

# Wood Door Technical Manual Stile and Rail

Revised July, 2017

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## Stile and Rail Details

### Wood Door Technical Manual

**ASSA ABLOY**

Wood Doors  
Graham | Maiman

July, 2017

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## Introduction

A large number of doors are offered in our brochure, but over half of our manufacturing projects are totally custom in nature. This allows you to assist your clients with options for exclusive designs.

We deal in many commercially available wood species to meet your most demanding clients.

Because all doors are built to order, we can provide you and your customers the flexibility that distinctive designs demand. Our products and services include:

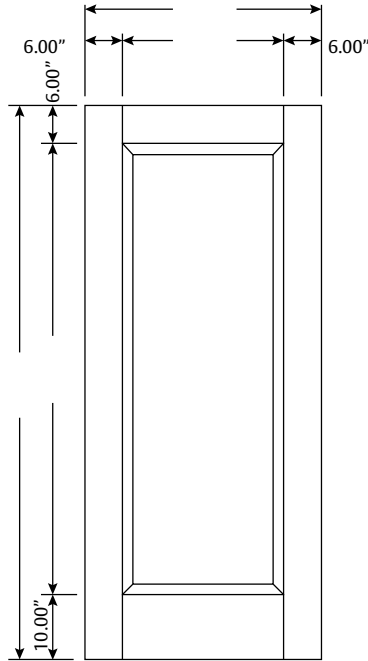
- Construction and pre-finishing according to ANSI/WDMA I.S.-6A latest version quality grades and finish types
- Pre-machining for hardware, saving on-site time and expense
- Corner samples for your approval
- Positive pressure tested 20 through 90-minute fire rated doors and frames
- Green architecture: Our banded and veneered cores are from sustainable forests and are certified through SCS for their recycled and recovered content
- 20 Minute fire rated true divided lite

# Standard Elevations Stile and Rail Details Wood Door Technical Manual

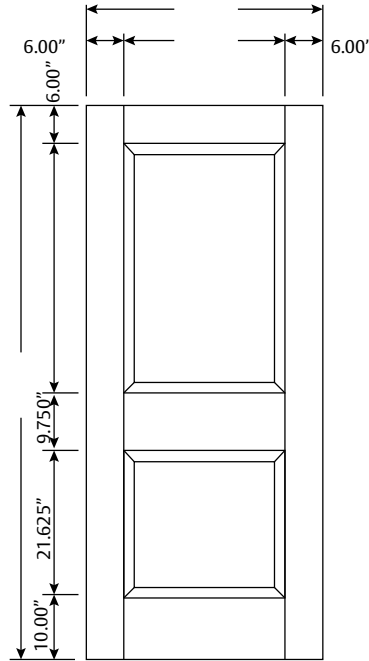
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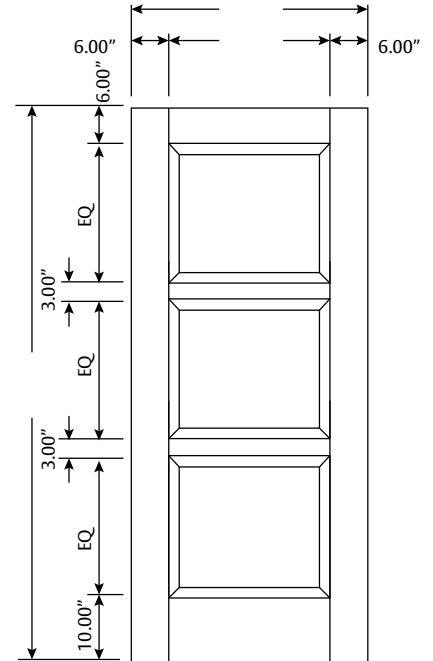
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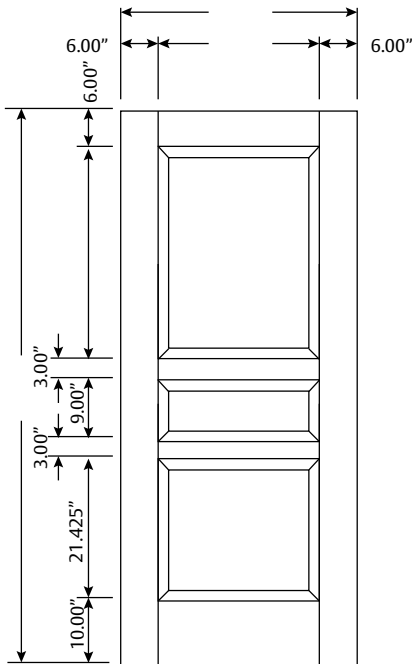
1 Panel 20 45 60 90



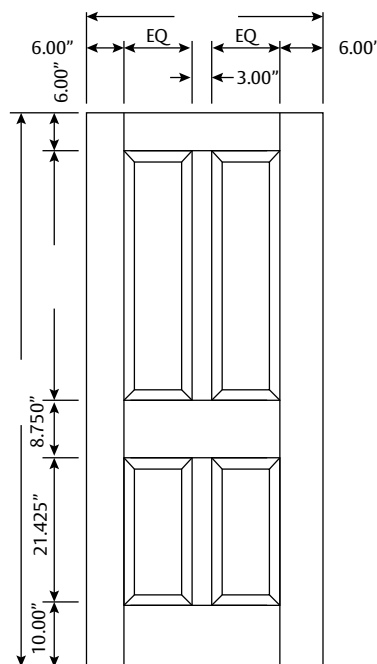
2 Panel 20 45 60 90



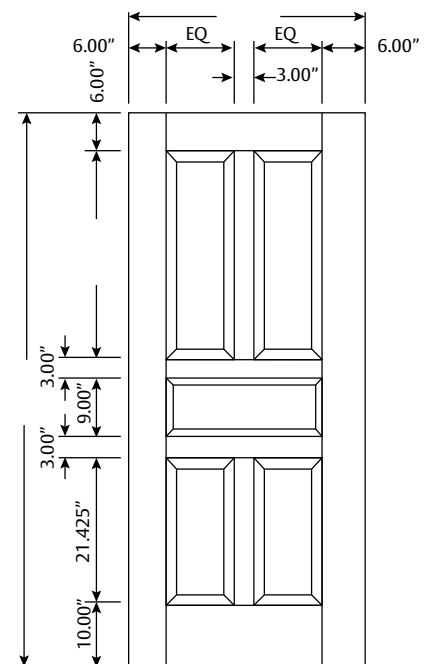
3 Equal Panel 20 45 60 90



3 Panel 20 45 60 90



4 Panel 20 45 60 90

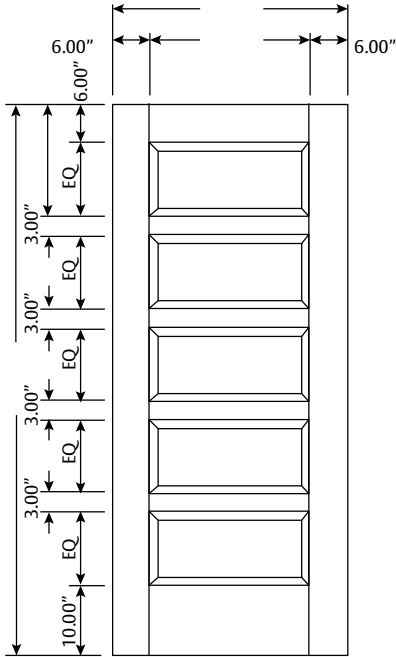


5 Panel 20 45 60 90

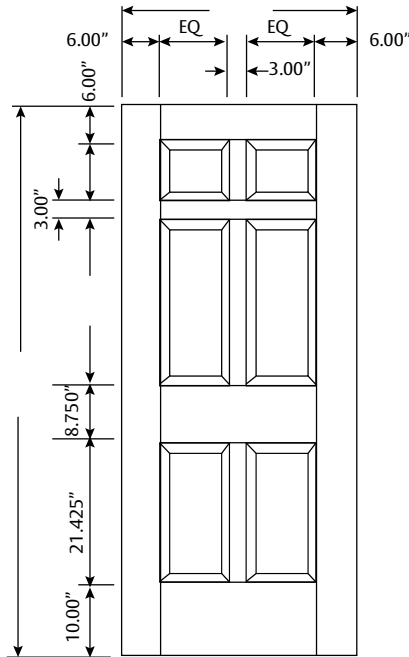
Fire-ratings in minutes available in addition to non-rated.  
Doors on this page all have a temperature rise rating of 250° F.

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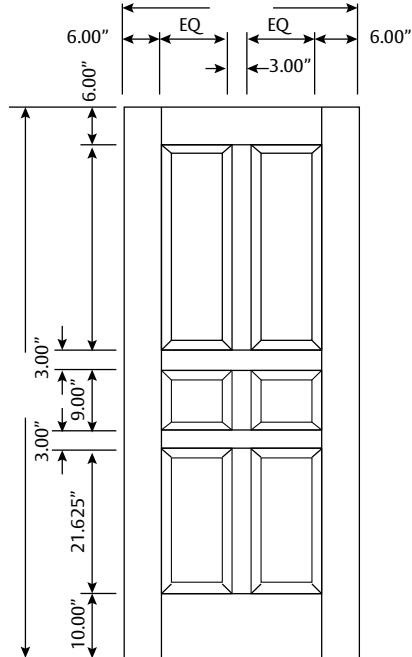
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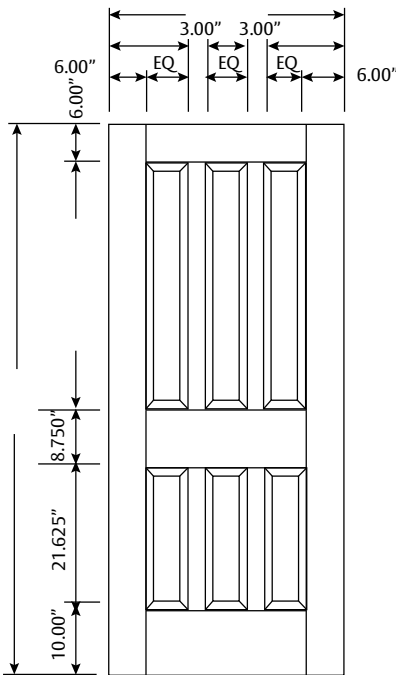
5 Horizontal Panels 20 45 60 90



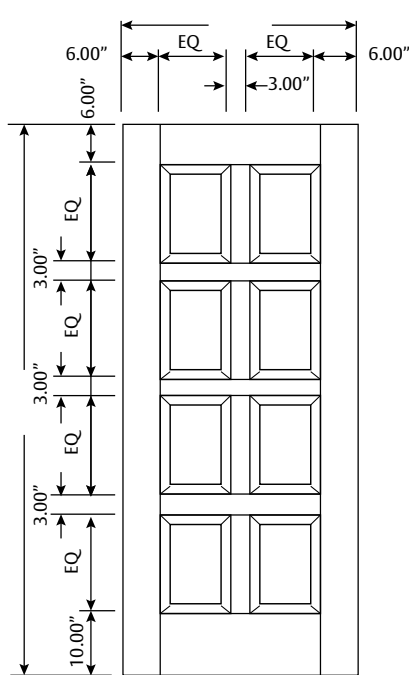
6 Panel Colonial 20 45 60 90



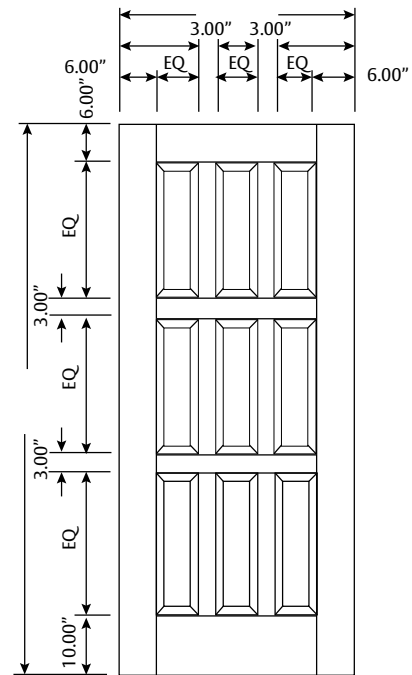
6 Panel (2x3) 20 45 60 90



6 Panel (3x2) 20 45 60 90



6 Panel (2x3) 20 45 60 90



9 Panel 20 45 60 90



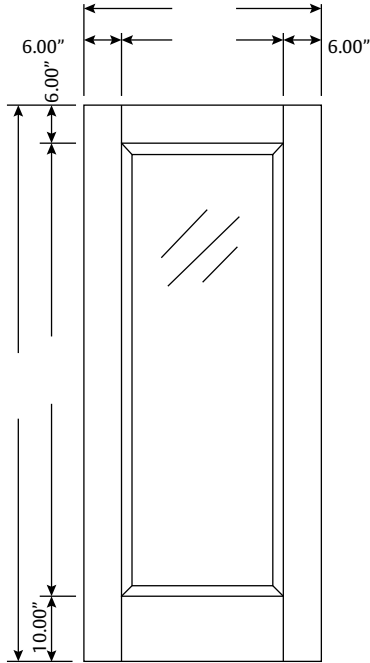
Fire-ratings in minutes available in addition to non-rated.  
Doors on this page all have a temperature rise rating of 250° F.

# Standard Elevations Stile and Rail Details Wood Door Technical Manual

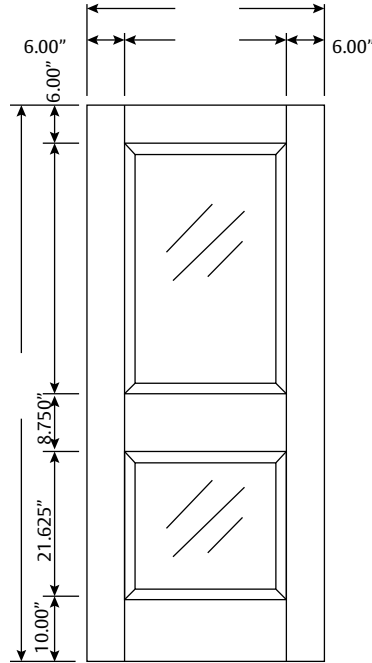
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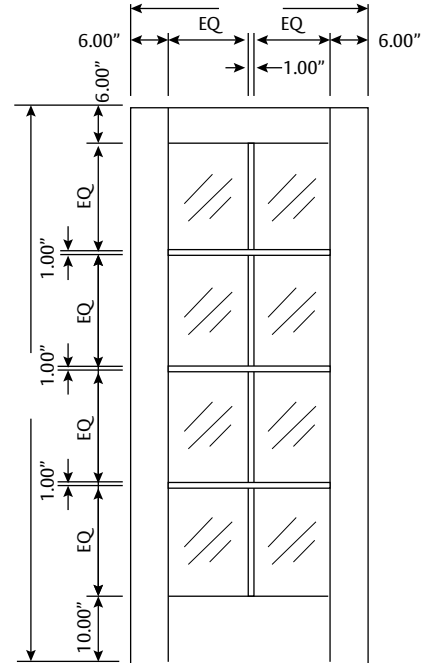
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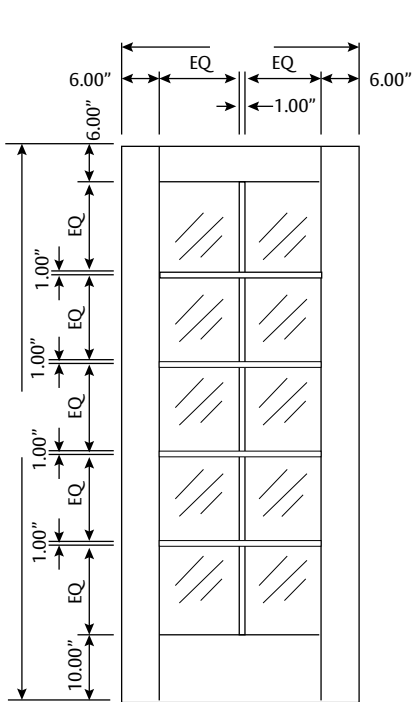
1 Lite 20



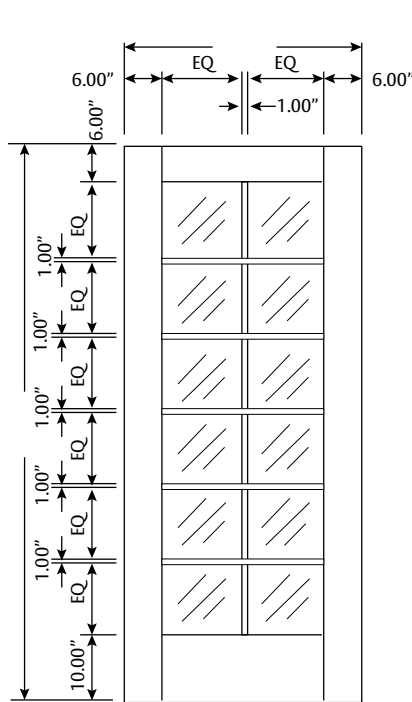
2 Lite 20



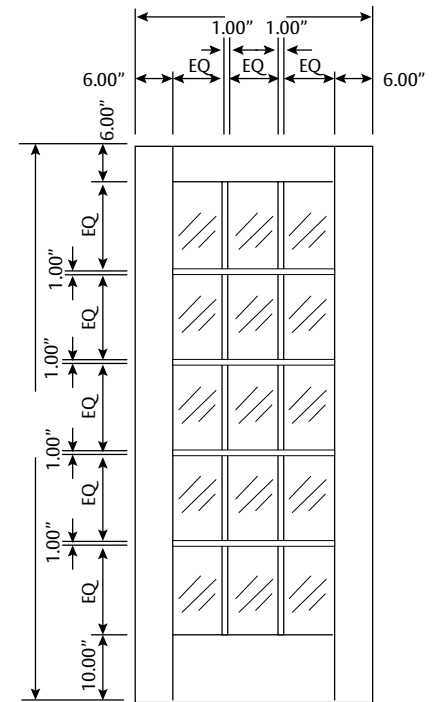
8 Lite 20



10 Lite 20



12 Lite 20

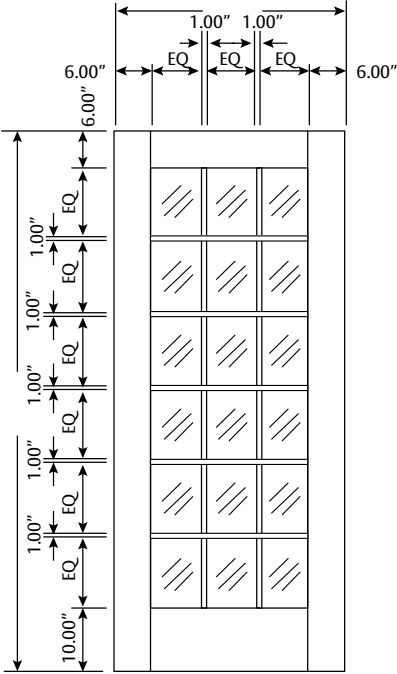


15 Lite 20

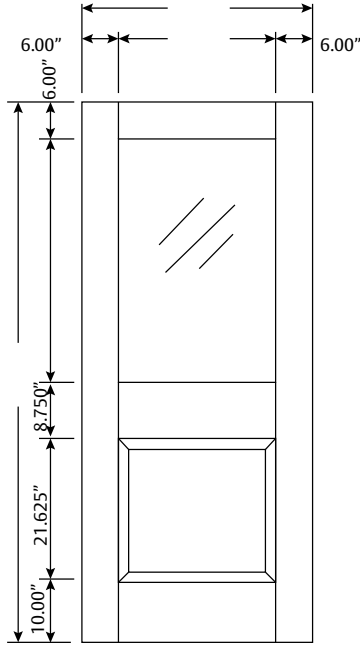
Fire-ratings in minutes available in addition to non-rated.  
Doors on this page all have a temperature rise rating of 250° F.

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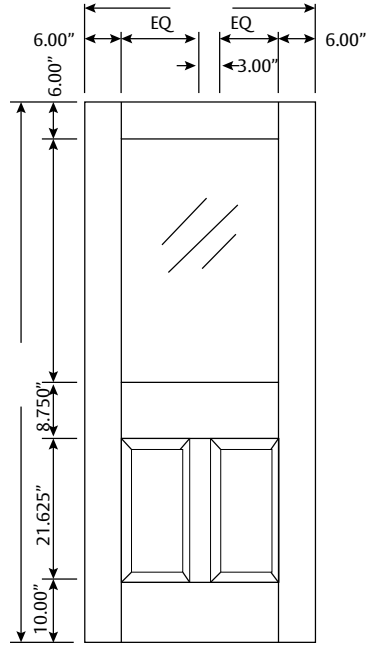
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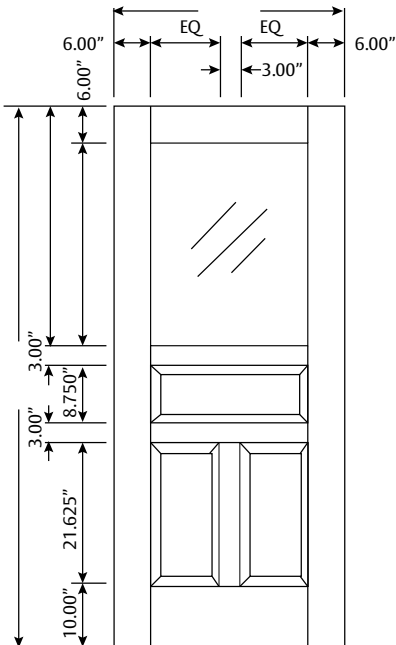
18 Lite 



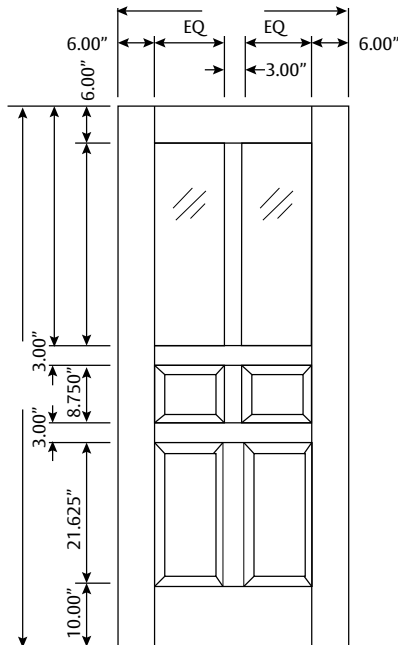
1 Lite 1 Panel 



1 Lite 2 Panel 



1 Lite 3 Panel 



2 Lite 4 Panel 

Note: 45, 60, and 90 minute doors require metal or veneer wrapped metal lite kits (not true-divided lite) which will decrease the illustrated division of 1" to .75"

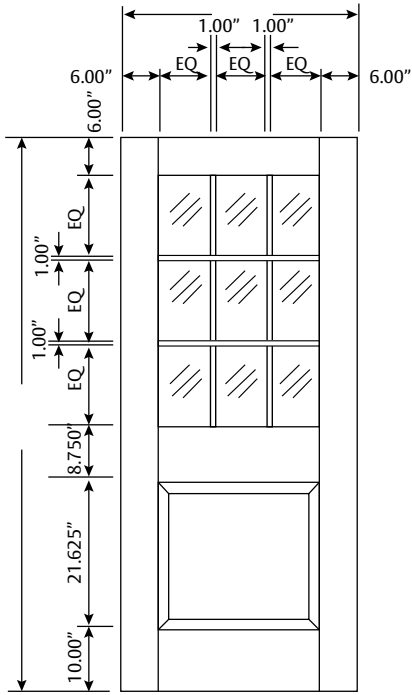
60 and 90 minute doors with more than 100 sq. in. clear view area of glazing will carry a temperature rise rating in excess of 650°F.

# Standard Elevations Stile and Rail Details Wood Door Technical Manual

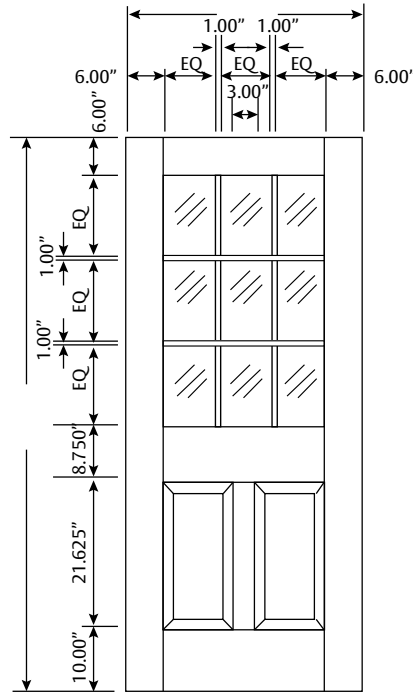
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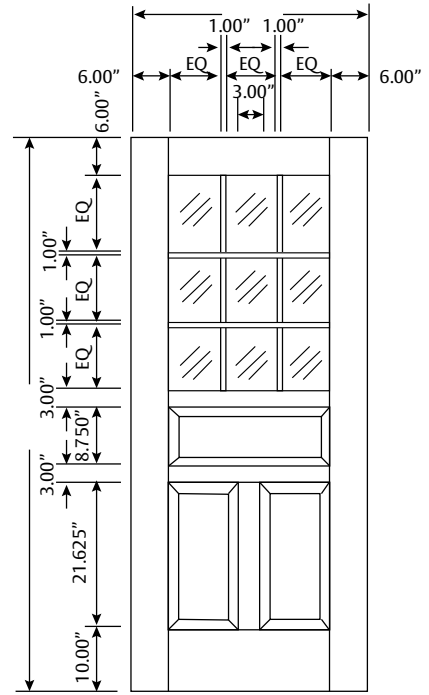
July, 2017



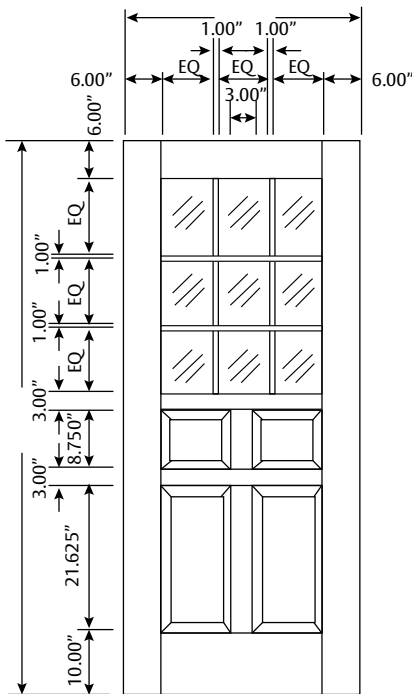
9 Lite 1 Panel  20 45 60 90



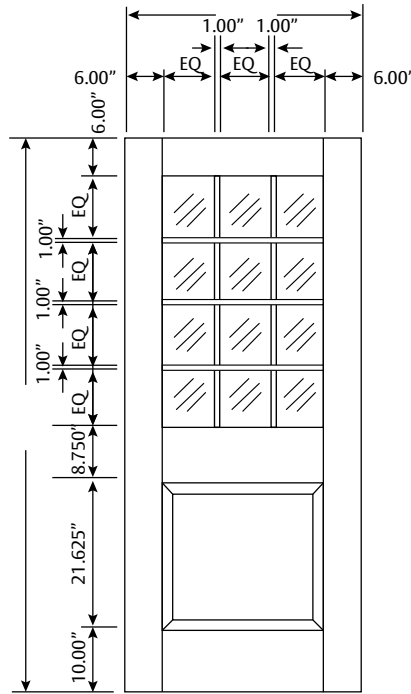
9 Lite 2 Panel  20 45 60 90



9 Lite 3 Panel  20 45 60 90



9 Lite 4 Panel  20 45 60 90



12 Lite 1 Panel  20 45 60 90

Note: 45, 60, and 90 minute doors require metal or veneer wrapped metal lite kits (not true-divided lite) which will decrease the illustrated division of 1" to .75"

Metal grills, such as the ones shown on this page, are not available with wood veneer.

60 and 90 minute doors with more than 100 sq. in. clear view area of glazing will carry a temperature rise rating in excess of 650°F.

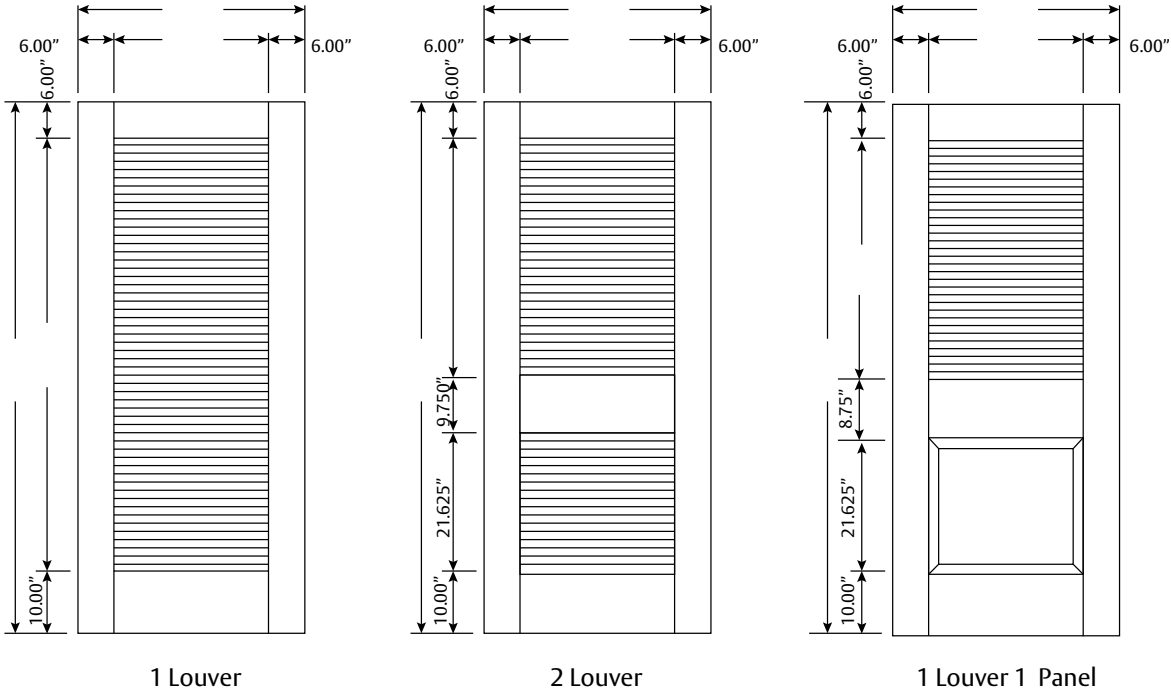




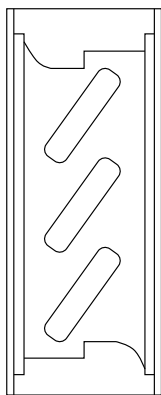
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## Louver Doors

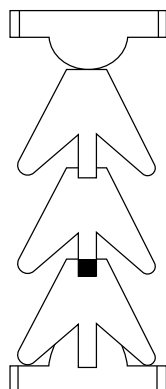
Our meticulous attention to detail is embodied in our louver doors. The quality of louver doors can vary greatly between manufacturers, but you can always be assured of the consistent high-quality craftsmanship of ASSA ABLOY Wood Doors.



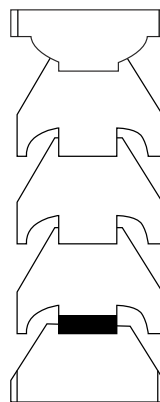
We offer standard slat louvers that allow for ventilation and some light as well as two types of privacy louvers: chevron and sargent. Chevron louvers are sharply angled to allow some ventilation and limited light if requested. Our exclusive sargent louvers, designed by our very own Ben Gemmill, feature the privacy benefits of the chevron louver with the look of traditional slat louvers.



Slat



Sargent  
(Maiman Exclusive)



Chevron

# Standard Stile and Rail Panel Options

## Stile and Rail Details

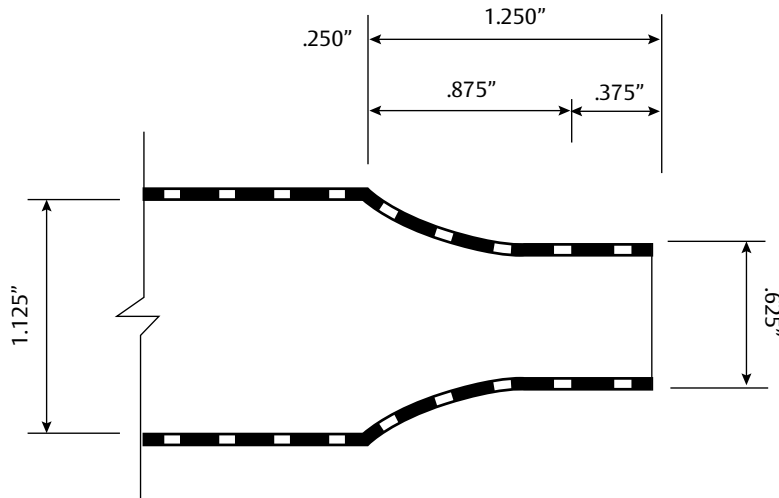
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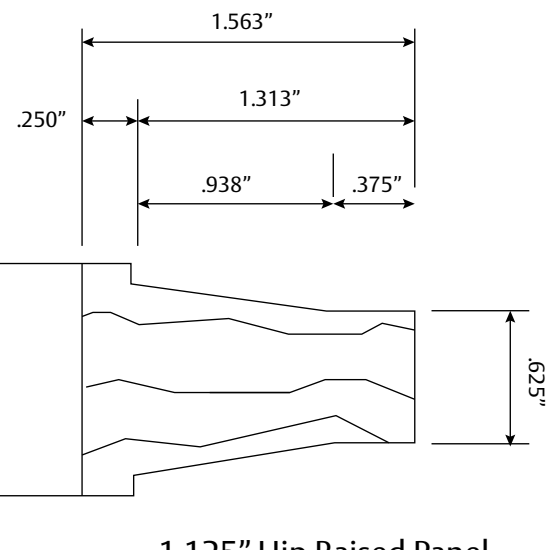
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## Standard Stile and Rail Panel Options

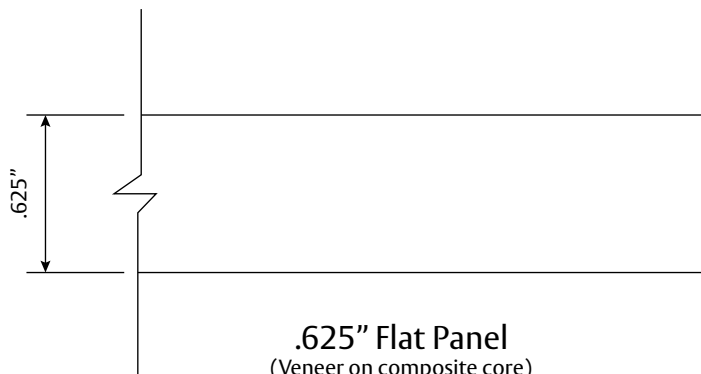


**1.125" Scoupe Raised Panel\***  
(membrane press panel)  
Maiman standard custom grade

\* rim banded scoupe panel required for FSC

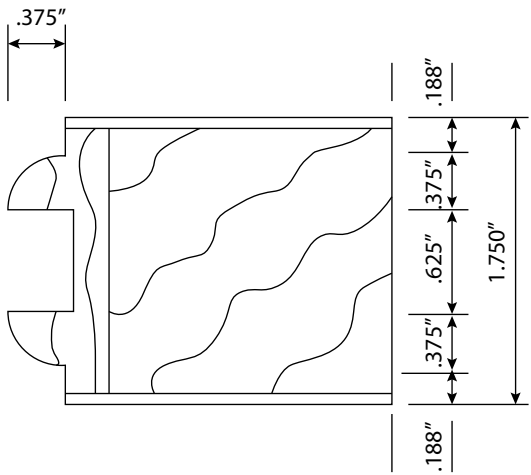


**1.125" Hip Raised Panel**  
(Rim banded panel)  
Maiman standard premium grade

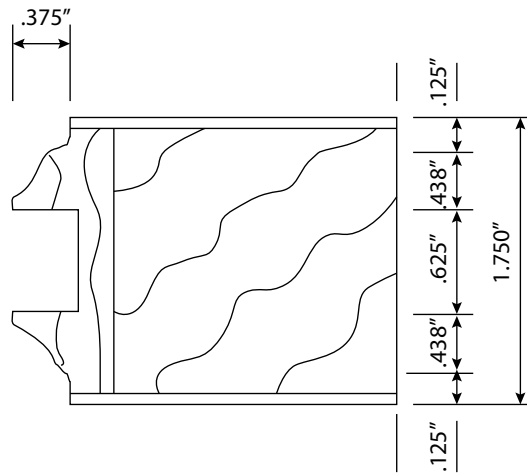


**.625" Flat Panel**  
(Veneer on composite core)

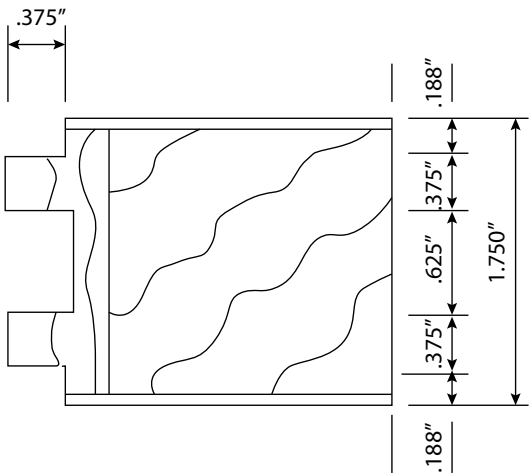
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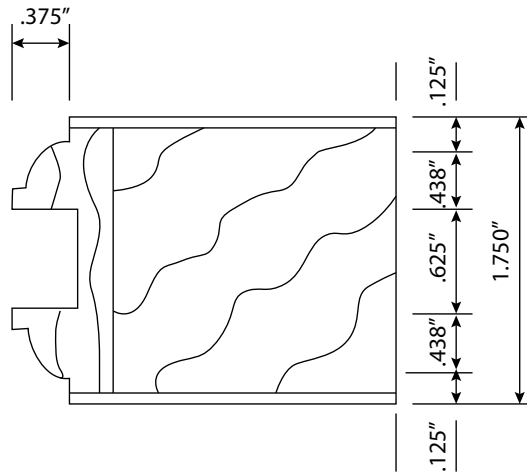
**.375" Quarter Round Sticking**



**.375" Ogee Sticking**



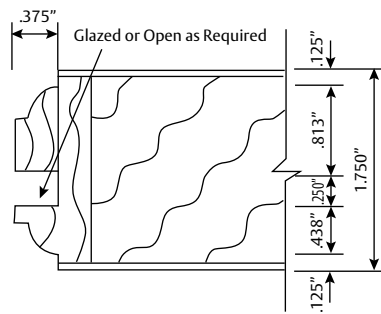
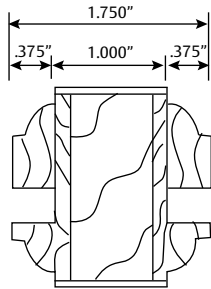
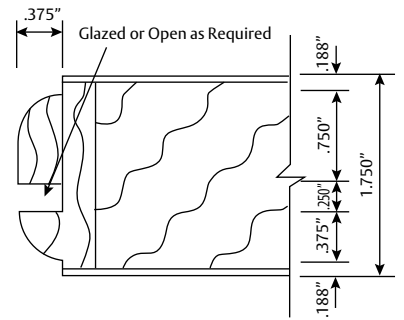
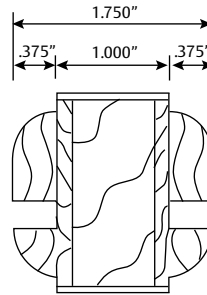
**.375" Square Sticking**



**.375" Ovolo Sticking**

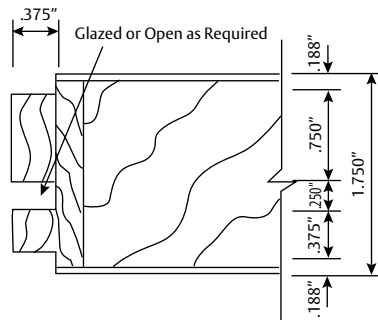
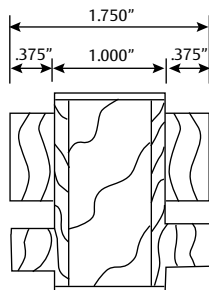
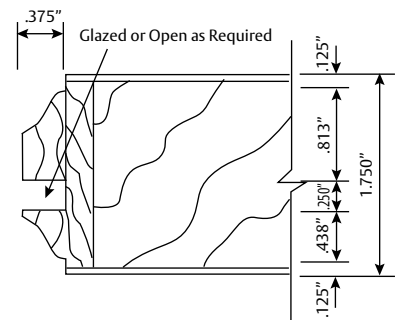
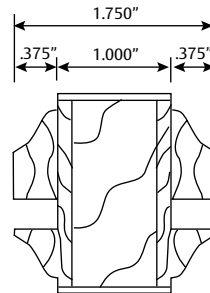
## Stile and Rail French Sticking Options

**.375" Quarter Round Sticking**



**.375" Ovolo Sticking**

**.375" Ogee Sticking**



**.375" Square Sticking**

# Veneer Options

## Stile and Rail Details

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We offer a wide and diverse range of veneers for your custom projects.

Please contact us if you are looking for something that is not on this list. We are usually able to get most exotic veneers.

Select Veneers (Subject to changes and availability)	Cost Relative to Natural Birch (1.00)	Hardness
Quartered Red Oak	2.00	Hard
Rift Red Oak	2.00	Hard
Natural Birch	1.00	Hard
Poplar	0.85	Hard
White Maple	2.15	Very Hard
White Birch	2.20	Hard
Natural Ash	0.90	Hard
Natural Maple	1.00	Very Hard
Quartered White Oak	2.50	Hard
Plain Sliced Red Oak	0.90	Hard
Plain Sliced White Oak	1.00	Hard
Knotty Pine	1.85	Soft
White Pine	1.10	Soft
White Ash	1.00	Hard
African Mahogany	2.25	Medium
Plain Sliced Cherry	2.35	Hard
Plain Sliced American Walnut	2.80	Hard
Vertical Grain Fir	2.50	Soft

### Standard Veneer Machining

We will use the following standards and these in WDMA I.S.6A-13 to match up panel veneers unless otherwise specified.

#### Standard Custom Grade

All species and cuts will be running book match, with the exception of rift cut red oak, rift cut white oak and all other quarter cut species, which will be running slip matched.

#### Standard Premium Grade

All species will be book and balance matched, except rift cut species which will be slip matched to avoid barber-poling.

Please see WDMA I.S. 6A-13 for further details on specifying panel veneer.

# Non-Rated Stile and Rail Door Specifications

## Stile and Rail Details

### Wood Door Technical Manual

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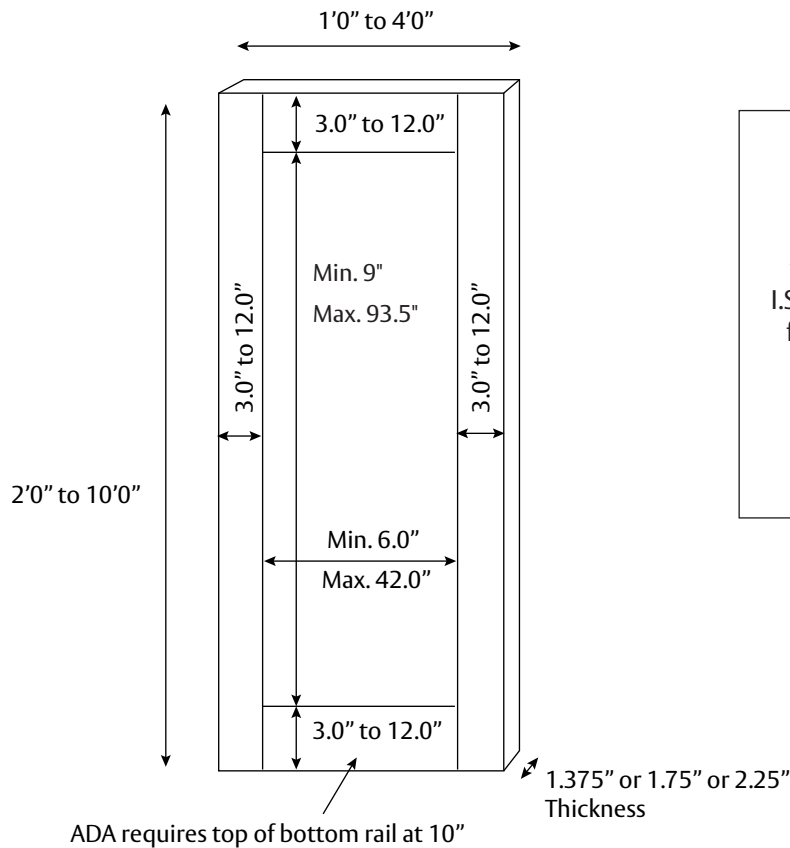
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Non-Rated Standard Stile and Rail Door Specifications	
Maximum Door Size	4'-0" x 10'-0"
Minimum Door Size	1'-0" x 2'-0"
Standard Thicknesses Available <sup>1</sup>	1.375", 1.75", 2.25"
Stiles, Rails, & Mullion Width (face)	Min. 3" — Max. 12"
Minimum Length of Any Part	9"
Sticking/Glass Stop Profiles <sup>2</sup>	.375" Quarter Round .375" Ovolo .375" Ogee .375" Square
Panel Raise Profiles	Scoupe (standard), Hip and Custom Match
Panel Size Limits	6"x9" min, 42"x 93.5" max

<sup>1</sup> Custom thicknesses available upon request

<sup>2</sup> Custom sticking profiles available



All doors meet or exceed the following: ANSI/WDMA I.S.6A, 2013-Industry Standard for Architectural Stile & Rail Doors. AWS latest version (AWI section 1400).

# 20 Minute Stile and Rail Door Specifications

## Stile and Rail Details

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20 Minute Stile and Rail Door Specifications Neutral and Positive Pressure Categories A & B	
Max. single door size	4-0 x 9-0
Max. paired door size	8-0 x 9-0
Wood species	White pine or denser
Min. door thickness	1.75"
Min. stile width	5"
Min. top rail width	5"
Min. cross rail width	3"
Min. mullion width	3"
Min. bottom rail width	5" *
Max. panel size	38" x 93.5"
Min. raised panel thickness	1.125"
Min. flat panel thickness	.625"
Min. dist. between panels or lites and panels	3"
Max. light area	See page 28 and 29 in the Architectural Accessories Section
Max. transom height	36"
Max. transom width	48"
Conc. vert. rods-6" stiles <sup>1 2</sup>	Yes
Various profiles	Yes
Meeting stile edges	Metal edges and astragals not required
Raceways/door bottoms	Yes
Concealed closer arms	Yes

<sup>1</sup> Refer to page 25 for CVR requirements.<sup>2</sup> Not available with positive pressure.

\* ADA requires top of bottom rail at 10" above finished floor.

# 20 Minute Fire Rated True Divided Lite Stile and Rail Details Wood Door Technical Manual

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All standard sticking options and lited elevations are available. The following will apply with a Stile & Rail wood bead 20-minute lite kit.

## Glazing Options

Clear Glass will be 1/4" PyroEdge-20 (Refer to Arch. Accessories page 28-29 for maximum clear view area).

Maximum size for 20 minute "French" door lites will be 12-1/2" x 24-1/2" (cutout size) for no limit of lites.

Refer to Architectural Accessories section page 28 and 29 for maximum clear view areas.

## Glass Types:

- 1/4" PyroEdge-20
- 1/4" Superlite 1-20
- 3/16" Firelite NT
- 1/4" Fireglass 20
- 5/16" Firelite Plus
- 1/4" Pyroswiss

With 3" minimum cross or lock rails, maximum single cutout size will be larger, per sizes above. Larger combinations are available with 3" rails rather than 1" bars and muntins.

## Additional 20-Minute Glazing Notes:

Stile & Rail doors may be used in combination with fire rated glazing and metal or wood veneered metal lite kits, as necessary. Consult factory for particulars, such as minimum 6" stiles and top rails with metal lite kits or that multiple lites with metal or wood lite kits may be used if separated by 3" mullions or cross rails.



# 45 Minute Stile & Rail Door Specifications

## Stile and Rail Details

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45 Minute Stile & Rail Door Specifications Neutral and Positive Pressure Categories A & B		
	Neutral Pressure	Positive Pressure
Max. single door size	3-6 x 9-0	3-6 x 9-0
Max. paired door size	7-0 x 9-0	7-0 x 8-0
Wood species	All	All
Min. door thickness	1.75"-raised panel	1.75"-raised panel
Min. stile width	5"	5.5"
Min. top rail width	5"	5"
Min. cross rail width	3"	3"
Min. mullion width	3"	3"
Min. bottom rail width	9" *	9" *
Max. Flat Panel Size	32" x 93.5"	32" x 93.5"
Max. Raised Panel Size	32" x 93.5"	32" x 93.5"
Min. Raised Panel Thickness	1.125"	1.125"
Min. Flat Panel Thickness <sup>1</sup>	1.125" with 2.25" stiles and rails	1.125" with 2.25" stiles and rails
Min. Dist. Between Panels or Lites and Panels	3"	3"
Max. Lite Area	Refer to page 28 and 29 of the Architectural Accessories section	Refer to page 28 and 29 of the Architectural Accessories section
Max. Transom Height	36"	36"
Max. Transom Width	42"	36"
Concealed Vertical Rods <sup>2</sup>	Available with 6" stiles	Not Available
Meeting Stile Edges	#59FS smoke & fire mortised astragal <sup>3</sup>	#59FS smoke & fire mortised astragal <sup>3</sup>
Raceways/Door Bottoms	Yes	Yes
Temp. Rise @ 30 min.	250° F	250° F
Concealed overhead closer arm only:	Norton 7900 or LCN 2010 models only as approved	

<sup>1</sup> 1.75" thick door available; please call for details. See alternate construction on page 19.

<sup>2</sup> Refer to page 25 for CVR requirements.

<sup>3</sup> Doors over 8' 0" tall require metal edges.

\* ADA requires top of bottom rail at 10" above finished floor.

# 60 Minute Stile & Rail Door Specifications

## Stile and Rail Details

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60 Minute Stile & Rail Door Specifications Neutral and Positive Pressure Categories A & B		
	Neutral Pressure	Positive Pressure
Max. single door size	3-6 x 9-0	3-6 x 9-0
Max. paired door size	7-0 x 9-0	7-0 x 8-0
Wood species	All	All
Min. door thickness	1.75"-raised panel	1.75"-raised panel
Min. stile width	5"	5.5"
Min. top rail width	5"	5"
Min. cross rail width	3"	3"
Min. mullion width	3"	3"
Min. bottom rail width	9" *	9" *
Max. Flat Panel Size	32" x 93.5"	32" x 93.5"
Max. Raised Panel Size	32" x 93.5"	32" x 93.5"
Min. Raised Panel Thickness	1.125"	1.125"
Min. Flat Panel Thickness <sup>2</sup>	1.125" with 2.25" stiles and rails	1.125" with 2.25" stiles and rails
Min. Dist. Between Panels or Lites and Panels	3"	3"
Max. Lite Area	Refer to page 28 and 29 of the Architectural Accessories section	Refer to page 28 and 29 of the Architectural Accessories section
Max. Transom Height	36"	36"
Max. Transom Width	42"	36"
Concealed Vertical Rods <sup>3</sup>	Available with 6" stiles	Not Available
Meeting Stile Edges	#59FS smoke & fire mortised astragal <sup>4</sup>	#59FS smoke & fire mortised astragal <sup>4</sup>
Raceways/Door Bottoms	Yes	Yes
Temp. Rise @ 30 min.	250° F	250° F
Concealed overhead closer arm only	Norton 7900 or LCN 2010 models only as approved	

<sup>2</sup> 1-3/4" thickness available. See alternate construction on page 19.

<sup>3</sup> Refer to page 25 for CVR requirements.

<sup>4</sup> Doors over 8' 0" tall require metal edges.

\* ADA requires top of bottom rail at 10" above finished floor.

# 90 Minute Stile & Rail Door Specifications

## Stile and Rail Details

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90 Minute Stile & Rail Door Specifications		
Neutral and Positive Pressure Categories A & B		
	Neutral Pressure	Positive Pressure
Max. single door size	3-6 x 9-0	3-6 x 9-0
Max. paired door size	7-0 x 9-0	7-0 x 8-0
Wood species	All	All
Min. door thickness	2.25" Only	2.25" Only
Min. stile width	5"	5.5"
Min. top rail width	5"	5"
Min. cross rail width	3"	3"
Min. mullion width	3"	3"
Min. bottom rail width	9" *	9" *
Max. Flat Panel Size	32" x 93.5"	32" x 93.5"
Max. Raised Panel Size	32" x 93.5"	32" x 93.5"
Min. Raised Panel Thickness	1.625"	1.625"
Min. Flat Panel Thickness	1.125"	1.125"
Min. Dist. Between Panels or Lites and Panels	3"	3"
Max. Lite Area <sup>1</sup>	Refer to page 28 and 29 of the Architectural Accessories section	Refer to page 28 and 29 of the Architectural Accessories section
Max. Transom Height	36"	36"
Max. Transom Width	42"	36"
Conc. Vert. Rods-6" Stiles <sup>2</sup>	Yes	N/A
Meeting Stile Edges	#59FS smoke & fire mortised astragal <sup>3</sup>	#59FS smoke & fire mortised astragal <sup>3</sup>
Raceways/Door Bottoms	Yes	Yes
Temp. Rise @ 30 min.	250° F	250° F
Maximum size of closer prep:	depth: 1-15/32", width: 1-5/16", length 23-3/4" **	

<sup>1</sup> 100sq. in. maximum for temperature rise rating.

<sup>2</sup> Refer to page 25 for CVR requirements.

<sup>3</sup> Doors over 8' 0" tall require metal edges.

\* ADA requires top of bottom rail at 10" above finished floor.

\*\*Maximum depth of cut out on door face to allow arm to swing 5/16"

# Alternative Stile and Rail Construction

## Stile and Rail Details

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Neutral and Positive Pressure								
	45 Minute		60 Minute		90 Minute			
	Singles	Pairs	Singles	Pairs	Singles	Pairs	Singles	Pairs
Size	3'6" X 8'	7' x 8'	3'6" X 8'	7' x 8'	3'6" X 8'	7' x 8'	4' x 10'	8' x 10'
Min. Stile Width	5"	5"	5"	5"	5"	5"	5"	5"
Min. Rail Width <sup>1</sup>	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"
Min. Stile/Rail Thickness	1.75"	1.75"	1.75"	1.75"	1.75"	1.75"	2 1/4"	2 1/4"
Min. Flat Panel Thickness	.625"	.625"	0.625"	.625"	.625"	0.875"	1.4125"	1.4125"
Min. Raised Panel Thickness	1.125"	1.125"	1.125"	1.125"	1.125"	1.625"	1.875"	1.875"
Max. Panel Size	32 x 87	32 x 87	32 x 87	32 x 87	32 x 87	32 x 87	See Note 2 Below	See Note 2 Below
Glazing --3/16" ceramic <sup>3 4</sup>	1296	1296	1235	1235	1216	1216	No	No
Radius Top Doors Max. Radius = .55 x Door Width	Yes	No	Yes	No	Yes	No	No	No
Overhead Concealed Closer Arm Only <sup>5</sup>	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Mortised Auto Flush Bolts	Yes	Yes	Yes	Yes	Yes	Yes	No	No
CVR		Yes		Yes		No		No
Wire Raceways	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Concealed Auto. Door Bottoms 1" wide x 1.75" deep	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Special Hardware								4 Point Latching Required

<sup>1</sup> ADA Requires 10" bottom rail

<sup>2</sup> Two panel or multi-panel only - 6" mid rail required

<sup>3</sup> Approved metal lite kit

<sup>4</sup> Max. 100 sq. in. for 250 degree temperature rise

<sup>5</sup> Arm cut out max. size - 17-5/16" x 1-1/4" x 1-3/8"

# Stile and Rail Factory Finishing

## Stile and Rail Details

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ASSA ABLOY Wood Doors can match almost any color available. We match every door to your specifications so you are not limited to a list of common finishes.

The two types of transparent finishing systems we use are TR-2 Catalyzed Lacquer and TR-6 Catalyzed Polyurethane as defined in the WDMA I.S. 6-A quality standard.

#### Report Card Comparison of Available ANSI/WDMA I.S. 6-A Finish System

Adapted from AWI 7th Edition Quality Standards

Transparent System Code	TR-2 (AWS System 2)	TR-6 (AWS System 11)
Finish System Type	Catalyzed Lacquer	Catalyzed Polyurethane
General Durability	C	A
Finish Clarity	A	D
Finished Surface Flexibility	C	B
Stain Resistance	A	A
Heat Resistance	A	A
Moisture Resistance	B	A
Solvent Resistance	B	A

Ratings are subjective judgments based on the general performance of generic products.

The **TR-2** system has the advantage of lower cost, good strength, reliability, is easy to repair and will be an excellent finish choice for the majority of interior applications.

The **TR-6** system has a higher solids content than the TR-2 which can effect its finish clarity, but it is also very hard and durable with one of the highest chemical and wear resistance ratings available. However, the TR-6 finish is also more difficult to repair than the TR-2. Additionally, off-gassing emissions are not a concern because it does not occur after the finish has completely cured. TR-6 is available in interior applications and required in all exterior applications.

# Color Matching Procedures

## Stile and Rail Details

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Original samples supplied by the customer will be matched as closely as possible in a range of shades. Some color variations may occur due to natural characteristics found in wood such as a difference in grain and texture.

Lighting is also a very important factor when evaluating a sample for overall appearance. When viewed under different types of lighting, such as incandescent, fluorescent, and natural sunlight, one may see a change in appearance due to the different reflective properties of each. This phenomenon is called metamerism. Samples shall be viewed under actual installed lighting conditions.

Finished control samples shall be protected from light so that no change in color will occur from the time the sample is made to when it is used to check the appearance conformity of the end product.

With these factors in mind, we attempt to produce a finish which will be a pleasing blend of color and tone throughout the entire project. Our experts take care and pride to ensure that every door has a look of charm and distinction.

## Samples

ASSA ABLOY Wood Doors will submit 5 samples of finish color for the customer's approvals. The customer is required to sign the back of one of the samples and return it, keeping the other four for your records. Ship date will not be assigned until signed samples are returned.

## Priming

We can provide interior and exterior primed products, each consisting of 1 or 2 coats of primer, which can be sanded between coats (upon request).

Doors which have normal MDF (Medium Density Fiberboard) panels will require a specifically formulated high solids primer. This primer has hiding and filling properties that will help minimize the lifting of fibers which can occur in the panel raise.

## Finishing Limitations

An end product is only as good as its beginnings. For example, if a custom grade door is specified with a premium grade finish, it is still a custom grade door. Staining may lessen the gap between custom and premium, but not always.

All doors pre-finished by ASSA ABLOY Wood Doors custom and premium grade, are hand-sanded prior to finishing to remove any cross grain scratches and to better achieve a uniform color throughout the door.

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## Maiman Stile and Rail Doors

Like any piece of fine furniture, wood doors need proper finishing and periodic maintenance to keep it performing its best. For a long-lasting, beautiful door, please follow the instructions as outlined in the appropriate section below. Failure to follow care & finishing recommendations will void the door's warranty.

Factory finishing is usually specified for high quality work where a superior appearance and performance of the finish is desired. Benefits of factory finishing include consistency, control of film thickness, environmental compliance, and curing/drying of the finish in a controlled atmosphere. Its use assumes a maximum degree of manufacture preparation so that site installation can be performed with a minimum amount of cutting, fitting, and adjustment to facilitate project completion.

Field finishing is typically specified when there is not a demand for specific need for a superior appearance and is not necessarily part of the woodwork contract. This would normally be specified in the painting specification section. The finisher/painter is responsible for examining and accepting the woodwork as supplied prior to the commencement of finishing. The finisher/painter is responsible for meeting or exceeding the control sample for surface performance characteristics (such as color, texture and sheen), including proper surface preparation, shading and blending of color and other requirements as defined or referenced in the project specifications or finish documents.

*CAUTION: ASSA ABLOY Wood Doors cannot evaluate all the available paints and stains, nor the customers' specific application requirements. Your coating supplier should know of suitable finish systems that give satisfactory results in your region. It is highly recommended that top quality finishes be selected, and the application instructions on the container or technical information be followed explicitly.*

## Interior Doors

Maiman Stile and Rail interior doors are offered in two finish options as designated by WDMA (Window and Door Manufacturers Association) including TR2/OP2 (Catalyzed Lacquer) and TR6 (Catalyzed Polyurethane). Factory finished interior doors receive a lifetime warranty for manufacturers defects.

Unfinished interior doors do not carry any finish warranty, only manufacturer's warranty for construction of the door. Per warranty instructions, all unfinished Maiman doors must be finished within 14 days receipt.

If you have purchased unfinished doors, you can choose from a wide variety of stain or paint possibilities. Reputable finish suppliers can provide a broad selection of color chips to demonstrate the look you can achieve when staining wood doors.

## Refinishing Factory Finished Interior Doors

Refer to the technical data sheets, product data sheets or specification sheets of your preferred finish supplier for exact preparation, process and finishing instruction on the product you intend to use for compatibility and application.

# Field Finishing Stile and Rail Details Wood Door Technical Manual

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## Field Finishing Interior Doors

General guidelines are provided through WDMA's Job Site Information bulletin. It is recommended that this document be printed and used as a general reference for site finishing. Refer to the technical data sheets, product data sheets or specification sheets of your preferred finish supplier and material for exact preparation, process and finishing instruction on the product you intend to use for compatibility and application.

## Exterior Doors

ASSA ABLOY Wood Doors apply only TR6 (Catalyzed Polyurethane) finishes to factory finished exterior doors. Factory finished exterior doors carry a 1 year warranty for factory finish, provide all conditions are met with regard to the Exterior Warranty.

*CAUTION: Avoid EXTERIOR WOOD DOORS finished in a dark color that will absorb heat when exposed to direct sunlight or without adequate overhead soffit protection.*

## Refinishing Factory Finished Exterior Doors

Factory finished exterior doors require continued care and maintenance to insure continued performance and aesthetics. It is recommended that a yearly inspection (twice a year in coastal areas) be performed to review structural and aesthetic issues that may have changed in the previous year due to exterior conditions on the site. Refer to the technical data sheets, product data sheets or specification sheets of your preferred finish supplier for exact preparation, process and finishing instruction on the product you intend to use for compatibility and application to the original factory finish applied.

## Field Finishing Exterior Doors

Refer to the technical data sheets, product data sheets or specification sheets of your preferred finish supplier and material for exact preparation, process and finishing instruction on the product you intend to use for compatibility and application for EXTERIOR APPLICATION.



# Machining Options

## Stile and Rail Details

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	Non-Rated	20 Minute			45 Minute			60 Minute			90 Minute		
		Pressure			Pressure			Pressure			Pressure		
		Neutral	PPB	PPA	Neutral	PPB	PPA	Neutral	PPB	PPA	Neutral	PPB	PPA
Mortise Lock	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Card Reader	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Thru-Bolts	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Combination Lock	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Cylinder Lock	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Concealed Vertical Rod	OK	OK			OK			OK			OK		
Door Bottom	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Concealed Door Closer - Arm Only	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Flush Cup Pull	OK												
Finger Pull	OK												
Pivot Hinges-Top & Bottom	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Intermediate Pivot	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Invisible Hinge	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Mortise Dead Bolt	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Mortise Exit Device	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Mortise Flush Bolt	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Viewer	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Raceway	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Rim Exit Device	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Roller Latch	OK												
Wood Bead Lite Kit	OK	OK	OK	OK	OK*	OK*	OK*	OK*	OK*	OK*	OK*	OK*	OK*
1.375" Thickness	OK												
1.75" Thickness	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
2.25" Thickness	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

Standard pre-machining for all doors includes: 3 hinge preps with prefit and beveled prep for cylinder lock.

OK - Available

N/R - Not required, though available

\* With approved lite kit and glazing

# 20, 45, 60, and 90 Minute Fire Rated and Non-Rated Openings Stile and Rail Details Wood Door Technical Manual

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## Criteria for stile and rail doors, fire rated and non-rated pairs, with concealed vertical rod

### Specifications for 20, 45, 60 Minute Doors and Non-Rated:

- 5" steel edges at meeting stiles (optional veneer wrapped)
- Minimum stile width: 6" (face dimension)
- Optional stile and rail thickness: 1-3/4" or 2-1/4"
- Hardware must be approved for use in wood and wood & plastic covered composite fire doors
- 20, 45, and 60 minute = Underwriters Laboratories (UL) rating USA and Underwriters' Laboratories of Canada (UL Canada)

### Specifications for 90 Minute Doors:

- 5" steel edges at meeting stiles (optional veneer wrapped)
- Minimum stile width: 6" (face dimension)
- Minimum stile and rail thickness: 2-1/4"
- Hardware must be approved for use in wood and wood & plastic covered composite fire doors
- 90 minute = Underwriters Laboratories (UL) rating USA and Underwriters' Laboratories of Canada (UL Canada)

Notes  
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