SECTION 08 43 33

SLIDING/FOLDING DOORS

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\*\* NOTE TO SPECIFIER \*\* Euro-Wall; Aluminum Sliding/Folding Door products.  
.  
This section is based on the products of Euro-Wall, which is located at:  
24100 Tiseo Blvd.  
Punta Gorda, FL 33980  
Toll Free Tel: 888-989-EURO (3876)   
Fax: 941-979-0846  
Email: [request info (kelly@euro-wall.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Euro-Wall&coid=48163&rep=&fax=941-979-0846&message=RE:%20Spec%20Question%20(08495eur):%20%20&mf=)  
Web: [www.euro-wall.com](http://www.euro-wall.com)   
 [ [Click Here](http://www.arcat.com/arcatcos/cos48/arc48163.html) ] for additional information.  
Euro-Wall produces both residential and commercial exterior and interior folding door systems for placement in structures anywhere in the world. Euro-Wall Folding Doors expands the available options for folding door placements, whether new construction, retrofit, or remodeling of existing structures. Euro-Wall Folding Doors specializes in High Velocity Wind and Hurricane Zones (HVHZ) and coastal packages as well as standard climate options. In addition to our folding doors, we also produce sliding doors, and French doors to meet the tough and stringent building codes that coastal authorities require.   
This Section includes Euro-Wall interior glass folding doors and interior sliding doors, which allows for separation of space for privacy when needed. The features of Euro-Wall bi-folding doors and sliding doors in a commercial or office setting helps to utilize space in an efficient and flexible manner which allows for form and function.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Sliding/Folding Doors.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 03 30 00 - Cast-in-Place Concrete.
    2. Section 03 45 13 - Faced Architectural Precast Concrete.
    3. Section 04 22 00.16 - Surface-Bonded Concrete Unit Masonry.
    4. Section 05 40 00 - Cold-Formed Metal Framing.
    5. Section 06 10 00 - Rough Carpentry.
    6. Section 06 20 00 - Finish Carpentry.
    7. Section 07 21 26 - Blown Insulation.
    8. Section 07 46 33 - Plastic Siding.
    9. Section 07 62 00 - Sheet Metal Flashing and Trim.
    10. Section 07 90 00 - Joint Protection.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. AAMA/WDMA/CSA 101/I.S.2/A440-08 (NAFS-08) - Standard/Specification for windows, doors, and unit skylights.
    2. AAMA CW-1 0 - Care and Handling of Architectural Aluminum from Shop to Site.
    3. AAMA 610.1 - Cleaning and Maintenance of Painted Aluminum Extrusions and Curtain Wall Panels.
    4. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum.
    5. AAMA 1801 - Voluntary Specification for the Acoustical Rating of Windows, Doors and Glazed Wall Sections
    6. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
    7. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performance Organic Coatings on Aluminum Extrusions and Panels.
    8. ASTM C 864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.
    9. ASTM C 1115 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting. Blocks, and Spacers.
    10. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors By Uniform Static Air Pressure Difference.
    11. ASTM E 547 - Water Penetration of Exterior Windows, Curtain Walls, and Doors.
    12. ASTM E 1886 - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.
    13. ASTM E 1996: "Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes".
    14. ANSI Z97.1 - Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test.

\*\* NOTE TO SPECIFIER \*\* Edit the following paragraphs for the sliding/folding door system to suit project requirements. Coordinate performance requirements with the manufacturer for the project location, wall size, and local building code requirements.

* 1. PERFORMANCE REQUIREMENTS
     1. System Design: Design and size components to withstand dead and live loads caused by pressure and suction of wind acting normal to plane of folding glass wall as calculated in accordance with applicable code.
     2. Outward/Inward opening Euro-C2 Aluminum Folding Door system when tested on a typical four panel folding door unit (3L1R), 160 inches (4070 mm) in width and 100 inches (2535 mm) in height shall meet or exceed the following performance tests..
        1. AAMA / WDMA / CSA 101 / I.S.2 / A440-08 (NAFS-08), Air infiltration: A2, Water Leakage Resistance: DP70 (510 PA), Wind Load Resistance: DP45.
        2. Design Pressure: 2400 Pa (50 psf), ASTM E330, Procedure A.
        3. Negative Design Pressure = 2400 Pa (50 psf), ASTM E330, Procedure A.
        4. Water Penetration Resistance: 510 Pa (10.5 psf), ASTM E 547 with no leakage.
        5. Air Leakage Resistance: A2 under NAFS-08.
     3. Outward/Inward opening Euro-C3 - Florida Building Code Product Approval (Miami-Dade HVHZ) FL15472 Aluminum Folding Door system when installed to conforming to FBC , unlimited width and 100 inches (2535 mm) in height shall meet or exceed the following performance tests.
        1. ASTM E 330, Procedure A: Uniform Load Structural: PG70 (5040 Pa/ 105 psf).
        2. AAMA / WDMA / CSA 101 / I.S.2 / A440-08 (NAFS-08), Air infiltration: A3, Water Leakage Resistance: DP70 (510 PA), Wind Load Resistance: DP70 (3360 PA).
        3. Design Pressure: 3360 Pa (70 psf), ASTM E 330, Procedure A.
        4. Negative Design Pressure: 3360 Pa (70 psf), ASTM E 330, Procedure A.
        5. Water Penetration Resistance: 510 Pa (10.5 psf), ASTM E 547.
        6. Air Leakage Resistance: A2 (NAFS-08)
        7. TAS 201 TAS 202 TAS 203, Pass
     4. Outward/Inward opening Euro-C2 Aluminum Folding Door system when tested on a typical four panel folding door unit (3L1R), 160 inches (4070 mm) in width and 100 inches (2535 mm) in height shall meet or exceed the following performance tests..
        1. ASTM E 1886: 10 Large Missile Impact Shots: Pass
        2. ASTM E 1996: 9000 Air Pressure Cycles (Positive/ Negative): 100 Psf (4800 Pa).
        3. ASTM E 330, Procedure A: Uniform Load Structural: DP70. (5040 Pa/ 105 psf).
        4. AAMA / WDMA / CSA 101 / I.S.2 / A440-08 (NAFS-08), Air infiltration: A3, Water Leakage Resistance: DP70 (510 PA), Wind Load Resistance: DP70 (3360 PA).
        5. Design Pressure: 3360 Pa (70 psf), ASTM E 330, Procedure A.
        6. Negative Design Pressure: 3360 Pa (70 psf), ASTM E 330, Procedure A.
        7. Water Penetration Resistance: 510 Pa (10.5 psf), ASTM E 547.
        8. Leakage Resistance: A2 (NAFS-08)
        9. TAS 201 TAS 202 TAS 203, Pass
  2. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.
     3. Shop Drawings: Detailed drawings prepared specifically for the project by manufacturer. Show opening dimensions, framed opening tolerances, profiles, product components, anchorages, and accessories.
        1. Indicate material thickness, fastener locations, glazing and hardware arrangements.
        2. Include schedule identifying each unit, with marks or numbers referencing drawings.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
    2. Verification Samples:
       1. Aluminum Finish: Two samples, minimum size 2 by 3 inches (50 by 75 mm), representing actual product and color.
       2. Glass: Two samples, minimum size 12 inches (300 mm) square, of specified glass, including coatings or frit pattern.
       3. Assembly Sample: 24 by 36 inch (600 by 900 mm) assembly complete with glazing, gaskets, fasteners, anchors, and finish; do not proceed with fabrication until workmanship and color are approved by Architect.
    3. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
    4. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic checking and adjustment and periodic cleaning and maintenance of all components
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this Section with minimum 5 years experience in fabrication and erection of glazed window wall systems for projects of similar scope.
     2. Installer Qualifications: Experienced in performing work of this section that has specialized in installation of work similar to that required for this project.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a full size mock-up for evaluation of surface preparation techniques and application workmanship.
       1. Finish areas designated by Architect.
       2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
       3. Refinish mock-up area as required to produce acceptable work.
       4. Incorporate accepted mock-up as part of the Work.
  1. DELIVERY, STORAGE, AND HANDLING
     1. Store products in manufacturer's unopened packaging until ready for installation.
     2. Provide care and handling conforming to AAMA CW-1 0, "Care and Handling of Architectural Aluminum from Shop to Site".
     3. Store products out of contact with the ground, under a weather tight covering, so as to prevent bending, warping, or other damage. Do not cover with unventilated tarps, polyethylene film, or similar coverings.
     4. Protect factory finishes from damage, precipitation and construction materials until ready for installation.
  2. SEQUENCING
     1. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
     2. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
  3. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
  4. WARRANTY
     1. Euro-Wall products are warranted for 10 years.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Euro-Wall, which is located at: 24100 Tiseo Blvd.; Punta Gorda, FL 33980; Toll Free Tel: 888-989-EURO (3876) ; Fax: 941-979-0846; Email: [request info (kelly@euro-wall.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Euro-Wall&coid=48163&rep=&fax=941-979-0846&message=RE:%20Spec%20Question%20(08495eur):%20%20&mf=); Web: [www.euro-wall.com](http://www.euro-wall.com)

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* Edit the following for the sliding/folding doors as required for the project. The Drawings should include the opening configuration including size(s) and swing and the stacking location(s). Note that openings should be framed with the structural capability of the header such that the maximum deflection with the live load is limited to be L/720 of the span. Ensure the frame header the C3 Top-hung system is designed to withstand the dead loads of all Door panels including glass plus momentum and impact loading. Also the rough opening header must not deflect more than 1/16 inch (2 mm) when carrying the weight of the door panels over full system span.

* 1. ALUMINUM SLIDING/FOLDING DOORS
     1. Provide top hung sliding/folding glass doors to fit the openings and configurations indicated on the Drawings. Provide system complete with head, sill and jambs complete with weatherstripping, operating hardware and specified accessories as follows:

\*\* NOTE TO SPECIFIER \*\* Select one of the following paragraphs for the system required and delete the paragraph not required.

* + - 1. System: Euro-Wall System LLC Euro-C2 Aluminum folding door system as manufactured by Euro-Wall Systems LLC.
      2. System: Euro-Wall System LLC Euro-C3 Aluminum folding doors system as manufactured by Euro-Wall Systems LLC
      3. System: Euro-Wall System LLC Euro-C3-100 Aluminum Folding Systems as manufactured by Euro-Wall Systems LLC.
      4. Door Panel Size: Provide doors as a factory fabricated knock-down system.

\*\* NOTE TO SPECIFIER \*\* Note that individual panels are available in widths 24 inches minimum to 39 inches (990 mm) and heights 39 inches minimum to 120 inches (3048 mm) maximum. Contact manufacturer for sizes to fit your performance requirements.

* + - * 1. As indicated on the Drawings.
      1. Operation:

\*\* NOTE TO SPECIFIER \*\* Select one of the following two paragraphs and delete the paragraph not required.

* + - * 1. Out-folding system.
        2. In-folding system.
      1. Glazing: Provide safety glazing materials complying with ANSI Z97.1 and with the requirements of Section 08 83 13 - Mirrored Glass Glazing.

\*\* NOTE TO SPECIFIER \*\* Delete two of the following three glazing paragraphs. Laminated glass is required for Impact Rated Systems.

* + - * 1. Glazing: 1 inch (24 mm) Sealed insulating glass.
        2. Glazing: 1 inch (24mm) Sealed Unit Hurricane Glass.
        3. Glazing: 1/4 inch (6 mm) Tempered glass Single Glass.
        4. Glazing: 9/16 inch (14 mm) Hurricane glass.
      1. Framing: Extruded aluminum with nominal thickness of .078 inches (2.0 mm) to .1562 (4mm).
      2. Weatherstripping:
         1. Dual weatherstripping on head, jambs and between panels, and single weatherstripping on sill.
         2. Hinge gaskets on specific hinges.
      3. Sill:

\*\* NOTE TO SPECIFIER \*\* Select one of the following paragraphs and delete the other. Note that ADA Sill may be used in areas where no test data is required.

* + - * 1. Standard Sill.
        2. Floor channel ADA Compliant Sill
        3. ADA Sill.

\*\* NOTE TO SPECIFIER \*\* Retain or add accessories required for project.

* + - 1. Accessories:
         1. Moldings.
         2. Sill Cover.
      2. Hardware: Folding door.
         1. Aluminum hinges, color as follows:

\*\* NOTE TO SPECIFIER \*\* Select one of the following paragraphs for the color required and delete those not required.

White Powder Coat.

Clear Anodized.

Bronze Powder Coat.

Black Powder Coat.

* + - * 1. Stainless steel corrosion proof carriers with sealed, self-lubrication, ball bearing multi-rollers.

\*\*NOTE TO SPECIFIER\*\* Select one of the two following paragraphs and delete the others.

* + - * 1. Twinpoint stainless steel Handle and Gear Box.
        2. Multipoint stainless steel door lock system.

\*\* NOTE TO SPECIFIER \*\* Select door handle and finish required from the following paragraphs as required and delete those not required.

* + - 1. Door Handles:
         1. Ferraro Series.

White powder coat finish.

Satin aluminum finish.

Black powder coat finish.

Bronze powder coat finish.

* + - * 1. Florence Series.

Satin nickel finish.

Polished Brass finish.

Bronze Powder coat finish.

Antique Brass finish.

Antique nickel finish.

* + - * 1. Faenza Series.

Satin nickel finish.

Polished Brass finish.

Bronze Powder coat finish.

Antique Brass finish.

Antique nickel finish.

* 1. MATERIALS
     1. Aluminum: 6063-T5 alloy and temper. Other alloys and tempers may be used for non-structural members provided they do not void the required warranties. Indicate alloys and tempers clearly on shop drawings and in structural calculations.

\*\* NOTE TO SPECIFIER \*\* The manufacturer will select the type of glazing for the project based on project location and performance requirements specified. Coordinate with glazing specified above.

* + 1. Glazing: Provide glazing type specified complying with ANSI Z97.1.
    2. Flashings: Sheet aluminum, same finish as for system components; secured with concealed fastening method or fastener with head finished to match; thickness as required for conditions encountered.
    3. Glazing Gaskets: Dry glazing system compression type design, replaceable; EPDM, complying with ASTM C 864, with solid strand cord to prevent shrinkage or; Elastomeric silicone with solid strand cord to prevent shrinkage, complying with ASTM C 1115, as provided by the manufacturer.
       1. Manufacturer's standard black color.
    4. Setting Blocks, Edge Blocks, and Spacers: As required by manufacturer and compatible with insulated glass where required.
    5. Anchors and Fasteners: Aluminum, zinc and stainless steel of type, which will not cause electrolytic action or corrosion.
    6. Accessories: Provide accessories as scheduled to achieve design intent and environmental control.

\*\* NOTE TO SPECIFIER \*\* Delete all but one of the following aluminum finishes. If more than one finish is required, indicate the locations where each is to be used. Verify current standard colors available.

* + 1. Aluminum Finish: Anodized Class 1 complying with AAMA 611 Class 1 Acid Etch anodic coatings.
       1. Color: Clear.
       2. Color: Dark bronze.
       3. Color: Black.
    2. Aluminum Finish: Standard mill finish with custom finish as follows:
       1. Powder Coat finish: D2000-AAMA 2604 (5 year Florida) 15 year manufacturer's warranty. Color as selected from manufacturer's standard colors.
       2. Custom Powder Coat finishes available D3000-AAMA 2605 (10 year Florida) 20 year manufacturer's warranty. Color as selected from manufacturer's standard colors.
       3. Wood Grain finishes (custom): AAMA 2604 (5 year Florida) 10 year manufacturer's warranty. Color as selected from manufacturer's standard colors.
  1. FABRICATI0N
     1. Fabricate components in accordance with approved shop drawings. Remove burrs and rough edges. Shop fabricate to greatest extent practicable to minimize field cutting, splicing, and assembly.
     2. Fabricate components true to detail and free from defects impairing appearance, strength or durability.
     3. Fabricate components to allow for accurate and rigid fit of joints and corners. Match components carefully ensuring continuity of line and design. Ensure joints and connections will be flush and weathertight. Ensure slip joints make full, tight contact and are weathertight.
     4. Reinforce components at anchorage and support points, at joints, and at attachment points for interfacing work.
     5. Glass: Accurately size glass to fit openings allowing clearances following recommendations of the manufacturer.
     6. Cut glass clean and carefully. Nicks and damaged edges will not be accepted. Replace glass that has damaged edges.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly prepared.

\*\* NOTE TO SPECIFIER \*\* Verify that structural capability of the header such that the maximum deflection with the live load is less than 1/8 inch (3 mm) over the full length of the opening.

* + 1. Verify openings are ready to receive work and dimensions and clearances are as indicated on the approved shop drawings.
    2. If preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
  1. PREPARATION
     1. Clean surfaces thoroughly prior to installation.
     2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
  2. INSTALLATION
     1. Install in accordance with manufacturer's instructions.
     2. Install system in accordance with approved shop drawings and manufacturer's instructions.
     3. Install components level, plumb and true to line with uniform joints. Do not use defective parts that are warped, twisted, bowed, dented or abraded.
     4. Separate dissimilar materials using nonconductive tape, paint, or other material not visible in finished work.
     5. Provide attachments and shims to permanently fasten system to building structure.
     6. Maintain dimensional tolerances and alignment with adjacent Work.
     7. Anchor securely in place, allowing for required movement, including expansion and contraction.
     8. Install glazing and sealants in accordance with manufacturer's instructions without exception, including surface preparations.
     9. Set sill members in bed of sealant. Set other members with internal sealants to provide weathertight construction.
     10. Install flashings, closures, corners, and other accessories as required or detailed.
     11. Clean surfaces and install sealant in accordance with sealant manufacturer's instructions and structure manufacturer's guidelines.
  3. ADJUSTING AND CLEANING
     1. Adjust hinge sets, locksets, and other hardware for proper operation. Lubricate using a suitable lubricant compatible with door and frame coatings.
     2. Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions before owner's acceptance.
     3. Clean and maintain aluminum surfaces in accordance with AAMA 610.1.
     4. Remove from project site and legally dispose of construction debris associated with this work.
  4. PROTECTION
     1. Protect installed products until completion of project.
     2. Touch-up, repair or replace damaged products before Substantial Completion.
  5. SCHEDULES

\*\* NOTE TO SPECIFIER \*\* Retain Paragraph below if required to suit project requirements. Identify products by name on the Drawings or use this paragraph to define the location of each type of material to be used. The following are some examples of schedule references. Edit as required to suit project or delete and identify products on the Drawings.

* + 1. :
    2. :

END OF SECTION