressure of 65 psf (DP 65). See Website www.kolbe-kolbe.com for impact performance ratings.
 3. High altitude IG has open breather tube.
 4. All glass is select quality complying with FS-DD-G-451D.
 5. IG complies with IGCC and ASTM E2190-08'.
- B. Glazing Methods:
 1. Units have K-Glaze with 3/16 inch (5mm) wide glazing tape and primary silicone on #1 surface along sight line paired with latex sealant on #4 surface at bottom wood glazing bead.
- C. Glass Options:
 1. [LoE² 240 –Glare Control] [LoE³ 366]. [ThermaPlus LoE glass has a [LoE²-270] [LoE²-366] option on surface 2 and a LoE hard coat on surface 4 plus permanent coating (interior pane)].
 2. Patterned, bronze, or gray-lite.
 3. Tempered or laminated glass.
 4. Protective film.
 5. Other options: Standard to the industry. [With] [Without] argon gas. (Argon gas may not be included in units to be installed in or shipping through high altitude areas.)

2.04 ACCESSORIES AND TRIM

<i>Edit for project requirements.</i>

- A. Installation Accessories:

For Individual, Muller Window Units, and Transoms:

 1. Galvanized steel installation clips (number required to meet DP20 may be factory applied to unit). Kolbe & Kolbe recommends that all units with exterior casing be installed using installation clips. Units without exterior casing are shipped with a factory applied nailing fin.

2. Mull anchors.
3. Strip mull anchors.

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. Adjust operable sash to work freely with hardware functioning properly. Re-adjust at completion of the project if directed.
- B. Remove visible labels.
- C. 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 murtic acid washing after completion of masonry) that might cause damage.

END OF SECTION