

This Specifications Sheet utilizes the Construction Specifications Institute (CSI) MasterFormat™ 1995 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 08555 or 08 52 13.05 ULTRA SERIES TRADITIONAL DOUBLE & TRIPLE SLIDER WINDOWS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Clad traditional [double] [triple] Slider windows complete with hardware, glazing, weatherstripping, [screens] [jamb extensions] [removable grilles] [grilles-in-the-air] [performance divided lites] [combination storm/screen] and standard or specified anchorages, trim, attachments, and accessories.

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 - Certification of Acoustical Performance.
 5. ASTM F588-07' or AAMA 1302.5 - Standard for Forced-Entry Resistance.
 6. ASTM E2190-08' - Standard Specification for Insulating Glass Unit Performance and Evaluation.
- B. Window and Door Manufacturers Association (AAMA/WDMA), American National Standards Institute/Window and Door Manufacturers Association (ANSI/WDMA).
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 Repellent 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. AAMA 1503.1-98 - Test Derived CRF.
 6. 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 the Air, Water, Structural Test Reports and Energy Rating Reports. For updated reports, please visit our website <http://www.kolbe-kolbe.com>.

- A. Minimum Design and Performance Requirements
1. The required design pressure(s) for windows and doors is _____ 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 unit's performance, when not tested, may be addressed by a manufacturer's Statement of Qualification.
 4. Mullion design shall be adequate for required 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.
- C. Emergency Escape and Rescue:
1. Larger widths/heights with standard hardware will comply with emergency escape and rescue requirements of Building Codes (greater or equal to 5.7 Sqft. of clear opening).

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>.
- 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 – Product Delivery Requirements, Section 01660 – 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

- A. Description: Slider windows are factory assembled with removable sash, as manufactured by Kolbe & Kolbe Millwork Co., Inc., Wausau, Wisconsin.
- B. Units available as standard performance.

2.02 MATERIALS

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

- A. Frame: Constructed of kiln-dried pine, with pine interior stops and mull casings on mull units, water repellent, preservative treated in accordance with WDMA I.S. 4-

- 07'A. Ultra assembled frames have factory installed heavy vinyl nailing fins at head, side jambs, and sill. Nailing fin at head has integral drip cap. Units with brickmould or casing do not have a vinyl nailing fin factory applied as standard.
1. Jamb thickness: 3/4 inch (19mm) at side jambs and head.
 2. Standard overall jamb with extensions applied: 4-9/16 inch (116mm).
 3. Sill thickness: 1-3/16 inch (30mm) with a 14° slope.
 4. Exterior: All frame parts are .050 inch (1.3mm) thick 6063 extruded aluminum alloy with accessory grooves, press fit onto the wood frame.
 5. Corner Construction: Mitered corners use internal corner key and sealer.
 6. Other wood species available: [Pine (standard)] [Alder] [Fir] [Maple] [Oak] [Cherry] [Mahogany] [Walnut] [Bamboo] [other] on exposed wood frame components.
 7. [FSC Certified wood requiring Chain of Custody (COC) label].
 8. Prep for stool.
- B. Sash: Constructed of kiln dried pine, water repellent, preservative treated in accordance with WDMA I.S. 4-07'A.
1. Thickness: 1-3/8 inch (35mm)
 2. Exterior: Sash parts are completely covered by a .019 inch (0.5mm) thick 5052 roll formed aluminum alloy with all corners lap jointed and sealed.
 3. Corner Construction: Mortise-and-tenon.
 4. Other wood species available: [Pine (standard)] [Alder] [Fir] [Maple] [Oak] [Cherry] [Mahogany] [Walnut] [Bamboo] [other] on exposed wood sash components.
 5. [FSC Certified wood requiring Chain of Custody (COC) label].
 6. Interior glazed.
 7. Sash Plough: Machined on the two outermost stiles. [Plough in left sash only] [Plough in right sash only] [No ploughs].
- C. Surface Finish:
1. Exterior Finish – Aluminum
 - a. Standard Paint Colors: Exterior aluminum frame and sash 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. [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.]
- D. Hardware:
1. Locking System Latches: Pick resistant Entry-Gard® cam locks with concealed locking mechanism including alignment lugs. Sash lock and keeper constructed of high-pressure die-cast zinc with aluminum back plate,

- coated with E-Gard®. Finishes: Standard is Clay [White] [Beige] [Brass] [Antique Brass] [Satin Nickel] [Antique Nickel] [Rustic Umber] [Matte Black].
2. Sash lift handles are optional for units without finger grooves (sash plough). Finishes available to match locks.
- E. Weatherstripping:
1. Head and Sill Tracks: Made of weatherable UV resistant PVC. Passes drop dart test. Color: Standard is Beige [White]. Head track has compression foam backing; sill track has integral multi-fin weatherstripping.
 2. Stiles and Meeting Stile: Black dual durometer polyolefin bulb with arloc slip coat.
 3. Parting stop: Rigid weatherable Beige PVC parting stop with flexible fins.
 4. Sill: Rigid weatherable Beige PVC water seal/weatherstrip.

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

- F. Screens: Sent loose as standard on all units.
1. Surrounds: Full screen
 2. Screen cloth: BetterVue® Black fiberglass is standard iVis (improved visibility insect screen) 10% better insect protection, airflow, and clearer view. [UltraVue® Black fiberglass eVis (excellent visibility insect screen) 20% better insect protection, 15% better airflow, and clearer view] [Bright aluminum (not available with Brass screen frame)] [Charcoal aluminum].
 3. Screen Channels: .024 inch (0.6mm) thick roll formed aluminum.
 4. Attachment: Spring loaded plungers.
 5. Corner Construction and Finish Color: Screen channel colors to match exterior colors. Channels are joined and reinforced with a corner key.
- G. 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]
- H. 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]
- I. 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.
- J. 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)].
- 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 and sash exterior. (Some limitations apply for PDL bars on special grid patterns.)
- K. 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 9/16 inch (14mm) with LoE²-270, argon filled.
 - 2. Standard IG or single glazed has standard design pressure of 25 psf (DP 25). See Website www.kolbe-kolbe.com for 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. Single glazed are all silicone-glazed.
 - 2. Operating units and fixed 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.)

D. Glazing Bead Options:

1. Beveled profile is standard. Options: [ovolo] [square]

2.04 ACCESSORIES AND TRIM

Edit for project requirements.

A. Installation Accessories:

1. Galvanized steel installation clips (number required to meet DP20 may be attached 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.

2.05 COMBINATION STORM AND SCREEN

Combination storm and screen units may be used in addition to sealed insulating glass where triple glazing is required.

A. StormGuard Combination Storm and Screen:

1. Frame: 0.045 inch (1.1mm) thick extruded aluminum. Finishes to match exterior colors.
2. Hardware: Spring loaded locking pins to hold moveable panel in position.
3. Weatherstripping: White pile weatherstripping.
4. Storm Panel: Select quality glass with aluminum frame. Finish color to match frame color.
5. Screen Panel: 18 × 16 wires-per-inch screen cloth [Fiberglass: Charcoal] [Bright aluminum] [Aluminum: Black].

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.

3.04 PROTECTION

- A. Cover windows, in accordance with Section 01760 – 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