

VT Industries, Inc.
1000 Industrial Park
PO Box 490
Holstein, Iowa 51025
Toll Free (800) 827-1615
Phone (712) 368-4381
Fax (712) 368-4111
Website www.vtindustries.com
E-mail door_info@vtindustries.com

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Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat*, *SectionFormat*, and *PageFormat*, as described in *The Project Resource Manual—CSI Manual of Practice*.

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all "Specifier Notes" when editing this section.

Section numbers are from *MasterFormat* 1995 Edition, with numbers from *MasterFormat* 2004 Edition in parentheses. Delete version not required.

SECTION 08212 (08 14 16)

FLUSH WOOD VENEER DOORS

Specifier Notes: This section covers VT Industries flush wood veneer doors. Consult VT Industries for assistance in editing this section for the specific application.

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Interior Flush Wood Veneer Doors:

Specifier Notes: Edit the following list as required.

1. 5-ply flush bonded particle-core doors.
2. Flush fire-rated wood doors.
3. Lead-lined doors.
4. Sound-retardant doors.
5. Profiled doors.

1.2 RELATED SECTIONS

Specifier Notes: Edit the following list of related sections as required for the project. List other sections with work directly related to this section.

- A. Section 06460 (06 48 00) – Wood Frames.
- B. Section 08100 (08 12 00) – Metal Frames.
- C. Section 08710 (08 71 00) – Door Hardware.
- D. Section 08800 (08 80 00) – Glazing.
- E. Section 10225 (08 91 26) – Door Louvers.

1.3 REFERENCES

Specifier Notes: List standards referenced in this section, complete with designations and titles. Delete standards not used in this section. This article does not require compliance with standards, but is merely a listing of those used.

- A. ANSI A208.1 – Particleboard.
- B. ASTM E 90 – Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
- C. ASTM E 413 – Classification for Rating Sound Insulation.
- D. AWI Section 1300 – Architectural Flush Doors.
- E. NFPA 80 – Standard for Fire Doors and Other Opening Protectives.
- F. UBC 7-2-1997/UL 10C – Positive Pressure Fire Tests of Door Assemblies.
- G. WDMA Finish System TR-6, Catalyzed Polyurethane.
- H. WDMA I.S.1-A – Architectural Wood Flush Doors.

1.4 SUBMITTALS

- A. Comply with Section 01330 (01 33 00) – Submittal Procedures.
- B. Product Data: Submit manufacturer's product data, including door construction description and WDMA I.S.1-A and AWI classifications.
- C. Schedules: Submit manufacturer's schedules, including door dimensions, cutouts, species, finish, and hardware. Reference individual door numbers as indicated on the Drawings.
- D. Samples: Submit manufacturer's door finish samples, showing range of color variation.

Specifier Notes: Include the following paragraph when specifying sound-retardant doors.

- E. Test Reports: Submit manufacturer's test results of STC ratings from testing performed by independent testing agency for sound-retardant doors.
- F. Manufacturer's Certification: Submit manufacturer's certification that doors comply with specified requirements and are suitable for intended application.

Specifier Notes: Include the following paragraph for projects requiring LEED certification.

- G. Environmental Documentation: Submit manufacturer's environmental documentation.
 - 1. Forest Stewardship Council (FSC) Stave Lumber and Particleboard Core Construction: Chain of custody certificate.
 - 2. Scientific Certification Systems (SCS) Particleboard Core Construction: Recovered fiber content certification.
 - 3. Rapidly Renewable Materials – Agrifiber Core Construction: Product data.
 - 4. Manufacturer's Information: Describe available LEED points.
- H. Cleaning Instructions: Submit manufacturer's cleaning instructions for doors.
- I. Warranty: Submit manufacturer's standard warranty.

1.5 QUALITY ASSURANCE

- A. Tolerances for Warp, Telegraphing, Squareness, and Prefitting Dimensions: WDMA I.S.1-A.
- B. Identifying Label: Each door shall bear identifying label indicating:
 - 1. Door manufacturer.
 - 2. Order number.
 - 3. Door number.
 - 4. Fire rating, if applicable.

Specifier Notes: Delete the following paragraph if fire-rated doors are not required.

- C. Fire-Rated Doors: Labeled by Intertek/Warnock Hersey.
 - 1. Construction Details and Hardware Application: Approved by labeling agency.

Specifier Notes: Edit the following paragraph as required. Delete if positive pressure opening assemblies are not required.

- D. Positive Pressure Opening Assemblies: UBC 7-2-1997/UL 10C.

Specifier Notes: Include the following paragraph for projects requiring LEED certification.

- E. Environmental Responsibility: Provide doors manufactured with the following environmentally responsible core materials:

Specifier Notes: Include the sentence for the specified core material.

1. Particleboard Core: Forest Stewardship Council (FSC) certified.
2. Agrifiber Core: Meets LEED requirements for rapidly renewable materials and recycled content.
3. Stave Lumber Core: Forest Stewardship Council (FSC) certified.
4. Structural Composite Lumber (SCL): Meets LEED requirements for low-emitting material credit.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Delivery:

1. Deliver doors to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
2. Package doors individually in polybags.

B. Storage:

1. Store doors in accordance with manufacturer's instructions.
2. Store doors in clean, dry area indoors, protected from damage and direct sunlight.
3. Store doors flat on level surface.
4. Do not store doors directly on concrete.
5. Keep doors completely covered. Use covering which allows air circulation and does not permit light to penetrate.
6. Store doors between 50 and 90 degrees F (10 and 32 degrees C) and 30 to 50 percent relative humidity.

C. Handling:

1. Handle doors in accordance with manufacturer's instructions.
2. Protect doors and finish during handling and installation to prevent damage.
3. Handle doors with clean hands or clean gloves.
4. Lift and carry doors. Do not drag doors across other doors or surfaces.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Do not subject doors to extreme conditions or changes in temperature or relative humidity in accordance with WDMA I.S.1-A.

1.8 WARRANTY

- A. Warrant solid core, interior doors for life of installation against warpage, delamination, and defects in materials and workmanship.
- B. Defects noted during warranty period shall be corrected at no cost to Owner. Corrective work shall include labor and material for repair, replacement, refinishing, and rehanging as required.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. VT Industries, Inc., 1000 Industrial Park, PO Box 490, Holstein, Iowa 51025. Toll Free (800) 827-1615. Phone (712) 368-4381. Fax (712) 368-4111. Website www.vtindustries.com. E-mail door_info@vtindustries.com.

2.2 GENERAL

Specifier Notes: Glass mouldings can be provided in a variety of wood species and profiles from non-rated to 90-minute rated. Consult VT Industries for more information.

- A. Glass Mouldings:
 - 1. Non-rated Flush Doors: VT Industries Style VT1.
 - 2. Fire-Rated Doors: VT Industries Style 110, steel vision frame, beige prime finish.
- B. Glazing: As specified in Section 08800 (08 80 00).
- C. Door Louvers: As specified in Section 10225 (08 91 26).

2.3 5-PLY FLUSH BONDED PARTICLE-CORE DOORS

- A. 5-Ply Flush Bonded Particle-Core Doors:

Specifier Notes: Specify the door model. Consult VT Industries for assistance in choosing the door model for the specific application.

- 1. Model: [5502-2, particleboard core, non-rated and 20-minute rated] [5P02-2, particleboard core, 20-minute rated] [5509-2, agrifiber core, non-rated and 20-minute rated] [5P09-2, agrifiber core, 20-minute rated] [5508, structural composite lumber, non-rated and 20-minute rated].
- 2. Compliance: WDMA I.S.1-A.
 - a. Quality Grade: Premium grade, extra heavy duty.
 - b. Type: PC-5ME.
- 3. 7-Ply and Non-Bonded Core Construction: Not acceptable.
- 4. Door Thickness: 1-3/4 inches.
- 5. Stiles:
 - a. Inner Stiles: 1-3/8 inches wide, before prefitting.
 - b. Structural Composite Lumber (SCL) With Outer Stile: Same species as face veneer.
 - c. Outer Stile: Apply after beveling and before face application.
- 6. Rails:
 - a. Structural composite lumber (SCL).
 - b. Minimum Width Before Prefitting: 1-3/8 inches.
- 7. Core:

Specifier Notes: Specify the core material.

- a. Material: [Particleboard] [Agrifiber] [Structural composite lumber (SCL)] [Stave lumber].
- b. Average Density: 28 pcf to 32 pcf.
- c. Compliance: ANSI A208.1, Grade 1-LD-2.
- 8. Door Assembly:

- a. Glue stiles and rails to core.
 - b. Sand entire assembly flat as a unit to ensure minimal telegraphing of core components through face veneers.
9. Composite Crossbands:
- a. Apply to core before application of matching hardware stiles.
 - b. Exposed Crossbanding: Not allowed along stile edges.
10. Veneers:
- a. Apply to crossbanded core in hot press using Type I, exterior, water-resistant adhesive.
 - b. 5-ply construction.
11. Face Veneers:

Specifier Notes: Specify the face veneers species, cut, and match.

- a. Veneer Species: _____ .
- b. Veneer Cut: _____ .
- c. Veneer Match and Assembly: _____ .
- d. Minimum Thickness Before Sanding: 1/42 inch.

2.4 FLUSH FIRE-RATED WOOD DOORS

A. Flush Fire-Rated Wood Doors:

Specifier Notes: Specify the door model. Consult VT Industries for assistance in choosing the door model for the specific application.

1. Model: [5545-2, 45-minute rated] [5P45-2, 45- and 60-minute rated] [5511-2, 45-, 60-, and 90-minute rated] [5P11-2, 60- and 90-minute rated] [5P08, 45-minute rated] [5P09, 45- and 60-minute rated].
2. Compliance: WDMA I.S.1-A.
 - a. Quality Grade: Premium.
 - b. Type: FD-5.
3. Door Thickness: 1-3/4 inches.
4. Outer Stiles: Same species as face veneer.
5. Inner Stiles:

Specifier Notes: Specify required inner stiles.

- a. [Structural composite lumber (SCL), 45-minute rated] [Noncombustible material, 60- and 90-minute rated].
- b. Warranted for use with standard-weight mortise butt hinges and No. 12, 1-1/4-inch steel threaded-to-head screws.

Specifier Notes: Specify required rails.

6. Rails:
 - a. [Structural composite lumber (SCL), 45-minute rated] [Noncombustible material, 60- and 90-minute rated].

- b. Width: Manufacturer's standard width.
- 7. Core:
 - a. Fire-retardant mineral board.
 - b. Weight: 30.8 pcf to 34.7 pcf.
 - c. Does not contain asbestos or added urea formaldehyde.
- 8. Composite Crossbands:
 - a. Apply to core before application of matching hardware stiles.
 - b. Exposed Crossbanding: Not allowed along stile edges.
- 9. Face Veneers:

Specifier Notes: Specify the face veneers species, cut, and match.

- a. Veneer Species: _____ .
- b. Veneer Cut: _____ .
- c. Veneer Match and Assembly: _____ .
- d. Minimum Thickness Before Sanding: 1/42 inch.
- 10. Positive Pressure:
 - a. Where UBC 7-2-1997/UL 10C standards for positive pressure apply, doors shall be constructed in accordance with Category A guidelines as published by Intertek/Warnock Hersey.
 - b. Smoke Gasketing: Apply smoke gasketing around frame perimeter to meet S-rating.
 - c. Intertek/Warnock Hersey Category A Guidelines: Edge sealing systems not allowed on frames.

Specifier Notes: The 2007 edition of NFPA 80 requires an annual inspection by the building owner of all fire-rated door assemblies classified as swinging doors with builders' hardware. VT Industries, Inc. "VTsmartdoor™" barcode technology will make the Owner's fire-rated door assembly inspections easier. Consult VT Industries, Inc. for more information.

- 11. Electronic Barcode: "VTsmartdoor" barcode technology.
 - a. Location: Fire label, hinge stile of doors.
 - b. Provide fire-rated door assembly information required for Owner's annual fire-door inspection in accordance with NFPA 80, Paragraph 5.2.1.

2.5 LEAD-LINED DOORS

A. Lead-Lined Doors:

Specifier Notes: Specify the door model. Consult VT Industries for assistance in choosing the door model for the specific application.

- 1. Model: [5515-2, non-rated] [5P15-2, 20-minute rated].
- 2. Compliance: WDMA I.S.1-A.
 - a. Quality Grade: Premium.
- 3. Non-Rated and 20-Minute-Rated Fire Doors With Lead Sheet on Both Sides of Core:
 - a. Door Thickness: 1-3/4 inches, plus or minus 1/16 inch.
 - b. Maximum Combined Lead Thickness: 1/4 inch.
- 4. Core:
 - a. Particleboard.

- b. Average Density: 28 pcf to 32 pcf.
- c. Grade: 1-LD-2, for lead-each-side construction.
- 5. Face Veneers and Vertical Stile Edges: Compatible with non-rated fire-rated doors.
- 6. Composite Crossbands:
 - a. Apply to core before application of matching hardware stiles.
 - b. Exposed Crossbanding: Not allowed along stile edges.
- 7. Stiles:
 - a. Inner Stiles: 1-3/8 inches wide, before prefitting.
 - b. Structural Composite Lumber (SCL) With Outer Stile: Same species as face veneer.
 - c. Outer Stile: Apply before beveling doors.
- 8. Rails:
 - a. Structural composite lumber (SCL).
 - b. Width: 1-3/8 inches, before prefitting for lead-each-side construction.
- 9. Lock and Hinge Stiles: Bevel 1/8 inch in 2 inches.
- 10. Lead-Lined Steel Lite Frames on 20-Minute Doors:
 - a. Maximum Lite Opening Size: 256 square inches.
 - b. Maximum Width and Height: 16 inches.
- 11. Lead Lining:

Specifier Notes: Edit the following sentence if a shielding study is not provided by the Owner.

- a. Thickness and Quality: Conform to shielding study provided by Owner.
- b. Maintain integrity of lead lining.

2.6 SOUND-RETARDANT DOORS

A. Sound-Retardant Doors:

Specifier Notes: Specify the door model. Consult VT Industries for assistance in choosing the door model for the specific application.

- 1. Model: [5540-2, stained stiles] [5550, stained stiles] [5P50, stained stiles] [5050, stained stiles] [5P40, stained stiles].
- 2. Compliance: WDMA I.S.1-A.
 - a. Quality Grade: Premium.
- 3. Testing Methods: ASTM E 90 and E 413.
- 4. Door Thickness: 1-3/4 inches.

Specifier Notes: Specify the STC rating. Consult VT Industries for assistance in choosing the STC rating for the specific application.

- 5. STC Rating: [39] [45].
- 6. Core: Sound absorbent material encapsulated by stiles, rails, crossbands, and face veneers.
- 7. Perimeter Gasketing and Drop Seals: To achieve STC ratings.
- 8. Face Veneers and Vertical Stile Edges: Compatible with non-rated fire-rated doors.

Specifier Notes: Delete the acoustical lite kit if a lite is not required in the door. Using the Model 105 acoustical lite kit, STC 39 doors can maintain the full acoustical rating. The maximum lite size to meet these requirements is 216 square inches or a maximum of 6 inches wide by 36 inches long.

9. Acoustical Lite Kit: [Model 105 for STC 39] [Model 105 for STC 44].

2.7 PROFILED DOORS

A. Profiled Doors:

Specifier Notes: Specify the door model.

1. Model: [FS1011] [FS1021] [FS1031] [FS1041] [FS1042] [FS1052] [FS1062] [FA1021] [FA1031].
2. Compliance: WDMA I.S.1-A.
 - a. Quality Grade: Premium.

Specifier Notes: Specify the fire-rated door requirements.

3. 20-Minute Positive-Pressure Fire-Rated Doors:
 - a. Maximum Size: 4'-0" by 8'-0", single or paired.
 - b. Standard hinges.
 - c. Locks: [Mortise] [Cylindrical].
 - d. Flush bolts.

Specifier Notes: Specify the routing profile.

4. Routing Profile: [VT 2] [VT 3] [VT 4].
5. Core: Medium-density fiberboard (MDF).
6. Face: High-density fiberboard (HDF).
7. Inner Stiles and Rails: Structural composite lumber (SCL).
8. Outer Stiles: Hardwood.
9. Face Dimensions:
 - a. Stiles: 6 inches.
 - b. Top Rail: 6 inches.
 - c. Bottom Rail: 10 inches.
 - d. Intermediate Rails: 4 inches or 6 inches.
 - e. Vertical Mullions: 4 inches.
 - f. Thickness: 1-3/4 inches.
10. Finish: Primed.

2.8 FABRICATION

A. Prefit Doors:

1. Prefit and bevel doors at factory to fit openings.
2. Prefit Tolerances: WDMA I.S.1-A and AWI Section 1300.

- B. Factory-machine doors for mortised hardware, including pilot holes for hinge screws and lock fronts.

2.9 FINISHES

- A. Doors shall receive factory finishing.
- B. Factory Finishing: WDMA System TR-6, catalyzed polyurethane, premium grade. WDMA finish Types 2 and 3 are not optimal.

Specifier Notes: Omit the stain coat if a clear finish is desired.

1. Stain coat.
2. Sealer: 3 coats.
3. Sanding: 320-grit sandpaper.
4. Topcoat: 2 coats.

Specifier Notes: Specify the stain color. Consult VT Industries for custom stain and paint colors and for minimum size of physical sample required for custom color matching.

- C. Stain Color: [Clear] [Alpine] [Grassland] [Oasis] [Ravine] [Savanna] [Timber] [Wheat] [_____].
- D. Top and Bottom Rails: Factory sealed with wood sealer.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine locations to receive doors. Notify Architect of conditions that would adversely affect installation or subsequent use. Do not begin installation until unacceptable conditions are corrected.
- B. Ensure frames are solidly anchored, allowing no deflection when doors are installed.
- C. Ensure frames are plumb, level, square, and within tolerance.

3.2 PREPARATION

- A. Allow doors to become acclimated to building temperature and relative humidity for a minimum of 24 hours before installation.

3.3 INSTALLATION

- A. Install doors in accordance with manufacturer's instructions.

Specifier Notes: Edit the following sentence as required.

- B. Install doors at locations indicated on the [Door Schedule] [Drawings].
- C. Install doors plumb, level, square, true to line, without warp or rack.
- D. Seal exposed surfaces with a minimum of 2 coats of polyurethane within 4 days of fitting each door.
- E. Install door hardware as specified in Section 08710 (08 71 00).

3.4 ADJUSTING

- A. Adjust doors to swing freely, without binding in frame.
- B. Adjust hardware to operate properly.
- C. Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Architect.
- D. Remove and replace damaged doors that cannot be successfully repaired, as determined by Architect.

3.5 CLEANING

- A. Clean doors promptly after installation in accordance with manufacturer's instructions.
- B. Do not use harsh cleaning materials or methods that could damage finish.

3.6 PROTECTION

- A. Protect installed doors from damage during construction.
- B. Place polybags over doors after adjusting and cleaning.

END OF SECTION