Table of Contents

Topic	Page
General Information	General 1
Doors	Door 1
Hardware Preparation	Hardware 1
Factory Finishing	Finishing 1
Door Details	Detail 1
Wood Frames	Frame 1
Tech Reports	Tech 1
Literature	Literature 1

ALGOMA™ HARDWOODS

1001 Perry Street • Algoma, Wisconsin 54201
920.487.5221 • 1.800.678.8910 • FAX 920.487.3636
www.algomahardwoods.com • AlgomaSales@masonite.com

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General Information

Topic	Page
About the Company	3
Field Sales Managers	4
Full Door and Frame Warranty	5
Policy on Field Finishing	7
Fire Door Installation and Finishing	8
General Policies and Procedures	9
Building Codes for Fire Safety	11
All About Wood Fire and Smoke Doors	12
Types of Veneer Cuts	13
Veneer Matching	14
Door Face Veneer Standards	15
Comparison of Flush Door Costs	22
Door Weights and Square Footages	23
Form for Presenting Loss/Damage Claim to Carrier	24

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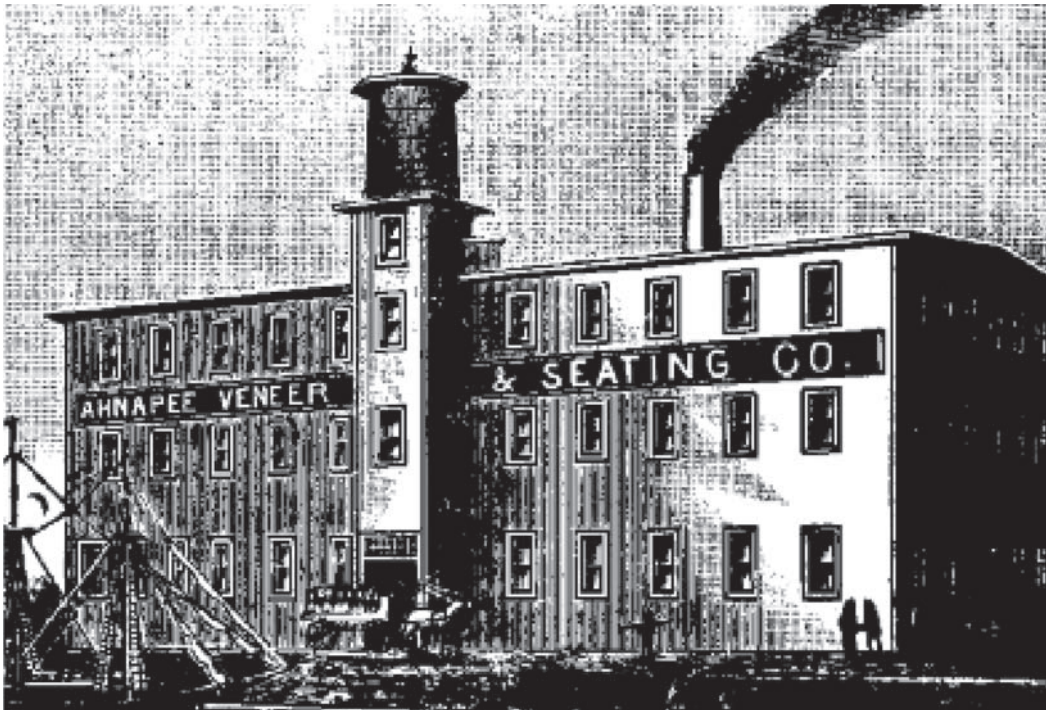
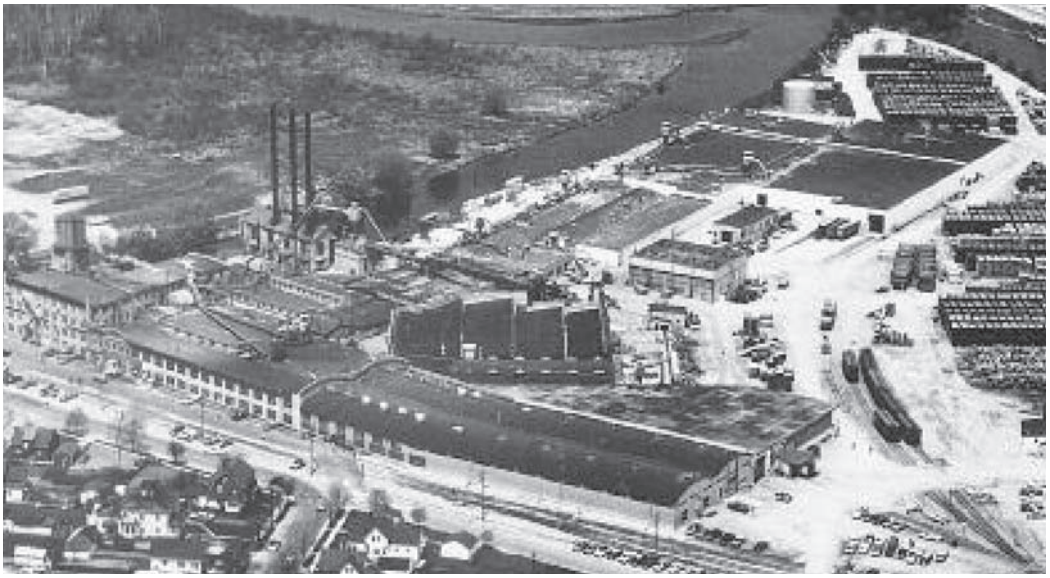
About the Company





Algoma Hardwoods, Inc. was formed in February 1977. The original company was founded in 1892.

Algoma Hardwoods is an experienced manufacturer with a century-old reputation for skill, knowledge and the highest quality products.

First to develop the wood faced mineral core fire door in 1947, Algoma Hardwoods continues to lead the industry in the research and development of products for life safety.

Algoma Hardwoods is equipped to bevel, prefit, premachine and prefinish flush wood solid core doors. Stile and rail doors and wood frames are also offered.

Algoma® Made products are available at competitive prices throughout the country. Qualifying customers can order directly from the mill by calling 800-678-8910.

To bring the mill and its customers closer together, Algoma Hardwoods has a sales force continuously calling on architects, interior designers, and customers throughout the country. These service professionals are ready to assist you with their time, product knowledge and solutions to your problems.

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SALES ORGANIZATION

Sales Organization

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General Sales Information

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Warranty Information

COVERAGE

This Warranty applies to Purchasers of the below-described products from Algoma Hardwoods, Inc., and to resale of them during the full warranty term, including Transferees of the product. Algoma Hardwoods, Inc. warrants that its products hereinafter listed, will be free from manufacturing defects which would render them unserviceable or unfit for their normal, recommended use for the time periods indicated below.

-PRIOR TO INSTALLATION

Any Algoma Hardwoods door or frame found by an authorized representative of Algoma Hardwoods to be defective within the meaning of this warranty, prior to installation, will, at Algoma Hardwoods' option, except as provided on the reverse side hereof with respect to claims relating to door warp or photographing, either be repaired, or replaced with an identical product delivered to the location or the structure without charge. If, after a reasonable number of attempts to remedy the problem, repair or replacement is not practical, Algoma Hardwoods will refund the purchase price of the product.

-AFTER INSTALLATION

If any product becomes defective after installation, Algoma Hardwoods will agree, in addition to the above, to pay reasonable expenses for removing, rehanging and refinishing. Such removal and rehanging shall be performed only with the approval of Algoma Hardwoods and after the cost of such work has been determined. **IF THE DEFECT FOR WHICH THE PRODUCT IS BEING REJECTED WAS VISIBLE AND APPARENT PRIOR TO INSTALLATION,** Algoma Hardwoods **CANNOT BE RESPONSIBLE** for the cost of removal and reinstalling the product.

EXCEPTIONS TO COVERAGE

ALGOMA HARDWOODS SHALL HAVE NO LIABILITY UNDER THIS WARRANTY UNLESS SUCH DOORS OR FRAMES HAVE BEEN HANDLED, STORED, FINISHED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH ESTABLISHED BUILDING PRACTICES, THE RECOMMENDATIONS SET FORTH ON THE REVERSE SIDE HEREOF, AND ALGOMA HARDWOODS' WRITTEN INSTALLATION RECOMMENDATIONS, AND HAVE BEEN SUBJECTED ONLY TO NORMAL USE. FURTHERMORE, UNLESS THE PRODUCTS HAVE BEEN PREFINISHED BY ALGOMA HARDWOODS, ALGOMA HARDWOODS SHALL HAVE NO LIABILITY UNDER THIS WARRANTY FOR THE FINISH OF SUCH DOORS OR FRAMES. This warranty does not apply if the defect or failure of the warranted product to conform to the warranty was caused by damage while in the possession of the consumer. **ALGOMA HARDWOODS' SOLE RESPONSIBILITY IS AS STATED IN THIS WARRANTY, AND ALGOMA HARDWOODS IS NOT LIABLE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES.** (This warranty gives you specific legal rights, and you may also have other rights which vary from state to state).

CLAIMS PROCEDURE

Algoma Hardwoods cannot inspect or control the handling or exposure of doors or frames after shipment; therefore, the Purchaser must inspect them when received. The Purchaser, upon discovery of a defect in the product, must notify Algoma Hardwoods, Inc. in writing, of the defect within thirty (30) days of discovery of the defect.

OTHER CONDITIONS ON WARRANTY

It shall not be Algoma Hardwoods' policy to inspect finished installations for the sole purpose of certifying that the installation is within warranty. **THIS WARRANTY WILL NOT COVER EXCLUSIONS, IS SUBJECT TO TOLERANCES, AND REQUIRES STRICT COMPLIANCE WITH THE STORAGE, HANDLING, JOB FINISHING AND INSTALLATION INSTRUCTIONS, ALL STATED ON THE REVERSE SIDE OF THIS WARRANTY.**

WARRANTY	Product	Interior Use	Exterior Use
	Wood Frames Life of original installation	NOT WARRANTED	
	Architectural Hot Press (PC-5 Novodor) FD 1⁄3 Hour	Life of original installation	NOT WARRANTED
	SLC-5 Stave Lumber Core, FD 1⁄3 Hour	Life of original installation	NOT WARRANTED
	SCLC-5 Structural Composite Lumber Core, FD 1⁄3 Hour	Life of original installation	NOT WARRANTED
	FD 1 1⁄2, FD 1, FD 3⁄4 Hour	Life of original installation	NOT WARRANTED
	SR Acoustical, FD 1⁄3 Hour	Life of original installation	NOT WARRANTED
	LL Lead Lined, FD 1⁄3 Hour	Life of original installation	NOT WARRANTED
	Stile and Rail/Artisan	Life of original installation	NOT WARRANTED
	FGFW Full Glass Full Warranty 1⁄3 Hour	Life of original installation	NOT WARRANTED
	SHC & IHC Hollow Core	Limited 1 year warranty	NOT WARRANTED
	Commercial Cold Press (CCP)	Limited Lifetime	NOT WARRANTED
	Commercial Cold Press (CCP) FD 1⁄3 Hour	Limited Lifetime	NOT WARRANTED

*Exclusions and limitations for exterior doors listed on reverse side.

Purchaser _____ Name of Installation _____

Address _____ City _____ State/Zip _____

Algoma Order No._____ No. of Doors _____ Type _____

No. of Doors _____ Type _____

Date Shipped _____ No. of Doors _____ Type _____

No. of Doors _____ Type _____

No. of Doors _____ Type _____

No. of Frames _____ Type _____

By: _____

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Warranty Information

PHOTOGRAPHING AND WARP TOLERANCES

1. Stiles, rail, and core show-through (photographing) on flush doors shall not be considered a defect unless the faces of the door vary from a true plane in excess of .010" in any three inch span.
2. Warp shall not be considered a defect unless it exceeds 1⁄4" in the plane of the concave side of the door itself. The following warp allowances are for 13⁄4 " or thicker doors. For doors wider than 3'6" and less than 7' in height, the warp shall not exceed 1⁄4" in a section 3'6" by the height of the door. For doors wider than 3'6" and higher than 7', the warp shall not exceed 1⁄4" in any 3'6" by 7' section. For doors up to and including 3'6" wide and over 7' in height, the warp shall not exceed 1⁄4" in any 7' length of door section. "Warp" is any distortion in the door itself and does not refer to the relationship of the door to the frame or jamb in which it is hung. The term "warp" shall include bow, cup and twist. In measuring the amount of warp present in a door, the following method shall be used: bow, cup, and twist shall be measured by placing a straight edge, taut wire or string on the suspect concave face of the door at any angle (i.e., horizontally, vertically, diagonally), with the door in its installed position. The measurement of bow, cup and twist shall be made at the point of maximum distance between the straight-edge, taut wire or string and the face of the door.
3. Manufacturer has the option to let the warped or photographing door hang 1 year to acclimate to surroundings.
4. Exterior doors, or interior doors subjected to different temperature or humidity conditions on each side of the door; or stored or used in conditions outside the guidlines below will not be warranted.

CERTAIN ADDITIONAL MATTERS EXCLUDED FROM THIS EXPRESS WARRANTY

1. The appearance of field finished doors or frames is not warranted.
2. Natural variations in the color or texture of wood are not to be considered as defects.
3. Since bleaches sometimes react unfavorably to minerals and other particles in wood, Algoma Hardwoods will not be liable for results of the bleaching of wood products.
4. The warranty against warp does not apply to the following:
   a. Doors with face veneers of different species on each side.
   b. Doors that are improperly hung or do not swing freely.
   c. Doors with top and bottom rails not sealed.
   d. Exterior doors
5. This warranty does not cover:
   a. Doors with cutouts for lights, louvers and/or face grooves, any edge of which is nearer than 5 inches to any edge of the door.
   b. Doors with cutout areas exceeding 40 percent of the door area, or with individual cutouts exceeding 54 inches in height (Exception: FGFW Full Glass Doors).
   c. Doors with less than 5 inches between cutouts for lights, louvers, locks, and/or other hardware cutouts (Exception: 11⁄2" on stile and rail doors and 11⁄2" on FGFW Full Glass Doors).
   d. Any delamination or warpage caused by failure to protect and seal all exposed surfaces of the door and the continued proper maintenance of these surfaces.
   e. The appearance of wood doors with a high gloss finish.
   f. Doors with hardware that is not compatible with a particular door construction. Concealed overhead closers, stops, or holders are limited to a maximum mortise dimension of 13⁄8" wide by 113⁄16" deep on particleboard or stave core doors (13⁄4" or thicker doors) and not approved for use on fire-rated doors.
   g. Repairs, rework or replacements made without prior written consent from manufacturer.
   h. Normal wear and tear including wear through of the finish or doors deteriorating for reasons other than material and workmanship of the door itself.
   i. Doors and accessories that are not acceptable to local authorities having jurisdiction.
   j. Doors where self-tapping or combination metal/wood screws are used to surface applied hardware.
   k. Exterior doors.

HANDLING, JOB FINISHING AND INSTALLATION INSTRUCTION

1. Deliver doors or frames to building site after plaster or cement is dry. If doors are stored at jobsite for more than one week, all edges should be sealed.
2. Handle with clean gloves and do not drag doors or frames across one another or across other surfaces.
3. Store flat on a level surface off the floor in a dry, well ventilated building. Cover to keep clean and avoid discoloration with opaque covering which does not permit light to penetrate. Covering must allow air circulation. Relative humidity should not be less than 25 percent or greater than 55 percent to aid in preventing warping and photographing. Avoid exposure to direct sunlight or artificial light, as some veneers will change color when exposed to light.
4. Doors and frames should not be subjected to: abnormal heat, extreme dryness, humid conditions or sudden changes therein.
5. The structural strength of the door or frame must not be impaired in the fitting of the door or frame, the application of hardware, or cutting and altering the door for lights, louvers, panels or any other special details. Cutting for electric strikes or other hardware may impair the structural strength of the frame.
6. For all doors up to 7'6" high, use three hinges. All doors 7'6" or higher require an additional hinge for each additional 30" of length.
   a. Top and bottom offset pivots require one intermediate pivot up to 7'6" and an additional pivot for each additional 30" of length.
   b. Center hung pivots warranted on PC-5 up to 7'0". All doors above 7'0" up to 8'0" must use stave lumber core.
7. Before finishing, remove handling marks or effects of exposure to moisture with a thorough, final sanding over all surfaces of the door using 120 to 180 grit sandpaper and clean before applying sealer or finish, otherwise a blotchy appearance may result. Sanding and finishing should be done in a horizontal position. Some species of wood contain a chemical (oak particularly) that reacts unfavorably with certain finishes. Where possible, the surface should be tested for such unfavorable reactions. Application of a thinned clear sanding sealer, followed by light block sanding before finishing, will promote the uniformity of subsequent stain coats. The full beauty of wood is best emphasized by the use of a satin or semi-gloss finish rather than high gloss. For spray application of paint on paint grade surfaces, additional preparation of the surface will be required to minimize visibility of grain. The darker the stain color, more sanding and prepping is required.
8. Immediately after fitting, or cutting for closers, weatherstrip and/or threshold, and before hanging any interior or exterior door on the job, the entire door, including the top and bottom edges, must receive an application of primer and two coats of a good grade paint, varnish or lacquer. Adequate drying time must be allowed between coats. For jobsite finishing, do not use a water-thinned paint unless an oil base prime coat is first applied. Exterior finishes shall be used on the exterior face and all edges of exterior doors.
9. Dark colored finishes should be avoided on exterior surfaces of exterior doors.
10. Doors or frames prefinished at the factory should be compared with the approved finish sample before installing. Installation of prefinished doors or frames shall constitute acceptance.
11. Finishing at the job site should be discontinued immediately if unsatisfactory results are evident. The manufacturer should be consulted for possible corrective action before continuing.

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Policy on Field Finishing

Finishing at the jobsite or in our customer's shop shifts the responsibility away from the Algoma factory. (See Algoma Hardwoods' Door Warranty, Tolerances, Exclusions and Instructions.) To assist all parties in recognizing their responsibilities, the notice shown here is included with every packing slip on every shipment leaving the factory.

NOTICE: JOB CAPTAIN AND FINISHER

Storing Doors
Pile doors on leveled supports covered with a sheet of plywood or heavy cardboard to protect the face of the bottom door. Cover the top door in a similar manner. Protect all doors from exposure to light with dark colored polyethylene or similar material. Do not store doors in damp areas or freshly plastered buildings. Storage area should be dry and well ventilated. Relative humidity should range from 25% to 55%. Do not subject material to extremely high or low humidity. **This is extremely important for fire doors because some constructions have fire retardant chemicals in them which will draw moisture. (See instruction sheet attached to each fire door.)** When moving doors, handle them with clean hands or wear clean gloves. Bare hands leave finger marks and stains. Do not drag them across each other or against other surfaces. If unfinished material is to be stored at jobsite for more than one week, all edges should be sealed.

Finishing Doors
All doors must be inspected for matching, face grade or other visual defects prior to installation and finishing. These doors **should not be considered as ready for finishing** as received. The factory cannot be responsible for the manner in which they are handled once they are loaded for shipment.

Before applying **any** finish, the finisher **must thoroughly block-sand or belt-sand both faces** with 120 to 180 grit sandpaper in order to remove all scuffs, scratches, burnishes, raised grain, handling marks and effects of exposure to moisture. Thorough sanding cannot be done without using a sanding block and the door must be in a horizontal position.

To ensure uniform color when applying any stains, it is highly recommended that a wash coat be applied, followed by a light sanding. It is also essential to apply stains with the door in a **horizontal position.** This permits easier handling of materials and prevents the solvents from evaporating too quickly, which is a common cause of streaks caused by the stains "setting up" before clean up can be completed. If problems develop in finishing **do not** continue with the finishing. Notify your finish supplier or door supplier immediately. Avoid extremely dark stains on light colored woods. **The darker the stain the better the preparatory sanding must be.**

Doors to be painted in the field will require additional field preparation before application of the final coats. Additional preparation may include spackling and/or sanding because of hidden surface blemishes or differential absorption of finish coats.

FAILURE TO FOLLOW THESE FINISHING INSTRUCTIONS PUTS TOTAL RESPONSIBILITY FOR THE APPEARANCE OF THE FINISHED PRODUCT IN THE HANDS OF JOBSITE PERSONNEL.

If these instructions are contrary to instructions supplied by the finish manufacturer, all work should stop until an understanding between finish supplier and door supplier is reached.

All doors must be inspected for color match, face grade or other visual defects prior to installation and finishing.

If the customer cannot prove to us that the material supplied by Algoma Hardwoods was handled as outlined above, we cannot be held liable for problems that may be encountered.

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Fire Door Installation and Field Finishing

Field Fitting & Machining for Hardware
Algoma® Made Mineral Core Fire Doors have hardwood plywood inner edge bands. This material is so strong that driving screws, nails or nail sets into the stile will be very difficult.

Fitting
Doors must be trimmed, beveled and machined at the factory or at a shop licensed under UL or ITS/WHI. Field machined doors may be rejected by authorities having jurisdiction.

The installer should never trim from the top of the door. For height, it is allowable to trim up to 3⁄4" from the bottom end of the door. Fire doors should never be cut down in width to fit a smaller opening than the size for which the door was manufactured.

Unless ordered otherwise, Algoma will always prefit single fire doors by 1⁄8" at each stile, or 1⁄4" in total width; paired fire doors by 3⁄32" at each stile, or 3⁄16" in total width.

Algoma's fire doors will be prefit 5⁄8" for length, with 1⁄8" clearance at the top and 1⁄2" at the bottom, unless ordered otherwise.

Both vertical edges will be beveled 3 degrees unless ordered otherwise.

Machining for Hardware
Algoma's fire doors **may be** hung with standard weight .134" x 41⁄2" x 41⁄2" non-ball bearing hinges up to 9'0". (Over 9'0", ball bearing hinges must be used.) Doors 7'6" or higher require an additional hinge for each additional 30" of length. Listed spring hinges may be used.

Pilot holes 5⁄32" in diameter must be drilled to accept a #12 x 11⁄4" fully threaded steel screws with constant diameter wood type threads for attaching the hinges. Use not less than #8 fully threaded screws and 1⁄8" pilot holes for a lock attachment.

Listed surface applied, thru-bolted closers, are recommended for wood fire doors. Surface closers may also be applied with screws, rather than thru-bolts when Superfire top rails are specified for mineral core fire doors. Unless doors are ordered with the heavy duty reinforcing, thru-bolts must be used to fasten closers or any other surface hardware. **(DO NOT OVERTIGHTEN THRU-BOLTS.)** If screws are used, **DO NOT** use self-tapping or combination wood/metal screws.

All Algoma® Made mineral core fire doors shall be installed in listed and labeled wood or metal frames.

Note: If Algoma® Made Fire Doors are purchased factory prefit and premachined, Algoma will predrill pilot holes for screws on mortise hinges upon request. Installation will only require application of hinges. Pilot holes for attachment screws on locks, other hardware and surface applied hardware will require drilling at the job.

Field Finishing Procedure
Prior to finishing, follow instructions as described in Policy on Field Finishing, page 8.

Do not use steel wool under any circumstances.

Use only oil soluble stains and test on an inconspicuous area of a door to be sure the desired color will be obtained.

INSTALLATION AND FIELD FINISHING INSTRUCTIONS MUST BE FOLLOWED OR WARRANTY IS VOID.

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Quotations. Per door, frame and other schedules, freight allowed, F.O.B. Algoma, USA dollars. No "Plans and Specs" quotes are made at Algoma. No "Plans and Specs" orders will be accepted.

Prices quoted by Algoma's customer when using Algoma's Quick Quote Program, will not be binding on the mill if in error, or if date quoted by customer is not registered at Algoma by sending in a copy of his quote. All prices, discounts and terms of sale are subject to cancellation, withdrawal or change without notice.

Terms of Sale. F.O.B. Algoma, WI Net 30 days ADI (After Date of Invoice). In brief form: Net 30 days ADI. A service charge of 1½% per month, or part thereof, will be assessed on any past due balance.

Order Acknowledgments to Customers. Once the approved door, frame and hardware schedule and shop drawings are in hand, Algoma Hardwoods will be responsible for the proper location of the machining for hardware as taken from above schedules. This and all other information for producing a door order will be written into Algoma Hardwoods' order form and a copy of it returned to the customer for his acknowledgment. The customer is responsible for acknowledging the correctness of:

1. The proper number of doors on each item and the total order.
2. Proper door construction by item.
3. Proper door sizes by item.
4. Proper door swings.
5. Correct lite and louver locations within the door's area.
6. Correct hinge and lock locations.

The above items must be known to produce the doors; therefore it is essential that the acknowledgments be returned or valuable time will be lost in producing the order. To underscore this, the following note is included on the acknowledgment of each machined and/or finished order:

> This acknowledges your order as we interpret it. Please check it for errors and return a signed copy immediately (with corrections noted in red). Production may have already begun. Delays in acknowledging may result in backcharges for material and labor if changes are not due to our misinterpretation. Failure to return a signed acknowledgement shifts responsibility back to the customer.

Prices. Acknowledged prices are based on the order as written, not necessarily on your inquiry or our original quotation. Prices as shown on acknowledgment are final (assuming no changes are made) and will be invoiced on the date of shipment.

Order Changes and Cancellations. Changes must be confirmed by customer in writing. Order changes received prior to actual production being started will be processed at a minimum of $200 per order change. After production has started and the change requires rework, refacing, etc., customer will be charged a minimum of $200 plus all necessary rework costs on a time and material basis. Cancellations received prior to actual production will be processed at a minimum of $250. Cancellations made after production has started will cost $250 plus expenses for all costs incurred. Those customers who, after the order has been written and entered by Algoma, submit a complete new schedule of any type, will be charged at the rate of $50 per hour for time spent updating Algoma's order.

Buck sheets sent in lieu of a frame schedule will incur a $5/door charge in addition to the standard coordination charge.

Consignment Policy. All consignment material use must be approved by Algoma Hardwoods prior to acceptance of an order.

All other consignment materials must be properly marked and labeled with customer name and order number. If consignment material is not received in time for scheduled installation, shipment will not be delayed—items will be shipped without installation, and consignment material will be returned to customer (collect) when received.

Consignment material must be shipped to Algoma freight prepaid. All charges will be applied to the order. All paperwork, expediting, tracing, etc. must be handled by the customer.

Samples. Construction Samples: 1¾-inch thick, 6" x 6" mill-option species faces and stiles. Faces and stiles clear Univar®-finished, rails sealed. Labeled for identification. On jobs, up to 3 samples will be furnished at no charge. Additional samples charged as follows:

FD ⅓ Hour Samples .....$15.00 each
FD 1½, 1 or ¾ Hour Samples .....$20.00 each

When submitting only veneers and/or finishes for approvals, ¼" x 8½" x 11" plywood samples will be supplied. (Unfinished or standard Univar®-finished; up to 3 at no charge.) Additional quantities are $5.00 each for unfinished and $7.50 each for finished samples.

Custom Samples. Special samples other than above, built to architects' job specifications, finished and unfinished. Please contact the mill for pricing.

Retainage. Algoma's invoices are not subject to retainage. Payment of invoice in full will not forfeit the right of the buyer to request subsequent corrections or adjustments.

Legislation. Seller represents that with respect to the production of the Articles and/or the performance of the services offered, it has fully complied with the provisions of the Fair Labor Standards Act of 1938 as amended. Algoma Hardwoods is an equal opportunity employer and has an approved Affirmative Action Plan on file.

Special Orders. All orders of special nature, size, thickness, face, core or cut are subject to special quotation and may not be canceled after acceptance by Seller. Seller reserves the right to require 50% advance payment on such orders.

Claims and Complaints. All claims for obvious defects, shortages or delays relating to the merchandise sold hereunder must be made in writing to Seller within five days after receipt of such merchandise, and Seller shall not be liable for any such claims not made within such time period. Under no circumstances shall Seller be liable for incidental or consequential damages arising out of any defect, shortage or delay or any breach of warranty and all such damages are specifically excluded. All other claims and complaints must be submitted in writing to Algoma Hardwoods. No commitment to return material will be honored unless approved by Algoma Hardwoods. No backcharge of any kind will be honored unless previously authorized by Algoma Hardwoods.

Appearance. All doors must be visually inspected for face grade, color, match and other defects by the customer prior to further work or installation. We are responsible for repairing or replacing material as originally furnished, but not refinishing or reinstallation if the defect could be detected prior to further work or installation. If manufacturing defects are detectable only after sealing or staining, no additional coat of finish may be applied without approval of the manufacturer.

End Matching. A variation of grain pattern is considered acceptable for end matching:

Single door and transom.....3⁄8"
Pair of doors with single transom .....1⁄2"

Force Majeure. Seller shall have no liability for any delays or non-performance due to strikes or other labor disturbances, fire, flood, shortage of materials, delays in transit, force majeure, government priority or other regulations delay or failure by Seller's suppliers to deliver or other cause beyond Seller's control or any other commercial impracticability, whether similar or dissimilar to the foregoing.

Damage or Loss In Transit. All shipments shall be F.O.B. Seller's mill. In all cases, the Buyer shall bear all risk of loss from the time the goods are delivered to a carrier or to Buyer's trucks; and buyer shall file and pursue all claims against carrier arising from damage to the goods while in their possession. Use form on page 24 of this section.

Product Delivery. Any additional charges assessed by carrier will be passed on to customer. Examples include re-delivery arrangements, excessive time in job site unloading, etc.

Warranty. Seller warrants that the merchandise on this acknowledgment will perform according to its standard printed warranties relating to such merchandise, subject to the terms and conditions of the said warranties which are incorporated by reference herein as if set out in full. If no standard printed warranty of Seller is applicable to any merchandise on this acknowledgment, then there are no warranties with respect to such merchandise other than those appearing on the face of this acknowledgment and Buyer's sale and exclusive remedy and the limit of Seller's liability shall be the invoice value of any such merchandise claimed to be defective. There are no warranties relating to the described merchandise which extend beyond the description in this paragraph and, unless otherwise noted in any applicable standard printed warranty, such warranties are exclusive and in lieu of all other warranties, express, implied or statutory, including the warranty of merchantability or fitness for a particular purpose.

Collection Costs. Should it become necessary to place Buyer's account for collection, Buyer shall pay all costs thereof including reasonable attorney fees.

Taxes and Surcharges. Prices named herein shall be subject to any additional charges to cover any existing or future surcharges, manufacturers, sales, use or similar tax which may be applicable and are to be borne by the Buyer.

Scope. This instrument constitutes the entire and only agreement between the parties hereto, and any representation, affirmation of fact, and course of prior dealings, promise of condition in connection therewith or usage of the trade not incorporated herein shall not be binding upon either party. No waiver, alteration or modification of any of the provisions hereof shall be binding unless in writing and signed by a specifically authorized representative of the Seller.

Building Codes for Fire Safety

The purpose of building codes is to provide reasonable minimum requirements in building construction to protect the public health, safety and welfare. To that end, there are provisions for fire safety, strength properties, durability and sanitation. This short recap provides a summary of the fire safety aspects of building codes.

General
Of those municipalities having building codes, it is estimated that approximately 70% have adopted, at least in part, one of the national model codes. However, the percentage that have adopted one as a complete package is much smaller.

Model Codes
The national model codes are for the most part performance type. They are written by professional people and with the assistance of industry. Four of them are true model codes. The fifth, National Fire Protection Association's Life Safety Code, is not a complete code, but as far as fire protection is concerned, it is given the same status as the model codes.

1. Basic Code, also known as BOCA, is written by Building Officials and Code Administrators International with headquarters at 4051 W. Floosmoor Road, Country Club Hills, IL 60477. It is widely adopted in the eastern and midwestern sections of the country.
2. Uniform Building Code is written by International Conference of Building Official (ICBO) with headquarters at 5360 South Workman Mill Road, Whittier, CA 90601. It is widely adopted on the Pacific coast and eastward to include cities in the midwest and some areas in the southwest.
3. Standard Building Code is written by Southern Building Code Congress with headquarters at 900 Montclair Road, Birmingham, AL 35213. It is widely adopted in the southern states.
4. National Building Code is written by American Insurance Service Group, Inc., with offices at 85 John St., New York, NY 10038. It has scattered adoptions throughout the country.
5. NFPA Life Safety Code is written by a Technical Committee of the National Fire Protection Association with headquarters at Battery March Park, Quincy, MA 02269. It is enforced most widely in those areas where the influence of the Fire Marshal is predominant.

Some states have a Fire Safety Code, which must be observed in construction and maintenance of public buildings. The State Fire Marshal, usually a political appointee, is responsible for enforcement of the code.

Within the model codes and NFPA Life Safety Code are chapters which are at considerable variance. It should be noted that state, county and municipal governing bodies adopting one of the model codes may make certain modifications to suit local conditions or to meet the political situation. Code regulations as described herein are meant to cover only their general application. It will, therefore, be necessary to refer to the appropriate chapter in the local code relative to variations and specific conditions.

Construction Standards by Federal Agencies
Some federal agencies write and administer construction standards which are, in a sense, partial or modified building codes.

1. The Housing and Community Development Act, effective January 1, 1975, gave Housing and Urban Development (HUD) the authority to write and administer a mobile home standard. The new Mobile Home Construction and Safety Standards have been implemented.
2. Federal Housing Administration (FHA) of HUD writes and administers Minimum Property Standards for FHA-insured buildings. They cover one- and two-family dwellings, multi-family dwellings and care-type housing.
3. Public Health Service of the Department of Health and Human Services writes and administers minimum Construction Requirements of Construction and Equipment for Hospital and Medical Facilities for construction under the Hill-Burton Program.
4. Social Security Administration of HEW has jurisdiction over construction for Medicare and Medicaid Facilities. NFPA Life Safety Code (1981 Edition) is the reference standard used for fire protection requirements for these facilities.
5. Other federal agencies refer to nationally recognized model codes for general construction requirements and establish certain specific criteria in the form of Guide Specifications

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All About Wood Fire and Smoke Doors

General

Fire doors are labeled according to type of opening they are to protect. The rating is awarded in hours or fraction of hours and the temperature rise at the end of 30 minutes of test is recorded. A hose stream impact test is run at the end of the test period.

Ratings

The table at right shows Underwriters Laboratories ratings for fire doors and those in bold type indicate ratings achieved by Algoma Hardwoods, Inc. Standard For Fire Doors National Fire Protection Association (NFPA) pamphlet #80 is the standard for fire door and window installation. It 's written by a Technical Committee of National Fire Protection Association and covers the use, installation and maintenance of fire doors. Copies may be obtained from National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269. The following are excerpts from the Standard:

U.L. RATINGS FOR FIRE DOORS

Time Rating on label	Type	Temperature Rise on label	Permissible Glass Area
3 Hr.‡	(A)	30 Min. 250°F Max.	None permitted
3 Hr.	(A)	30 Min. 450°F Max.	None permitted
3 Hr.	(A)	30 Min. 640°F Max.	None permitted
3 Hr.	(A)	*	None permitted
1½ Hr.	**(B)**	**30 Min. 250°F Max.**	**Up to 100 sq. in. per leaf**
1½ Hr.	(B)	30 Min. 450°F Max.	Up to 100 sq. in. per leaf
1½ Hr.	(B)	30 Min. 650°F Max.	Up to 100 sq. in. per leaf
1½ Hr.	(B)	*	Up to 100 sq. in. per leaf
1 Hr.	**(B)**	**30 Min. 250°F Max.**	**Up to 100 sq. in. per leaf**
1½ Hr.	(D)	30 Min. 250°F Max.	None permitted
1½ Hr.	(D)	30 Min. 450°F Max.	None permitted
1½ Hr.	(D)	30 Min. 650°F Max.	None permitted
1½ Hr.	(D)	*	None permitted
¾ Hr.	(C)	**	Up to 1296 sq. in. per leaf
¾ Hr.	(E)	**	Up to 720 sq. in. per leaf
⅓ Hr.		**	Up to 1296 sq. in. per leaf

‡3-Hour Doors only available in metal.

*When temperature rise for 3, 1½ or 1 hour door exceeds 650°F, it is not recorded on the label.

**No recording of temperature rise is made on the label of ¾, ⅓ hour doors.

Classification of Wall Openings. Three-hour fire doors (A) are for use in openings in walls separating buildings or dividing a single building into fire areas. The 1½-hour fire doors (B) and (D) are for use in openings in 2-hour enclosures of vertical communications through buildings (stairs, elevators, etc.) or (D) in exterior walls which are subject to severe fire exposure from outside of the building. The 1-hour fire doors (B) are for use in buildings in 1-hour enclosures of vertical communications through buildings (stairs, elevators, etc.) The ¾-hour fire doors (C) and (E) are for use in openings in partitions between corridor and rooms or (E) in exterior walls which are subject to moderate fire exposure from outside the building. The ⅓-hour fire door is for use where smoke control is a primary consideration and is for protection of openings in partitions between a habitable room and a corridor when the wall is constructed to have a fire resistance rating of not more than one hour or across corridors where a smoke partition is required.

Labels. The fire protection ratings of 3, 1½, 1, ¾ or ⅓ hours indicate the duration of the test exposure, and the letters A,B,C,D or E appearing on the label following the hourly rating indicate the classification of the wall opening for which the door is designed. Labels provide evidence that the size of the door and the exposed glass area are acceptable under the Standard. When the temperature rise is shown on the label, it indicates the temperature developed on the unexposed face of the door at the end of 30 minutes of exposure to the Standard Fire Test. Labels may indicate that the maximum transmitted temperatures are 250°F, 450°F, or 650°F. If the temperature rise is not indicated, the rise for the door is in excess of 650°F. The temperature rise with glass vision panels of 100 sq. in. or less per door leaf is the same as for similar doors without glass lites. The temperature rise for all doors with glass lites exceeding 100 sq. in. or for doors provided with louvers is in excess of 650°F.

Temperature Rise Limitations. Where fire doors are used in stairway enclosures, such doors should be constructed so that the maximum transmitted temperature end point shall not exceed 450°F above ambient at the end of 30 minutes of the Standard Fire Exposure Test.

Glass. Only labeled or listed special glass shall be used.

Frames. Only labeled door frames shall be used. Wood or plastic-faced doors can be installed in pressed steel, aluminum, steel channel or wood frames of the single unit type. The clearance between the bottom of the door and the floor surface shall not exceed ¾-inch or ⅜-inch with the existence of a raised sill or threshold. The clearance at the top and sides or between edges of doors shall not exceed ⅛-inch.

Sills. Buildings with combustible floors require special sill construction at door openings, as combustible floor construction shall not extend through the opening, except in 1/3-hour openings. Raised non-combustible sills or thresholds are acceptable whenever combustible floor coverings are contemplated or are in use on one or both sides of the door opening. Combustible floor coverings shall be permitted to extend through the door openings of 11/2-hour ratings or less providing the floor covering has a minimum of a Class II interior floor finish rating. If non-combustible floors are used, sills are not required.

Standard vs. Codes

According to the scope of NFPA #80, it is not intended that the Standard should establish the degree of protection required or to constitute the approval of any products. In this regard, where there is a conflict between the Standard and the building code, the building code shall prevail. For example, the Uniform Building Code by ICBO has provisions for ⅓-hour (20 min.) doors to protect openings in one hour corridor walls. These are smoke doors, not fire doors. They are required to pass the fire endurance of the Standard Test Method, but are not required to pass the hose stream test.

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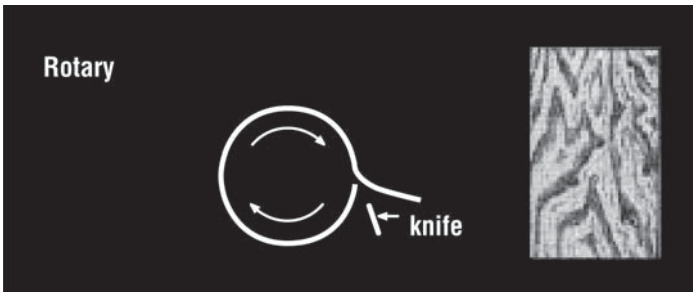
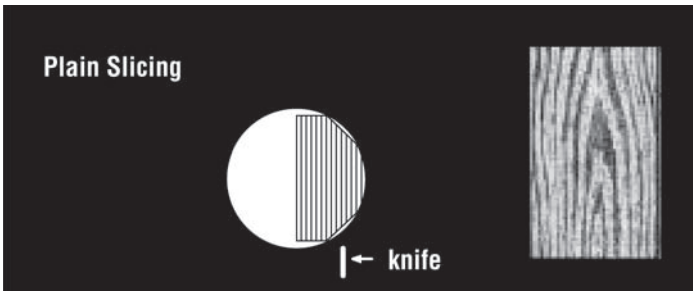
Types of Veneer Cuts

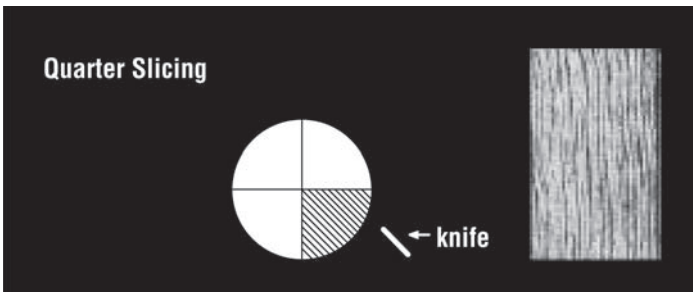
The manner in which veneers are cut is an important factor in producing the various visual effects obtained. The same species cut differently will have entirely different visual character and will vary in color as well. There are four principal methods of cutting veneer. The veneer slicer and veneer lathe are the primary equipment employed.



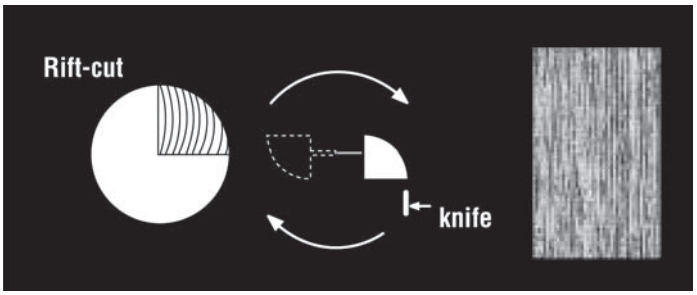
Rotary. The log is mounted centrally in the lathe and turned against a knife, like unwinding a roll of paper. Since this cut follows the log's annual growth rings a bold grain figure is produced. Rotary cut veneer is exceptionally wide and matching at veneer joints is relatively difficult. Almost all softwood plywood is cut this way. Lengths in all hardwoods are limited to 10'.



Plain slicing (or flat slicing). The half log, or flitch, is mounted with the heart side flat against the guide plate of the slicer and the slicing is done parallel to a line through the center of the log. This produces a figure similar to that of plain sawn lumber.



Quarter slicing. The quarter log, or flitch, is mounted on the guide plate so that the growth rings of the log strike the knife at approximately right angles, producing a series of stripes, straight in some woods, varied in others. In red and white oak, the knife will tend to cut along the medullary rays in the log, which provides flake in the veneer.



Rift-cut. Rift-cut veneer is produced in the various species of oak. Oak has medullary ray cells which radiate from the center of the log like the spokes of a wheel. The rift is obtained by slicing slightly across these medullary rays. This accentuates the vertical grain and minimizes the "flake." **Comb grain** is a selection from rift-cut material that is distinguished by the tightness and straightness of its grain.

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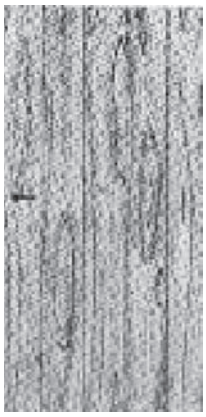
Veneer Matching

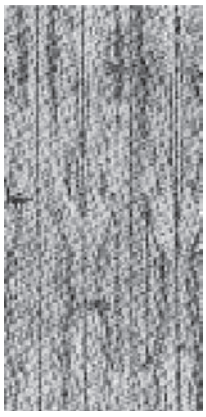
Book Match

Slip Match



Random Match

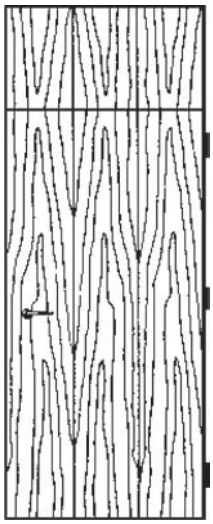
Running Match



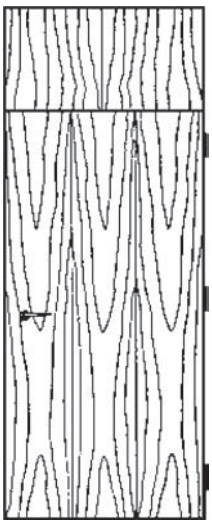
Balance Match

Center Match

Continuous Match



End Match



No Match

Matching of Individual Veneer Pieces in a Door Face

Book Match. Most common match in the industry. Every other piece of veneer is turned over so adjacent pieces are opened like adjacent pages in a book. Veneer joints match and create a mirrored image at the joint line, yielding a maximum continuity of grain. Used with rotary, plain sliced, quarter, rift-cut or comb grain veneers.

Slip Match. Adjoining pieces of veneer are placed in sequence without turning over every other piece. Grain figure repeats, but joints won't show mirrored effect. Often used in quarter cut, rift-cut and comb grain veneers to eliminate the barber pole effect.

Random Match. Veneers are joined with the intention of creating a casual unmatched effect. Veneers from several logs may be used within a face.

Assembly of Veneers Within the Door Face

Running Match. Non-symmetrical appearance. Veneer pieces of unequal width. Each face is assembled from as many veneer pieces as necessary.

Balance Match. Symmetrical appearance. Each face is assembled from pieces of uniform width before trimming. This match reduces veneer yield.

Center Match. Symmetrical appearance. Each face has an even number of veneer pieces of uniform width before trimming. Veneer joint in the center of the panel produces symmetry. This match reduces veneer yield.

Doors With Transoms

Continuous Match. Provides optimum veneer utilization as each single piece of veneer extends from the top of the transom to the bottom of the door. Veneer length may limit this option.

End Match. A single piece of veneer extends from the bottom to the top of the door with a mirror image at the transom.

No Match. Intended for casual, unmatched appearance.

Match Line. In Continuous and End Match transoms, the following variation of grain pattern between the door and transom is considered acceptable:

Single door and transom .....3/8"

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Door Face Veneer Standards

The face grading requirements for flush doors are described in the following pages. It is not correct to refer to veneers (or any raw material) using the terms "custom," "premium" or "economy" grades. These grade designations only apply to complete products.

FACE MATERIAL REQUIREMENTS

Veneers for Transparent Finishes

- **Custom Grade Doors.** "A" grade faces are standard for Custom Grade doors. Veneer is required to be of sufficient thickness (minimum 1/50" at 12% MC) to preclude sand-through, show-through of core, and glue bleed.
- **Premium Grade Doors.** "A" grade faces are standard for Premium Grade doors (WDMA). Veneer is required to be of sufficient thickness (minimum 1/50" at 12% MC) to preclude sand-through, show-through of core, and glue bleed.
- **Economy Grade Doors.** "B" grade faces are accepted for Economy Grade doors. Veneer is required to be of sufficient thickness (minimum 1/50" at 12% MC) to preclude sand-through, show-through of core, and glue bleed.

Veneer Grade Descriptions

- **Grade AA.** The veneer shall be smooth, tight-cut and full-length. When the face consists of more than one veneer component or piece, the edges shall appear parallel and be edge matched. Rotary-cut faces may be whole piece or multipiece with edge joints tight with no sharp color contrasts at the joints. Species specified for natural color will allow color contrasts, but must be book matched or conform to the type of matching as specified. The components of plain-sliced (flatcut) and multi-piece rotary faces will be book matched, unless otherwise specified with a running, balanced, or center matched arrangement. Unless otherwise specified, components in plain-sliced faces will have a matching arrangement selected by the manufacturer. Plain-sliced faces will consist of two or more components and rotary faces will consist of one or more components with no component less than 5 inches (127mm) wide except for outside components which may be less than 5 inches (127mm) to allow for certain types of matching or panel edge trim loss. No plain-sliced components will have a split heart. No full quarter-cut is allowed in plain-sliced faces. The width of any single component in quarter-cut, rift-cut or comb grain faces shall not be less than 3 inches (76mm) except for outside components which may be less than 3 inches (76mm) to allow for certain types of matching or door edge trim loss.
- **Grade A.** The veneer shall be smooth, tight-cut and full-length. When the face consists of more than one veneer component or piece, the edges shall appear parallel and be edged matched. Rotary-cut faces may be whole piece or be multi-piece with edge joints tight; however, no sharp color contrasts are permitted at the joints and the face will provide a good general appearance. Species specified for natural color will allow color contrasts, but must be book matched or conform to the type of matching as specified. The components of plain-sliced (flat-cut) and multi-piece rotary faces will be book matched, unless otherwise specified with a running, balanced, or center matched arrangement. Unless otherwise specified, components in plain-sliced faces will have a matching arrangement selected by the manufacturer. Plain-sliced faces will consist of two or more components and rotary faces will consist of one or more components with no component less than 4 inches (102mm) wide except for outside components which may be less than 4 inches (102mm) to allow for certain types of matching or panel edge trim loss. Split heart is permitted if manufactured cathedral is achieved. No full quarter-cut is allowed in plain-sliced faces. The width of any single component in quarter-cut, rift-cut or comb grain faces shall not be less than 3 inches (76mm) except for outside components which may be less than 3 inches (76mm) to allow for certain types of matching or door edge trim loss. In some species sapwood is permitted; in other species it may be permitted by agreement between buyer and seller.
- **Grade B.** The veneer shall be smooth, tight-cut and full-length. Slip or book matched veneers are available if specified by the buyer. If not specified, multi-piece faces will be pleasingly matched. Sharp color contrasts at the joints are not permitted. Species specified for natural color will allow color contrasts, but must be pleasing matched or conform to the type of matching as specified. Plain-sliced faces will consist of two or more components with no component less than 3 inches (76mm) wide and rotary faces will consist of one or more components with no component less than 4 inches (102mm). Outside components may be less than 3 inches (76mm) for plain-sliced faces and 4 inches (102mm) for rotary faces to allow for certain types of matching or door edge trim loss. Some full quarter-cut is permitted in plain sliced faces. For some species, unlimited sapwood is allowed and in other species a percentage of sapwood is allowed.

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Door Face Veneer Glossary

Balance Matched - Two or more veneer components or leaves of equal size (prior to edge trimming) to make up a single face.

Bark Pocket - Comparatively small area of bark around which normal wood has grown.

Blending - Color change that is detectable at a distance of 6' to 8' but which does not seriously detract from the overall appearance of the panel.

Burl - A swirl, twist or distortion in the grain of the wood which usually occurs near a knot or crotch. A burl can often be associated with abrupt color variation and/or a cluster of adventitious buds.

Burl Bending - A swirl, twist or distortion in the grain of the wood which usually occurs near a knot or crotch, but does not contain a knot and does not contain abrupt color variation. A bending burl is detectable at 6 ft. to 8 ft. (1.8m to 2.4m) as a swirl or rounded.

Center Match - An even number of veneer components or leaves of equal size (prior to edge trimming) matched with a joint in the center of the panel to achieve horizontal symmetry.

Checks - Small slits running parallel to grain of wood, caused chiefly by strains produced in seasoning.

Comb Grain - The grain of a quarter-sawn lumber.

Component (of face) - An individual piece of veneer that is jointed to other pieces to achieve a full length and width face. Terms used interchangeable with component in the context of face are piece and leaf.

Cross Bar - Irregularity of grain resembling a dip in the grain running at right angles, or nearly so, to the length of the veneer.

Decay - The decomposition of wood substance by fungi.

Discolorations - Stains in wood substances. Some common veneer stains are sap stains, blue stains, stain produced by chemical action caused by the iron in the cutting knife coming into contact with the tanic acid in the wood, and those resulting from the chemical action of the glue.

Doze - (synonymous with DOTE) A form of incipient decay characterized by a dull and lifeless appearance of the wood accompanied by a lack of strength and softening of the wood substance.

Face Veneer - The outermost exposed wood veneer surface of a veneered wood door.

Few - A small number without regard to their arrangement in the panel.

Figure - The pattern produced in a wood surface by annual growth rings, rays, knots, deviations from natural grain such as interlocked and wavy grain, and irregular coloration.

Flake, Ray - Portion of a ray as it appears on the quartered surface. Flake can be a dominant appearance feature in oak and is sometimes referred to as fleck.

Grain - The direction, size, arrangement, and appearance of the fibers in wood or veneer.

Grain Slope - Expression of the angle of the grain to the long edges of the veneer component.

Grain Sweep - Expression of the angle of the grain to the long edges of the veneer component over the area extending one-eighth of the length of the piece from the ends.

Gum Pockets - Well-defined openings between rings of annual growth, containing gum or evidence of prior gum accumulations.

Gum Spots - Gum or resinous material of color spots caused by prior resin accumulations sometimes found on panel surfaces.

Hairline - Thin, perceptible line showing at the joint of two pieces of wood.

Heartwood - The nonactive center of a tree generally distinguishable from the outer portion (sapwood) by its darker color.

Inconspicuous - Barely detectable with the naked eye at a distance of 6' to 8'.

Knot - Cross section of tree branch or limb with grain usually running at right angles to that of the piece of wood in which it occurs.

Knots, Blending Pin - Sound knots 1/4"or less in diameter that do not contain dark centers. Blending pin knots are detectable at a distance of 6' to 8' and do not seriously detract from the overall appearance of the panel.

Knot Holes - Voids produced by dropping of knots from the wood in which they were originally embedded.

Knots, Open - Openings where a portion of the wood substance of the knot was dropped out, or where cross checks have occurred to present an opening.

Knots, Pin - Sound knots 1/4"or less in diameter containing dark centers.

Knots, Sound, Tight - Knots that are solid across their face and fixed by growth to retain their place.

Mineral Stain - Olive and greenish-black streaks believed to designate areas of abnormal concentration of mineral matter; common in hard maple, hickory, and basswood; also called "Mineral Streak."

Plain Sliced - Veneer sliced parallel to the pith of the log and approximately tangent to the growth rings to achieve flat cut veneer. Plain sliced veneer can be cut using either a horizontal or vertical slicing machine or by the half-round method using a rotary lathe.

Pleasing Matched - A face containing components which provides a pleasing overall appearance. The grain of the various components need not be matched at the joints. Sharp color contrasts at the joints of the components are not permitted.

Quartered - Veneer produced by cutting in a radial direction to the pith to the extent that ray flake is produced, and the amount may be unlimited.

Ray - Ribbon-shaped strand of tissue extending in a radial direction across the grain, so oriented that the face of the ribbon is exposed as a fleck on the quarter surface. Also known as "Wood Ray."

Repairs - A patch shim, or filler material inserted and/or glued into veneer or a panel to achieve a sound surface.

Repairs, Blending - Wood or filler insertions similar in color to adjacent wood so as to blend well.

Rift Cut - Veneer produced by cutting at a slight angle to the radial to produce a quartered appearance without excessive ray flake.

Rotary Cut - Veneer produced by centering the entire log in a lathe and turning it against a broad cutting knife.

Rough Cut - Irregular shaped areas of generally uneven corrugation on the surface of veneer.

Sapwood - The living wood of lighter color occurring in the outer portion of a tree.

Shake - A separation along the grain of wood in which the greater part occurs between the rings of annual growth.

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Door Face Veneer Standards

SPECIES **ASH, BEECH[b], BIRCH, MAPLE, POPLAR**
Cut **Plain Sliced (Flat Cut), Quarter Cut, Rotary Cut**

Grade Description		**AA**			**A**		
Color and Matching		**Sap (White)**	**Heart (Red or Brown)**	**Natural**	**Sap (White)**	**Heart (Red or Brown)**	**Natural**
Sapwood		Yes	No	Yes	Yes	No	Yes
Heartwood		No	Yes	Yes	No	Yes	Yes
Color Streaks or Spots		Slight			Slight		Yes
Color Variation		Slight		Yes	Slight		Yes
Sharp Color Contrasts at Joints		Yes, if Slip, Plank or Random Matched			Yes, if Slip, Plank or Random Matched		
Type of Matching							
Book Matched		Yes			Yes		
Slip Matched		Specify			Specify		
Pleasing Matched		Not applicable			Not applicable		
Nominal Minimum Plain Sliced		5" (127mm)			4" (102 mm)		
Width of Quarter		3" (76 mm)			3" (76 mm)		
Face Component (a) Rotary		5" (127 mm)			4" (102mm)		
Natural Characteristics							
Small Conspicuous Burls & Pin Knots - Combined Avg. Number		1 per 5 sq. ft. (2 per sq m)			1 per 3 sq. ft. (4 per sq m)		
Conspicuous Burls - Max. Size		¼" (6.4mm)			⅜" (9.5mm)		
Conspicuous Pin Knots							
Avg. Number		No			1 per 8 sq. ft. (4 per 3 sq m)		
Max. Size: Dark Part		No			⅛" (3.2mm)		
Total		No			¼" (6.4mm)		
Scattered Sound and Repaired Knots							
Combined Avg. Number		No			No		
Maximum Size - Sound		No			No		
Maximum Size - Repaired		No			No		
Average Number - Repaired		No			No		
Mineral Streaks		No; Maple, slight			Slight		
Bark Pockets		No			No		
Worm Tracks		Slight			Slight		
Vine Marks		Slight			Slight		
Cross Bars		Slight			Slight		
Manufacturing Characteristics							
Rough Cut/Ruptured Grain		No			No		
Blended Repaired Tapering Hairline Splits		Two 1/32" x 3" (Two 0.8mm x 76mm) (on ends only)			Two 1/16" x 6" (Two 1.6mm x 152mm)		
Repairs		Very small blending			Small blending		
Special Characteristics (Except as listed below, special characteristics are not restricted)							
Quartered	1" in 12" (25.4mm in 305mm) maximum grain slope, 2½" in 12" (63.5mm in 305mm) maximum grain sweep.						

Unfilled worm holes, open splits, open joints, open bark pockets, shake or doze not allowed in above grades.

Notes: (a) Outside components will be a different size to allow for edge trim loss and certain types of matching.
(b) American or European

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Door Face Veneer Standards

SPECIES — **AFRICAN AND HONDURAS MAHOGANY, ANEGRE, MAKORE, SAPELE**
Cut — **Plain Sliced (Flat Cut), Quarter Cut, Rotary Cut**

Grade Description	AA	A	B
Color and Matching			
Sapwood	No	No	No
Heartwood	Yes	Yes	Yes
Color Streaks or Spots	Slight	Slight	Occasional
Color Variation	Slight	Slight	Moderate
Sharp Color Contrasts at Joints	Yes, if Slip, Plank or Random Matched	Yes, if Slip, Plank or Random Matched	Yes, if Slip, Plank or Random Matched
Type of Matching			
Book Matched	Yes	Yes	Specify
Slip Matched	Specify	Specify	Specify
Pleasing Matched	Not applicable	Not applicable	Yes
Nominal Minimum Plain Sliced	5" (127mm)	4" (102 mm)	3" (76 mm)
Width of Quarter	3" (76 mm)	3" (76 mm)	3" (76 mm)
Face Component (a) Rotary	5" (127 mm)	4" (102mm)	4" (102mm)
Natural Characteristics			
Small Conspicuous Burls & Pin Knots - Combined Avg. Number	1 per 5 sq. ft. (2 per sq m)	1 per 3 sq. ft. (4 per sq m)	1 per 2 sq. ft. (6 per sq m)
Conspicuous Burls - Max. Size	¼" (6.4mm)	⅜" (9.5mm)	½" (12.7mm)
Conspicuous Pin Knots			
Avg. Number	No	1 per 8 sq. ft. (4 per 3 sq m)	1 per 4 sq. ft. (3 per sq m)
Max. Size: Dark Part	No	⅛" (3.2mm)	⅛" (3.2mm)
Total	No	¼" (6.4mm)	¼" (6.4mm)
Scattered Sound and Repaired Knots			
Combined Avg. Number	No	No	1 per 8 sq. ft. (4 per 3 sq m)
Maximum Size - Sound	No	No	⅜" (9.5mm)
Maximum Size - Repaired	No	No	⅛" (3.2mm)
Average Number - Repaired	No	No	1 per 8 sq. ft. (4 per 3 sq m)
Mineral Streaks	No	Slight	Occasional
Bark Pockets	No	No	Few to ⅛" x 1". (Two 3.2mm x 203mm)
Worm Tracks	No	No	Slight
Vine Marks	Slight	Slight	Yes
Cross Bars	Occasional	Occasional	Yes
Manufacturing Characteristics			
Rough Cut/Ruptured Grain	No	No	Slight
Blended Repaired Tapering Hairline Splits	Two 1/32" x 3" (Two 0.8mm x 76mm) (on ends only)	Two 1/16" x 6" (Two 1.6mm x 152mm)	Two ⅛" x 8" (Two 3.2mm x 203mm)
Repairs	Very small blending	Small blending	Blending
Special Characteristics (Except as listed below, special characteristics are not restricted)			
Quartered	1" in 12" (25.4mm in 305mm) maximum grain slope, 2½" in 12" (63.5mm in 305mm) maximum grain sweep.		

Unfilled worm holes, open splits, open joints, open bark pockets, shake or doze not allowed in above grades.

Notes: (a) Outside components will be a different size to allow for edge trim loss and certain types of matching.

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Door Face Veneer Standards

SPECIES **RED AND WHITE OAK**
Cut **Plain Sliced (Flat Cut), Quarter Cut, Rotary Cut**

Grade Description	**AA**		**A**		**B**	
Color and Matching	Red Oak	White Oak	Red Oak	White Oak	Red Oak	White Oak
Sapwood	No	No	5%[a]	5%[a]	10-20%[a]	Yes
Heartwood	Yes	Yes	Yes	Yes	Yes	Yes
Color Streaks or Spots	Yes		Yes		Yes	
Color Variation	Slight		Slight		Yes	
Sharp Color Contrasts at Joints	Yes, if Slip, Plank or Random Matched		Yes, if Slip, Plank or Random Matched		Yes, if Slip, Plank or Random Matched	
Type of Matching						
Book Matched	Yes		Yes		Specify	
Slip Matched	Specify		Specify		Specify	
Pleasing Matched	Not applicable		Not applicable		Yes	
Nominal Minimum Plain Sliced	5" (127mm)		4" (102 mm)		3" (76 mm)	
Width of Quarter	3" (76 mm)		3" (76 mm)		3" (76 mm)	
Face Component (a) Rotary	5" (127 mm)		4" (102mm)		4" (102mm)	
Natural Characteristics						
Small Conspicuous Burls & Pin Knots - Combined Avg. Number	1 per 4 sq. ft. (3 per sq m)		1 per 2⅔ sq. ft. (4 per sq m)		1 per 1⅓ sq. ft. (4 per sq m)	
Conspicuous Burls - Max. Size	¼" (6.4mm)		⅜" (9.5mm)		½" (12.7mm)	
Conspicuous Pin Knots						
Avg. Number	No		1 per 8 sq. ft. (4 per 3 sq m)		1 per 2 sq. ft. (6 per sq m)	
Max. Size: Dark Part	No		⅛" (3.2mm)		⅛" (3.2mm)	
Total	No		¼" (6.4mm)		¼" (6.4mm)	
Scattered Sound and Repaired Knots						
Combined Avg. Number	No		No		1 per 8 sq. ft. (4 per 3 sq m)	
Maximum Size - Sound	No		No		⅜" (9.5mm)	
Maximum Size - Repaired	No		No		⅛" (3.2mm)	
Average Number - Repaired	No		No		1 per 8 sq. ft. (4 per 3 sq m)	
Mineral Streaks	No		Slight, Blending		Few to 12 in. (Few to 305mm)	
Bark Pockets	No		No		Few to 3.2 mm x 25.4 mm	
Worm Tracks	No		No		Slight	
Vine Marks	No		Slight		Yes	
Cross Bars	Slight		Slight		Yes	
Manufacturing Characteristics						
Rough Cut/Ruptured Grain	No		No		Slight	
Blended Repaired Tapering Hairline Splits	Two 1/32" x 3" (Two 0.8mm x 76mm) (on ends only)		Two 1/16" x 6" (Two 1.6mm x 152mm)		Two ⅛" x 8" (Two 3.2mm x 203mm)	
Repairs	Very small blending		Small blending		Blending	
Ray Fleck (Flake)	Slight, Blending Quarter cut unlimited		Slight, Blending Quarter cut unlimited		Slight, Blending Quarter cut unlimited	
	Rift not to exceed ⅜ in (9.5mm) in width					
	Comb not to exceed 3/32 in. (2.4mm) in width					
Slope and Sweep *Quarter & Rift*	1" in 12" (25.4mm in 305mm) maximum grain slope, 2½" in 12" (63.5mm in 305mm) maximum grain sweep.					
Comb Grain	½" in 12" (12.7mm in 305mm) maximum grain slope, ½" in 12" (12.7mm in 305mm) maximum grain sweep.					

Unfilled worm holes, open splits, open joints, open bark pockets, shake or doze not allowed in above grades.

Notes: (a) Sap is permitted in rotary only unless otherwise specified.
(b) 10% sap is permitted in rift, comb, quartered and plain sliced. 20% sap allowed in rotary.
(c) Outside components will be a different size to allow for edge trim loss and certain types of matching.

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Door Face Veneer Standards

SPECIES **PECAN AND HICKORY**
Cut **Plain Sliced (Flat Cut), Quarter Cut, Rotary Cut**

Grade Description	AA	A	B
Color and Matching			
Sapwood	Yes	Yes	Yes
Heartwood	Yes	Yes	Yes
Color Streaks or Spots	Yes	Yes	Yes
Color Variation	Yes	Yes	Yes
Sharp Color Contrasts at Joints	Yes, if Slip, Plank or Random Matched	Yes, if Slip, Plank or Random Matched	Yes, if Slip, Plank or Random Matched
Type of Matching			
Book Matched	Yes	Yes	Specify
Slip Matched	Specify	Specify	Specify
Pleasing Matched	Not applicable	Not applicable	Yes
Nominal Minimum Plain Sliced	5" (127mm)	4" (102 mm)	3" (76 mm)
Width of Quarter	3" (76 mm)	3" (76 mm)	3" (76 mm)
Face Component (a) Rotary	5" (127 mm)	4" (102mm)	4" (102mm)
Natural Characteristics			
Small Conspicuous Burls & Pin Knots - Combined Avg. Number	1 per 1 sq. ft. (11 per sq m)	2 per 1 sq. ft. (22 per sq m)	No limit
Conspicuous Burls - Max. Size	¼" (6.4mm)	⅜" (9.5mm)	½" (12.7mm)
Conspicuous Pin Knots			
Avg. Number	1 per 2 sq. ft. (6 per sq m)	2 per 1 sq. ft. (22 per sq m)	No limit
Max. Size: Dark Part	⅛" (3.2mm)	⅛" (3.2mm)	⅛" (3.2mm)
Total	¼" (6.4mm)	¼" (6.4mm)	¼" (6.4mm)
Scattered Sound and Repaired Knots			
Combined Avg. Number	No	No	1 per 8 sq. ft. (4 per 3 sq m)
Maximum Size - Sound	No	No	⅜" (9.5mm)
Maximum Size - Repaired	No	No	⅛" (3.2mm)
Average Number - Repaired	No	No	1 per 8 sq. ft. (4 per 3 sq m)
Mineral Streaks	Slight	Slight	Yes
Bark Pockets	No	Small, Occasional	Few to ¼" x 2" (Few to 6.4mm x 50.8mm)
Worm Tracks	No	Slight	Few
Vine Marks	Slight	Occasional	Yes
Cross Bars	Slight	Occasional	Yes
Manufacturing Characteristics			
Rough Cut/Ruptured Grain	No	No	Slight
Blended Repaired Tapering Hairline Splits	Two 1/32" x 3" (Two 0.8mm x 76mm) (on ends only)	Two 1/16" x 6" (Two 1.6mm x 152mm)	Four ⅛" x 8" (Four 3.2mm x 203mm)
Repairs	Very small blending	Small blending	Blending
Special Characteristics (Except as listed below, special characteristics are not restricted)			
Bird Pecks (c)	No	Slight	Yes
Knife Marks	Knife marks may occur in these high density species		
Quartered	1" in 12" (25.4mm in 305mm) maximum grain slope, 2½" in 12" (63.5mm in 305mm) maximum grain sweep.		

Unfilled worm holes, open splits, open joints, open bark pockets, shake or doze not allowed in above grades.

Notes: (a) Outside components will be a different size to allow for edge trim loss and certain types of matching.

(b) For Pecan and Hickory, conspicuous pin knots means sound knots 1/4" (6.4mm) or less in diamter with dark centers larger than 1/16" (1.6mm). Blending pin knots are sound knots 1/4" (6.4mm) or less in diameter with dark centers 1/16" (1.6mm) or less and are allowed in all grades of Pecan and Hickory.

(c) To achieve a more rustic appearance, bird peck shall be specified.

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Door Face Veneer Standards

SPECIES **WALNUT AND CHERRY**
Cut **Plain Sliced (Flat Cut), Quarter Cut, Rotary Cut**

Grade Description	AA	A	B
Color and Matching			
Sapwood	No	No[a]	No[a]
Heartwood	Yes	Yes	Yes
Color Streaks or Spots	Slight	Slight	Yes
Color Variation	Slight	Slight	Yes
Sharp Color Contrasts at Joints	Yes, if Slip, Plank or Random Matched	Yes, if Slip, Plank or Random Matched	Yes, if Slip, Plank or Random Matched
Type of Matching			
Book Matched	Yes	Yes	Specify
Slip Matched	Specify	Specify	Specify
Pleasing Matched	Not applicable	Not applicable	Yes
Nominal Minimum Plain Sliced	5" (127mm)	4" (102 mm)	3" (76 mm)
Width of Quarter	3" (76 mm)	3" (76 mm)	3" (76 mm)
Face Component (a) Rotary	5" (127 mm)	4" (102mm)	4" (102mm)
Natural Characteristics (Except as limited below, natural characteristics are not restricted)			
Small Conspicuous Burls & Pin Knots - Combined Avg. Number	1 per 4 sq. ft. (3 per sq m)	1 per 1⅓ sq. ft. (8 per sq m)	2 per 1 sq. ft. (22 per sq. m)
Conspicuous Burls - Max. Size	¼" (6.4mm)	⅜" (9.5mm)	½" (12.7mm)
Conspicuous Pin Knots			
Avg. Number	1 per 5 sq. ft. (3 per sq m)	1 per 2 sq. ft. (6 per sq m)	1 per 1 sq. ft. (11 per sq. m)
Max. Size: Dark Part	⅛" (3.2mm)	⅛" (3.2mm)	⅛" (3.2mm)
Total	¼" (6.4mm)	¼" (6.4mm)	¼" (6.4mm)
Scattered Sound and Repaired Knots			
Combined Avg. Number	No	No	1 per 8 sq. ft. (4 per 3 sq m)
Maximum Size - Sound	No	No	⅜" (9.5mm)
Maximum Size - Repaired	No	No	⅛" (3.2mm)
Average Number - Repaired	No	No	1 per 8 sq. ft. (4 per 3 sq m)
Mineral Streaks	Slight	Slight	Yes
Bark Pockets	No	No	Few to ⅛" x 1" (Few to 3.2mm x 25.4mm)
Worm Tracks	No	No	Slight
Vine Marks	Slight	Occasional	Yes
Cross Bars	Slight	Occasional	Yes
Manufacturing Characteristics			
Rough Cut/Ruptured Grain	No	No	Slight
Blended Repaired Tapering Hairline Splits	Two 1/32" x 3" (Two 0.8mm x 76mm) (on ends only)	Two 1/16" x 6" (Two 1.6mm x 152mm)	Four ⅛" x 8" (Four 3.2mm x 203mm)
Repairs	Very small blending	Small blending	Blending
Special Characteristics (Except as listed below, special characteristics are not restricted)			
Gum Spots	Occasional gum spots permitted in Cherry	Occasional gum spots permitted in Cherry	Gum spots and gum streaks in Cherry
Quartered	1" in 12" (25.4mm in 305mm) maximum grain slope, 2½" in 12" (63.5mm in 305mm) maximum grain sweep.		

Unfilled worm holes, open splits, open joints, open bark pockets, shake or doze not allowed in above grades.

Notes: (a) Sap is allowed in grades A and B, however, the percentage must be agreed upon between buyer and seller.

(b) Outside components will be a different size to allow for edge trim loss and certain types of matching.

(c) For Walnut and Cherry, conspicuous pin knots means sound knots 1/4" (6.4mm) or less in diameter with dark centers larger than 1/16" (1.6mm). Blending pin knots are sound knots 1/4" (6.4mm) or less in diameter with dark centers of 1/16" (1.6mm) or less and are allowed in all grades of Walnut and Cherry.

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Comparison of Flush Door Costs

This chart of door cost ratios can be used as a guide for comparing relative costs of flush doors with veneers.

Actual costs can vary widely due to specifiers' veneer selection and/or veneer matching. Plain sliced Red Oak is used as the basis of comparison and therefore has the relative cost value of "100."

Anigre, Sli Plain	150
Anigre, Qtd Plain	150
Anigre, Qtd Light Figure	170
Anigre, Qtd Med. Figure	197
Ash, Sli White	121
Ash, Sli Brown	173
Avodire, Qtd	222
Birch, Sli Nat	110
Birch, Rot Nat	94
Birch, Sli Red	167
Birch, Rot Red	106
Birch, Sli White	137
Birch, Rot White	118
Bubinga, Qtd	222
Cherry, Sli	131
Ebony, Qtd Macassar	723
Fir, Qtd/Vertical Grain	160
Gum, Qtd Fgd Red	238
Hickory, Sli w/sap (or Pecan)	129
Koa, Qtd	296
Lacewood, Qtd	245
Mahogany, Sli African	119
Mahogany, Qtd African	126
Maple, Birdseye (Heavy eye)	663
Maple, Sli White	121
Medium Density Overlay	85
Oak, Sli Red	100
Oak, Rift Red	122
Oak, Sli White	121
Oak, Rift White	134
Oak, Qtd English Brown	423
Paldao, Qtd	222
Rosewood, Sli East Indian	683
Rosewood, Sli Santos	445
Sapele, Sli	147
Sapele, Qtd	128
Satinwood, Qtd East Indian	720
Teak, Sli	238
Tigerwood, Qtd	193
Walnut, Sli	144
Zebrawood, Qtd	244

*Based on PC-5 core construction and "A" Grade faces. No allowance made for ship, sell, G&A or profit.

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Door Weights and Square Footages

Square Feet

Door Height	Door Width						
	2'0"	**2'4"**	**2'6"**	**2'8"**	**3'0"**	**3'6"**	**4'0"**
6'8"	13.3	15.6	16.7	17.8	20.0	23.3	26.7
7'0"	14.0	16.3	17.5	18.7	21.0	24.5	28.0
7'6"	15.0	17.5	18.8	20.0	22.5	26.3	30.0
8'0"	16.0	18.7	20.0	21.3	24.0	28.0	32.0
8'6"	17.0	19.8	21.3	22.7	25.5	29.8	34.0
9'0"	18.0	21.0	22.5	24.0	27.0	31.5	36.0

Door	Size/Style	Pounds Per Sq. Ft.
PC-5 Novodor	1¾"	5.7 lbs
	1⅜"	3.7 lbs
SCLC-5 Structural Composite	1¾"	6.3 lbs
	1⅜"	3.6 lbs
SLC-5 Stave Core	1¾"	4.8 lbs
	1⅜"	3.5 lbs
	2¼"	5.6 lbs
FD 1½, 1 & ¾ Hour	1¾"	4.3 lbs
	With Superfire rails & lockblocks	4.7 lbs
CCP	1¾"	4.8 lbs
Acoustical	STC-28 MinCore	4.3 lbs
	STC-28 PC-5	5.7 lbs
	STC-43	7.1 lbs
	STC-39, 40, 45, 54	6.4 lbs
Lead Lined (SCLC-5)	1/16" lead	9.4 lbs
	⅛" lead	13.4 lbs
PC-HPDL-3	1¾"	5.0 lbs
PC-HPDL-5	1¾"	5.4 lbs
SLC-HPDL-5	1¾"	5.0 lbs

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Carrier Damage Claim

Name of firm by whom claim is presented _____ Address of Claimant _____ Claimant's Number _____

Name of Carrier _____ Date _____ Carrier's Number _____

Address of Carrier _____

This claim of $ _____ (Amount of claim) is made against the carrier named above by _____ (Name of Claimant)

for _____ ("loss" or "damage") in connection with the following described shipment:

Description of shipment _____

Name and address of consignor (shipper) _____

Shipped from _____ (City, Town or Station) To _____ (City, Town or Station)

Final Destination _____ (City, Town or Station) Routed via _____

Bill of Lading issued by _____ Co. Date of Bill of Lading _____

Paid Freight Bill (Pro) Number _____ Express Bill Serial No. _____

Name and address of consignee (Whom shipped to) _____

If Shipment reconsigned enroute, state particulars: _____

Detailed Statement Showing How Amount Claimed Is Determined

(Number and description of articles, nature and extent of loss or damage, invoice price of articles, amount of claim, etc.)

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

Total Amount Claimed _____

The Following Documents Are Submitted in Support of Claim

- ☐ 1. Original bill of lading, if not previously surrendered to carrier.
- ☐ 2. Original paid freight ("expense") bill.
- ☐ 3. Original invoice or certified copy.
- ☐ 4. Other particulars obtainable in proof of loss or damage claimed.

_____

_____

_____

_____

Remarks: _____

_____

_____

The foregoing statement of facts is hereby certified to as correct. _____

Signature of Claimant

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Hardware Preparation

Topic	Page

Door Hardware Preparation 3
Fire Door Hardware: Locksets, Hinges, Closers & Frames 5
Instructions for Wood Door Schedules 6
Schedule A: Wood Door Cover Sheet 7
Schedule B: Door Specification Sheet 8
Schedule C: Premachined Door Schedule 9
Schedule D: Wood Door Schedule 10
Schedule E: Door Elevation 11
Schedule F: Detail Sheet 12
Schedule G: Fire Door Core Reinforcement Options 13
Concealed Vertical Rod Devices 14
Surface and Concealed Less Bottom Rod Devices 16

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Door Hardware Preparation

At the Jobsite
Machining preparation at the jobsite or in our customer's shop shifts the responsibility away from the Algoma factory. (See Warranty, "Handling, Job Finishing and Installation Instructions," Item 9.)

At the Factory
Algoma Hardwoods has been prefitting, beveling and machining fire and non-fire wood doors for hardware for more than 40 years. This type of experience allow architects and customers who want control over quality standards and construction schedules to specify that doors be precision machined at the factory for all hardware listed on the hardware schedule (other than surface mounted hardware). The firm can feel confident it will get a good job, on schedule, and at a savings over field labor.

In addition to preparation for the functional hardware, Algoma Hardwoods is prepared to also do the following work which is frequently done at the jobsite:

- Apply kick plates
- Apply push plates
- Install edge guards
- Install metal louvers
- Install metal vision lites
- Apply flashing (prefit doors only)
- Factory glaze

It is preferred that all machining and detailing information be sent in on Schedules A through G, pages 7 through 13 in this section.

Insertion of the following in the General Notes section of the specification is needed for proper control of project scheduling:

1. At least 120 days before delivery date, customer shall furnish the following information to the door manufacturer: approved hollow metal schedule and shop details; approved hardware schedule, list of templates required, and approved door shop drawings.
2. Frames improperly set shall be corrected to receive factory fit door by contractors at their expense.

When the information above is supplied in the General Notes, Algoma Hardwoods, Inc. will assume the responsibility for coordinating the approved hardware schedule, door schedule and hollow metal schedule and will supply machined doors individually numbered according to opening number.

Order Acknowledgments to Customers
Once the approved door, frame and hardware schedule and shop drawings are in hand, Algoma Hardwoods will be responsible for the proper location of the machining for hardware as taken from above schedules. This and all other information for producing a door order will be written into Algoma Hardwoods' order form and a copy of it returned to the customer for his acknowledgment. The customer is responsible for acknowledging the correctness of:

1. The proper number of doors on each item and the total order.
2. Proper door construction by item.
3. Proper door sizes by item.
4. Proper door swings.
5. Correct lite and louver locations within the door's area.
6. Correct hinge and lock locations.

The above items must be known to produce the doors; therefore it is essential that the acknowledgments be returned or valuable time will be lost in producing the order. To underscore this, the following note is included on the acknowledgment of each machined and/or finished order:

> "This acknowledges your order as we interpret it. Please check it for errors and return a signed copy immediately (with corrections noted). Production may have already begun. Delays in acknowledging may result in back-charges for material and labor if changes are not due to our misinterpretation."

If the acknowledgment is not returned, the customer assumes the responsibility that all is correct.

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Door Hardware Preparation

Special Information Regarding Machining for Wood Fire Doors

For information on approved hardware applications refer to fire door pages in the **Doors** section of this binder.

The National Fire Protection Association (NFPA) Pamphlet #80 requires that all fire doors be prepared for locks, latches, hinges, concealed closers, glass lites, vision panels, louvers, astragals and laminated overlays by the door manufacturer or his licensee in conformance with the manufacturer's inspection service procedure and under label service. Exceptions to this ruling include: preparation for surface applied hardware; function holes up to 1" diameter and cylinder holes up to 1¼" for mortise locks; holes for labeled viewers; a maximum ¾" undercut on wood and composite doors; and application of some protection plates. These exceptions may be done in the field.

Algoma Hardwoods has a number of licensed machiners eligible to machine under Underwriters Laboratories or Intertek label service. Many of these licensees stock fire doors for quick delivery of a completely machined product.

WARNING
Caution should be taken in storing and handling fire doors. Store in a dry area where relative humidity falls between 25% and 55% and follow instructions as described on page entitled **Fire Door Installation and Field Finishing** in the **General Section** of this catalog.

NOTE
Unless ordered otherwise, Algoma will always prefit fire doors ¼" singles, 3/16" pairs in width.

Prefitting for height will always be ⅛" at the top and ½" at the bottom unless ordered otherwise. The maximum clearance allowed on fire doors is ⅛" at each side and top and ¾" at the bottom.

It is a ruling of the National Fire Protection Association (NFPA) Pamphlet #80 and enforced by the testing and inspection laboratories (Underwriters and Intertek) that all wood fire doors be machined for hardware before the door can be labeled. This means the machining must be performed by the manufacturer or his licensed machiner. Such doors cannot be jobsite prepared for hardware unless special, often expensive, arrangements are made ahead of time.

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Fire Door Hardware

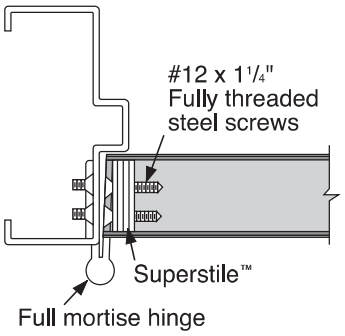
Locksets, Hinges, Closers and Frames

Lock Sets for Algoma® Made Fire Doors

Lock and latchsets with ½" bolt throw (or greater) as listed by Underwriters Laboratories must be specified. It is recommended that locksets with screwless roses be used to avoid the problem of very short rose attachment screws that may in time work loose.

Hinges for Algoma® Made Fire Door

With Algoma's Superstile™ on FD ¾, 1 and 1½ hour fire doors, half surface hinges are not necessary. (See individual door specifications in the **Doors** section of this binder.) Full mortised ball-bearing steel hinges can be installed on the hinge stile edge, the hinge being secured with #12 x 1¼" flathead, fully threaded steel screws with constant diameter wood type threads. When applying screws always predrill 5⁄32" diameter pilot holes to the same depth as the screw. Mortised hinges should be a minimum of .134" x 4½" x 4½". They must be of the ball-bearing type. Two (2) hinges for the first 5' and one (1) hinge for every 2½' of height thereafter are required. **The standard weight hinge leaf (.134") is approved for use on all Algoma doors through 4' x 10'.** Cycle testing has been conducted with Algoma doors of this size and Underwriters Laboratories has verified the test results. Heavy weight hinges are not required on Algoma doors.

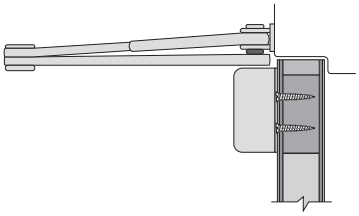


Superstile™ Edge Performance

All Algoma Grade Mineral Core Fire Doors have been tested for superior screw holding strength and split resistance. See page **Doors 15** for more complete information.

Door Closers And Exit Devices

Surface-mounted closers and exit devices are suitable for Algoma Made Fire Doors in singles and pairs. (See FD ¾, 1 and 1½ hour fire door specifications in the **Doors** section of this binder). Surface-mounted door closers and exit devices must be installed with throughbolts, unless doors are ordered with heavy duty reinforcement at the top rail and/or lock block positions as illustrated on page **Doors 18**. Proper testing has been conducted to verify that screws are suitable with this reinforcement in the door. Self tapping or combination wood/metal screws should not be used.



Heavy Duty Reinforcement Performance

Testing results, when pulling throughbolt heads through the door and withdrawing screws from various door core materials, show a marked advantage with Algoma Hardwoods optional heavy duty reinforcement rail/lockblock material.

Through Bolt Pull Through	Lbs. of Pull
Bolt Head Pulled Through Mineral Core	428
Algoma's Reinforcement	1472

Screw Withdrawal	Lbs. of Pull
Withdrawal from Hardwood Stave Core	920
Algoma's Reinforcement Rail/Lockblock	**866**
Withdrawal from Softwood Stave Core	593
Withdrawal from Particle Core	262
Withdrawal from Mineral Core	126

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Instructions for Wood Door Schedules

A complete set of flush door forms consists of:

Schedule A - Cover Sheet
Schedule B - Specification Sheet
Schedule C - Premachined Door Schedule
Schedule D - Wood Door Schedule
Schedule E - Door Elevation Sheet
Schedule F - Detail Sheet
Schedule G -Door Core Reinforcement Options (Hardware Blocking)

The above forms may be used to make up a complete wood door shop drawing for use in obtaining architect's approval. When approved, they should be sent to Algoma along with your purchase order.

NOTE: Schedule C is to be used for factory machined doors when you coordinate the door, frame and hardware schedules. Schedule D is to be used in place of Schedule C if you submit your order to Algoma with approved frame and hardware schedules for their use in coordinating the order OR when doors are not factory machined.

The instructions for the use of each sheet are as follows:

SCHEDULE A This is meant to serve as the cover sheet on the number of forms involved with a job. Its use is self-explanatory.

SCHEDULE B Fill out as completely as possible. Do not omit any blanks in **Specifications** section.

SCHEDULE C Use one or more of these forms as needed. Doors which have the same size, construction, species, hardware machining and locations, fire rating, and lite or louver openings can be combined on one sheet. If hardware locations are the same as previous page, just check box at bottom left of page rather than listing all locations again.

SCHEDULE D Fill in each line completely. Undercut should be determined from floor conditions taken from room finish schedule or from hardware schedule (thresholds).

SCHEDULE E Use this schedule to make any shop drawings necessary to show the architect and the door supplier appropriate details of single doors, dutch doors and pairs of doors.

SCHEDULE F Use this sheet to show any special requirements the specifier chooses or that may not be standard with the manufacturer or could not be shown elsewhere in this group of forms.

SCHEDULE G This form is intended for your use in selecting the core design numbers for reinforcement options in mineral and wood core fire doors. The core model numbers should be entered in the **Core Model Number** column of Schedule D or in the appropriate box on Schedule C.

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WOOD DOOR SCHEDULE

(APPROVAL STAMP)

BUILDING

LOCATION

ARCHITECT

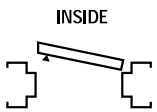
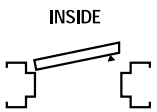
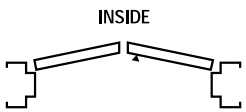
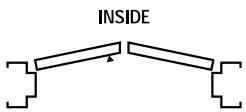
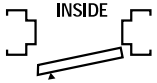
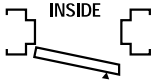
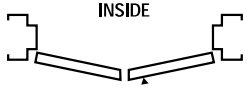
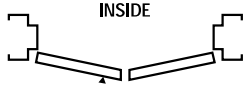
CONTRACTOR

DOOR MANUFACTURER(S)

PRESENTED BY:

DOOR HANDING CHART

▲ INDICATES KEY SIZE

SINGLE DOORS		PAIRS OF DOORS	
 RH RIGHT HAND	 LH LEFT HAND	 RIGHT HAND ACTIVE	 LEFT HAND ACTIVE
 RHRB RIGHT HAND REVERSE BEVEL	 LHRB LEFT HAND REVERSE BEVEL	 RIGHT HAND REVERSE BEVEL ACTIVE	 LEFT HAND REVERSE BEVEL ACTIVE

ALGOMA™ HARDWOODS

COVER SHEET

DATE	REVISIONS	BY

JOB NAME

DRAWN BY | DATE

CONTRACT/JOB NO.

SCHEDULE A

SHEET _____

OF _____

Schedule A

Wood Door Cover Sheet

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3/21/13

Schedule B

Door Specification Sheet

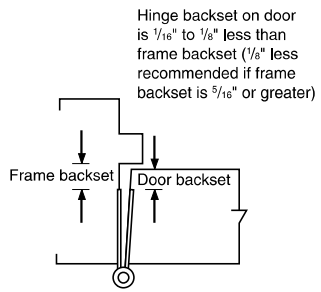
AWI Wood Door Identification

AWI Spec Symbol	Door Construction	Core Type
PC-5	5 Ply particleboard core	Bonded edges
PC-7	7 Ply particleboard core	Bonded edges
SLC-5	5 Ply stave lumber core	Bonded edges
SCLC-5	5 Ply structural lumber core	
FD 1½	1½ Hour labeled fire door (90 min.) (B)	
FD 1	1 Hour labeled fire door (60 min.) (B)	
FD ¾	¾ Hour labeled fire door (45 min.) (C)	
SR	Sound retardant (STC rated)	
LL	Lead lined	
IHC	Institutional hollow core	
SHC	Standard hollow core	

NOTES

- Types PC-5 thru SCLC-5 and SR & LL are available with 20 minute label (FD ⅓).
- When labeled doors are required be sure the **Label** column is filled in on Wood Door sheet Schedule D.
- All fire doors subject to size and other label restrictions.

NOTE: Most manufacturers do not bore lead holes, wood screw holes, or make preparation for mounting holes for face plates, butts, roses, escutcheons or surface applied hardware. Contact door supplier to verify which operations are included.



CORE TYPES Use AWI symbols at left _____

FACE VENEERS Specify grade, cut, and species required _____

STILES (Side Edges)
FD 1½, 1 & ¾ Hour Compatible ☐ Same ☐
Other Doors Compatible ☐ Same ☐

END RAILS Mill option unless otherwise specified _____

GLASS OPENINGS Specify moulding type and glass thickness _____

LOUVERS Specify louver type _____
(if metal louvers, specify moulding type & louver thickness) _____

PREFIT CLEARANCES Standard for hinged doors 1/8" top, ½" bottom, singles ¼" width, pairs 3/16" width. Specify if other clearances are required. _____

EDGE MACHINING Standard for hinged doors bevel both hinge and lock edge 1/8" in 2" (3°). Specify other edge machining requirements _____

FINISHING ☐ At Factory ☐ By Others (At Jobsite)
If factory finished, specify AWI System Number _____
Approved color sample no. _____
Date of approval _____
Finish comments _____

PACKAGING Standard will be used unless otherwise specified:
☐ Individually Polybagged
☐ Individually Cartoned
Other _____

REMARKS _____

	DATE	REVISIONS	BY	JOB NAME		
ALGOMA HARDWOODS				DRAWN BY	DATE	SCHEDULE B
SPECIFICATION SHEET				CONTRACT/JOB NO.		SHEET _____ OF _____

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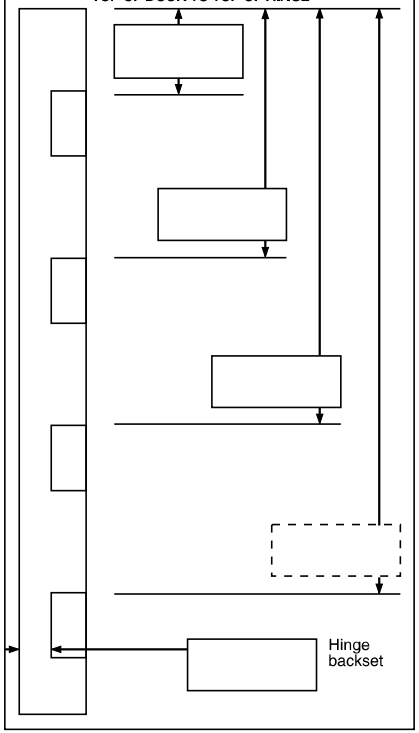
FRAME OPENING SIZE x	HARDWARE GROUP/SET	FIRE DOOR LABEL	FIRE DOOR CORE MODEL	DESIGN OR DOOR ELEV.	ORDER NO. / MILL USE ONLY ITEM NO. / PAGE
PREFIT DOOR SIZE x	THICKNESS	AWI SYMBOL (CORE TYPE)	SPECIES		

HINGES

SIZE | MFG. NO.

TEMPLATE NO.

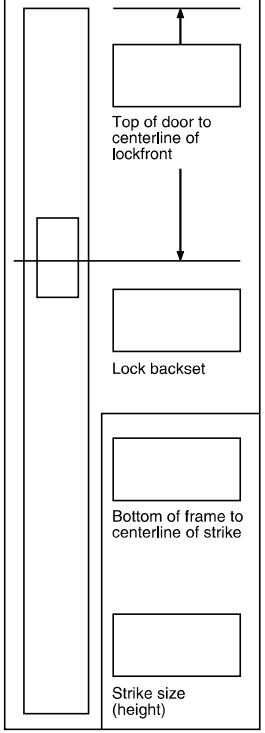
TOP OF DOOR TO TOP OF HINGE



LOCK

MFG. NO.

TEMPLATE NO.



LIGHT

SIZE W _____ x L _____

LOCKSTILE _____

TOP RAIL _____

LOUVER

SIZE W _____ x L _____

LOCKSTILE _____

BTM. RAIL _____

TYPE _____

BOXSTRIKE-TEMP.

FLUSH BOLTS-TEMP.

MORTISE HOLDER/STOP-DEGREE OF OPG.-TEMP.

OTHER HARDWARE/REMARKS

DOOR NO. TOTAL DOORS THIS PAGE _____	SWING

☐ SAME LOCATIONS AS PREVIOUS SHEET

DATE	REVISIONS	BY	JOB NAME		
			DRAWN BY	DATE	SCHEDULE C
			CONTRACT/JOB NO.		SHEET _____ OF _____

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PREMACHINED DOOR SCHEDULE

Schedule C

Premachined Door Schedule

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Schedule D

Wood Door Schedule

HARDWARE SET NO.																						
WOOD DOORS	REMARKS																					
	UNDERCUT																					
	SPECIES																					
	DESIGN OR ELEVATION																					
	FIRE DOORS: CORE MODEL																					
	FIRE DOORS: LABEL																					
	AWI SYMBOL (CORE TYPE)																					
	THICKNESS																					
FRAME	OPENING SIZE: HEIGHT																					
	OPENING SIZE: WIDTH																					
	MATERIAL																					
HAND	PAIR ACTIVE																					
	SINGLE																					
LOCATION																						
	FROM OR TO																					
	OPENING NUMBER																					
ITEM																						

JOB NAME

DRAWN BY

DATE

SCHEDULE D

SHEET ____ OF ____

CONTRACT/JOB NO.

DATE	REVISIONS	BY

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WOOD DOOR SCHEDULE

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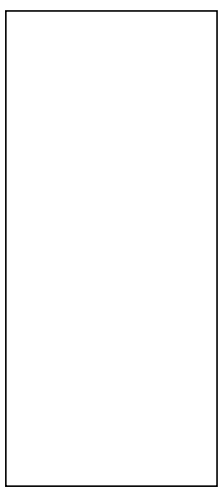
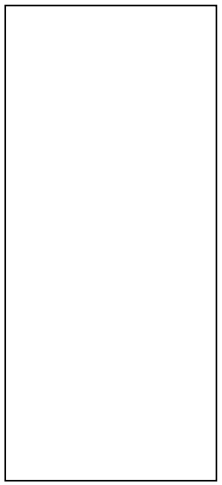
Fill in form fields electronically then print to create drawing by hand.

Schedule E

Door Elevation



ELEVATION _____



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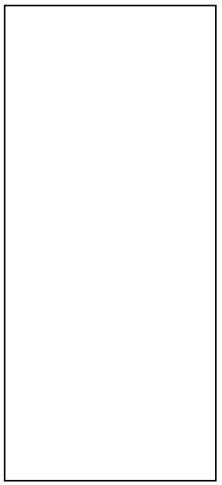
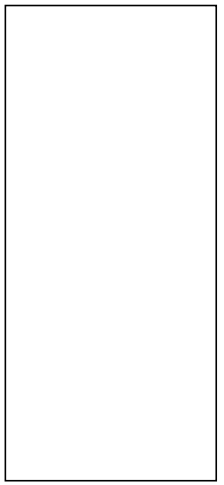
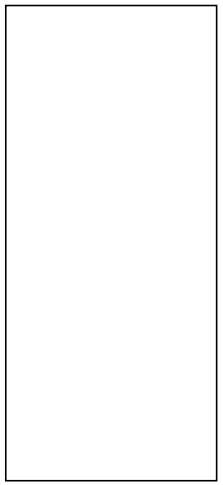


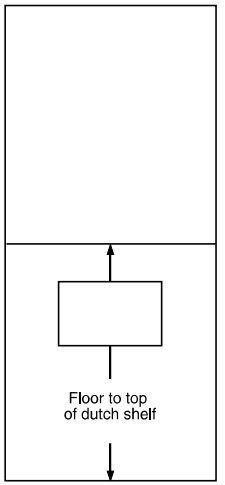
ELEVATION _____



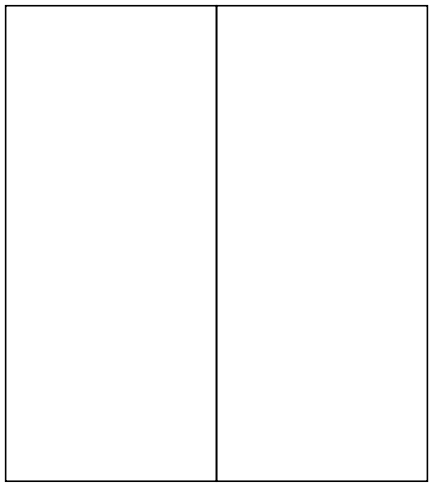
ELEVATION _____



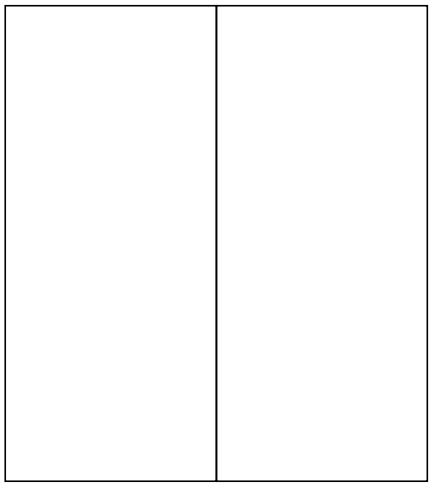
ELEVATION _____



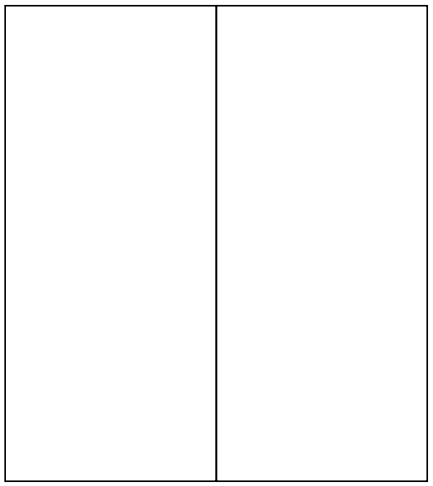
ELEVATION _____



ELEVATION _____



ELEVATION _____



ELEVATION _____

NOTE: Minimum distance from edge of cutouts for glass or louvers to edge of door or to cutouts for locks and other hardware is 6" on most types of doors. Keep lock and other hardware locations in mind when detailing glass or louver openings, as label and warranty may be voided. **Verify that your top rail dimension is large enough to accommodate a surface closer.**

ALGOMA HARDWOODS	DATE	REVISIONS	BY	JOB NAME		
				DRAWN BY	DATE	SCHEDULE E
DOOR ELEVATION SHEET				CONTRACT/JOB NO.		SHEET _____ OF _____

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Schedule F

Detail Sheet

Fill in form fields electronically then print to create drawing by hand.

DATE	REVISIONS	BY

ALGOMA™ HARDWOODS

DETAIL SHEET

JOB NAME

DRAWN BY | DATE

CONTRACT/JOB NO.

SCHEDULE F

SHEET ____ OF ____

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Schedule G

Door Core Reinforcement Options (Hardware Blocking)

Door Core Reinforcement Options (Hardware Blocking)

Specify by model and mark in the **Core Model** column of Schedule D
or list in **Fire Door Core Model** box of Schedule C

FD 1½, 1 and ¾ Hour Composite Type Fire Doors

Model A B C D

1. Reinforcements for attaching surface mounted hardware with screws shown cross hatched.
2. Models A through D shall have reinforced stile (Superstiles) for mortised hinges unless manufacturer advises otherwise.
3. Matching Veneered or compatible lumber stiles on models A through D are usually available as an option at extra cost.

FD ⅓ Hour Wood Core Fire Doors

Model E F G H

ALGOMA HARDWOODS™

DATE	REVISIONS	BY

JOB NAME

DRAWN BY | DATE

CONTRACT/JOB NO.

SCHEDULE G

SHEET ____ OF ____

DOOR CORE REINFORCEMENT OPTIONS

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Concealed Vertical Rod Device Preparation

Algoma Fire Doors Available Factory Prepared for Concealed Vertical Rod Devices

Concealed Vertical Rod Devices in an Algoma® Made fire door offers these benefits:

- Combines functional design with pleasing appearance
- Meets ADA requirements
- Available for FD ⅓, ¾, 1 and 1½ hour installations
- Reduces impact damage by concealing hardware
- Operates more quietly than conventional devices

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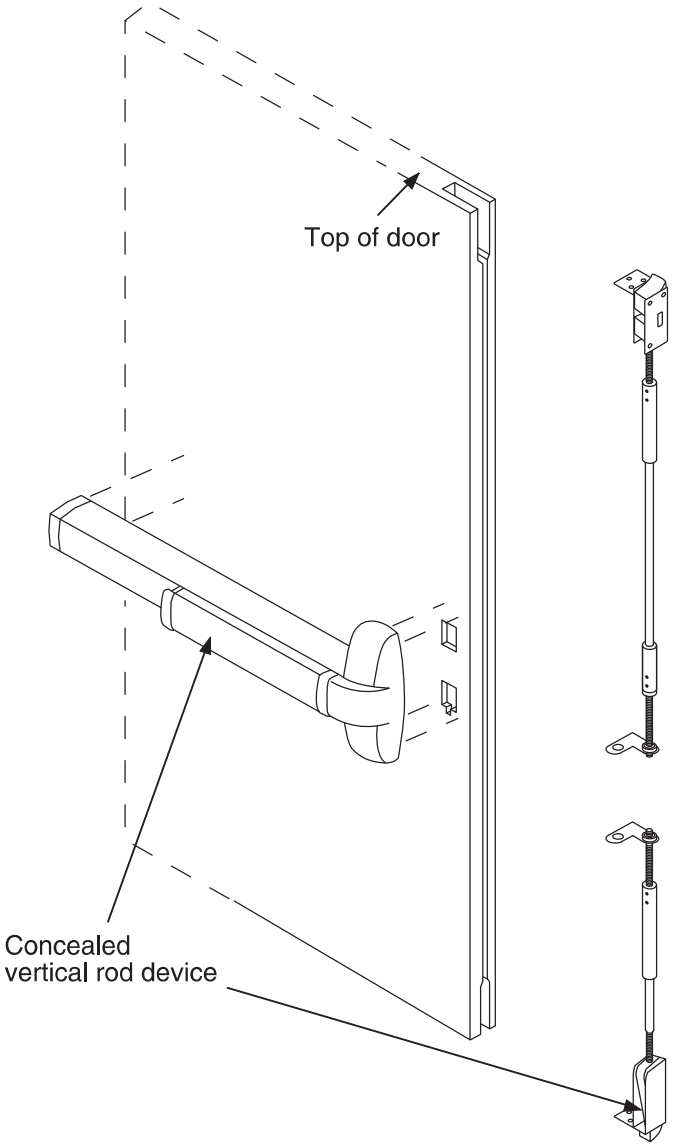
Concealed Vertical Rod Device Approvals

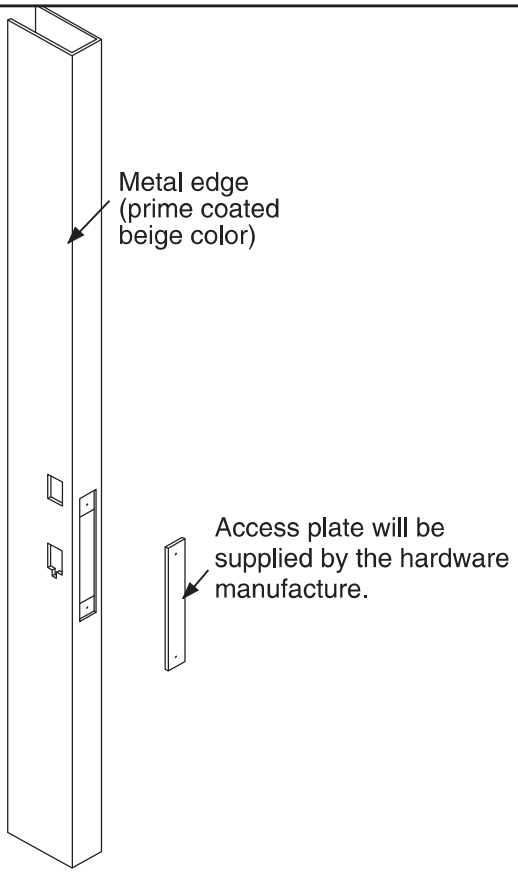
Concealed Vertical Rod Device
FD ⅓, ¾, 1 and 1½ hour doors approved for pairs up to 8'0" x 9'3" (2440 x 2820 mm); 8'0" x 9'0" (2440 x 2743 mm) in double egress.

Manufacturer	Maximum Opening Size*	Model/Series
Von Duprin	96" x 111" (2440 x 2820 mm) for FD ⅓, ¾, 1 and 1½ hour.	9947 WDC-F 9847 WDC-F 5547 WDC-F 3547 WDC-F 3347 WDC-F
Monarch Hardware	96" x 111" (2440 x 2820 mm) for FD ⅓, ¾, 1 and 1½ hour.	F17-C F18-C FCV-C FXX-C
Falcon	96" x 111" (2440 x 2820 mm) for FD ⅓, ¾, 1 and 1½ hour.	F25C WDC
DORMA	96" x 111" (2440 x 2820 mm) for FD ⅓, ¾, 1 and 1½ hour.	9100 5100
Sargent	96" x 111" (2440 x 2820 mm) for FD ⅓, ¾, 1 and 1½ hour.	12-WD8600
Yale	96" x 111" (2440 x 2820 mm) for FD ⅓, ¾, 1 and 1½ hour.	7160W
Corbin Russwin	96" x 111" (2440 x 2820 mm) for FD ⅓, ¾, 1 and 1½ hour.	ED5860
Precision	96" x 111" (2440 x 2820 mm) for FD ⅓, ¾, 1 and 1½ hour.	FL-2700

FD ⅓, ¾, 1 and 1½ hour doors are available for double egress pairs, maximum 96" x 108" (2440 x 2743 mm) opening size.

* If the device listing is <111" (2820mm), then the listed size becomes the maximum for the device.





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Surface and Concealed Less Bottom Rod Devices

Rated and Non-Rated Concealed Vertical Rod LBR

Manufacturer	Opening Size	Device	Fire Rating
Von Duprin	8'0"x9'3"	9947WDCLBR	20-90 minute
	8'0"x9'3"	9847WDCLBR	20-90 minute
Sargent	8'0"x9'3"	PP8600	20-90 minute
	8'0"x9'3"	PR8600	20-90 minute
Monarch	8'0"x9'3"	F17CLBR	20 minute
	8'0"x9'3"	F18CLBR	20 minute
	8'0"x9'3"	FXXCLBR	20 minute
	8'0"x9'3"	FCVCLBR	20 minute
Precision	8'0"x9'3"	FL2700LBR	20-90 minute
Corbin/Russwin	8'0"x9'3"	ED5860BM55	20 minute
Dorma	8'0"x9'3"	F9100	20 minute
Yale	8'0"x9'3"	7160W	20 minute
Adams Rite	8'0"x8'0"	3900	45-90 minute
	8'0"x9'0"	3900	20 minute
Falcon	8'0"x9'3"	F25CLBR	20 minute

*Above devices require a 5" metal channel except for Adams Rite 3900. The 3900 cannot be supplied with a metal edge.

Rated and Non-Rated Surface Vertical Rod LBR

Manufacturer	Opening Size	Device	Fire Rating
Yale	*See note.	7170-LBR	20-90 minute
Corbin/Russwin		ED5470-M55	20-90 minute
Von Duprin		9927LBR	20-90 minute
		9827LBR	20-90 minute
Monarch		F17VLBR	20-90 minute
		F18VLBR	20-90 minute
		F19VLBR	20-90 minute
		FXXVLBR	20-90 minute
Precision		FL1200	20-90 minute
Detex		F2101	20-90 minute
		F5101	20-90 minute
Sargent		PP8700	20-90 minute
		PR8700	20-90 minute
Dorma		F4400LB	20-90 minute
		F5400LB	20-90 minute
		F6400LB	20-90 minute
		F8400LB	20-90 minute
		F9400LB	20-90 minute

*Maximum size 8'0"x9'0". See hardware manufacturer for listed size for wood doors.

Fire rated devices require a heat activated bolt installed in the bottom half of the door.

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Tech Reports

Topic	Page
Quick Ship	3
Sound Transmission Class Doors (STC)	5
Environmentally Certified Wood Doors	7
Advantages of Factory Finished Doors	8
A Grade versus AA Grade Veneers	9
Positive Pressure and Wood Doors	10
Positive Pressure Approvals	11
Positive Pressure Category A	12
Positive Pressure Category B	14
Surface Vertical Rod / Less Bottom Rod (SVR/LBR)	15
Structural Composite Lumber (SCL)	16
Protection Plates on Fire Doors	17
Stile and Rail Standard Component Dimensions	18

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Quick Ship

ALGOMA HARDWOODS, INC.
More than a name…it's a standard.

Algoma Hardwoods is proud to offer its "Quick Ship" program. As part of our Quick Suite of offerings (Quick Quote, Quick Order and Quick Ship) the program provides you an expedited shipping schedule. Projects that require a better than standard lead-time are a perfect fit for our Quick Ship program. The template below defines the program offering. It's as easy as matching your project requirements against the chart. If it meets the parameters in the chart we will enter the order. If it doesn't, feel free to call your Algoma Hardwoods representative and inquire as to our ability to manufacture the order under Quick Ship guidelines.

Door Type (Architectural Hot Press)	**Slabs**	**Premachined and/or Prefinished**
Ready to Ship in….	**14 Calendar days**	**21 Calendar days**
Thickness	1.75"	1.75"
Quantity	100 or less	100 or less
Finish Approval		Must have color approval prior to release to manufacturing
Face Veneers **Book and Running Matched** **Pair Matched** **Set Matching (Contact Algoma)**	Plain Sliced Red Oak, RC Red Oak, Plain Sliced Cherry, Plain Sliced White Maple, Plain Sliced Mahogany, Plain Sliced White Birch, RC White Birch, RC Natural Birch MDO, Consult factory for other species availability.	Plain Sliced Red Oak, RC Red Oak, Plain Sliced Cherry, Plain Sliced White Maple Plain Sliced Mahogany, Plain Sliced White Birch, RC White Birch, RC Natural Birch, MDO, Consult factory for other species availability.
Core Types	Particle (standard and FSC), Stave (standard and FSC), SCLC (standard and FSC), Mineral (fire retardant), UF Free	Particle (standard and FSC), Stave (standard and FSC), SCLC (standard and FSC), Mineral (fire retardant), UF Free
Size	4-0x9-0, maximum	4-0x9-0, maximum
Hardware		**Must be submitted on Algoma's QuickOrder software/machining sheets (no handwritten orders).** No restrictions on machining exclusive of CVR's with metal channels and mortised edge guards, existing frames up to 25 doors
Lites		Standard beading/vision frames; glazed openings with ¼" tempered glass
Information	All questions must be answered within 24 hours of Algoma's having sent them.	All questions must be answered within 24 hours of Algoma's having sent them.
Order Changes	Not allowed; or will alter delivery date.	Not allowed; or will alter delivery date.
Pricing	**Projects meeting this Template in all ways – no Quick Ship premium. Projects not meeting this Template in any way – Quick Ship premium TBD. Additional freight charges may apply.**	**Projects meeting this Template in all ways – no Quick Ship premium. Projects not meeting this Template in any way – Quick Ship premium TBD. Additional freight charges may apply.**
Exclusions		Door/Transom Combinations; Lead-Lined; STC 39-45; Stile and Rail; RhinoDoors; PVC Edges; Applied Mouldings; Radius Stiles; Wicket Doors; Reveals/Grooves/ Kerfs; Painted Finish; Wood Jambs; Veneer-banded Edges, plastic.

Quick Ship

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Door Type (Commercial Cold Press)	**Slabs**	**Premachined and/or Prefinished**
Ready to Ship in….	2 weeks from receipt of purchase order	3 weeks from receipt of purchase order
Thickness	1.75	1.75
Quantity	100 or less	100 or less
Finish Approval		10 working days prior to ship-date
Face Veneers Book and Running Matched	Plain Sliced Red Oak RC White Birch RC Natural Birch Paint Grade Birch	Plain Sliced Red Oak RC White Birch RC Natural Birch Paint Grade Birch
Core Types	Particle, Mineral (fire-retardant)	Particle, Mineral (fire-retardant)
Size	4-0x9-0, maximum	4-0x9-0, maximum
Hardware		Must be coordinated by customer on pre-approved machining sheets
Lites		Standard beading/vision frames
Information	All questions must be answered the same business day	All questions must be answered within 24 hours of Algoma's having sent them
Changes prior to order release	May impact lead-time	May impact lead-time
Changes after order is released	Not allowed	Not allowed
Pricing	Please contact Algoma Hardwoods for pricing on its Quick Ship program, additional freight charges may apply.	Please contact Algoma Hardwoods for pricing on its Quick Ship program, additional freight charges may apply.

Tech Report

ALGOMA HARDWOODS, INC.
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Sound Transmission

Class Doors (STC)

Excuse me? What's that you said? ***I'm sorry, can you please repeat that?*** No, you are not losing your hearing. The reason you can't hear my conversation is that you are standing behind one of Algoma Hardwoods' Sound Transmission Class (STC) doors. And the good news? Now hear this. We've expanded our already broad range offering of STC rated wood doors. Sure we've got our standard STC 45, 43, 40, 39 and 28's. But now we've earned STC ratings for 33, 32 and 31 (with lite openings), expanding our offerings beyond our well established STC 28 fire-rated door. Please see the chart on the following page for specifics.

How about no added Urea-Formaldehyde? Well, we have addressed that. And, our STC 33, 32 and 28's can all be constructed to comply with the new LEED for Schools criteria. In fact, we can even prepare the door for lite openings and build it no added urea-formaldehyde. Algoma Hardwoods is committed to providing doors that are constructed to the most up-to-date LEED standard.

How About Collaborative for High Performance Schools (CHPS)? We've addressed that too. Our doors have been tested by a third party laboratory to ensure their compliance with CHPS (Collaborative for High Performance Schools) for VOC emissions.

All of our doors have been tested to the strict standards defined by Riverbank Laboratories. This gives you the confidence that all of our STC rated doors will perform as specified.

Whether it's a school or military installation; government building or hospital, you are sure to find an Algoma Hardwoods' STC rated wood door that fits your project. Specify Algoma Hardwoods and you'll specify excellence.

STC Chart

ALGOMA HARDWOODS, INC.
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STC RATING	CORE TYPE	DOOR THICKNESS	FSC	NAUF	FIRE RATING	GLASS TYPE	GLASS AREA	GLAZING SYSTEM	THRESHOLD	GASKET	DROP SEAL	TEST NUMBER
54	SPECIAL	1.75"	NO	YES	n/a	n/a	n/a	n/a	NO	S88, DBL ROW	NGP 225N	TL94-189
45	SPECIAL	1.75"	NO	YES	n/a	n/a	n/a	n/a	YES	S88, DBL ROW	NGP 225N	TL95-194
43	SPECIAL	1.75"	NO	YES	20	n/a	n/a	n/a	YES	S88, DBL ROW	NGP 225N	TL94-193
40	SPECIAL	1.75"	NO	YES	n/a	n/a	n/a	n/a	NO	S88, DBL ROW	NGP 225N	TL94-190
39	SPECIAL	1.75"	NO	YES	n/a	DBL GLAZED	400	WOOD BEAD	YES	S88, DBL ROW	NGP 225N	TL94-192
33	SCLC	1.75"	YES	YES	20	5/16", 1/4" LAMINATED, NON-RATED	1296	WOOD BEAD	NO	S88, DBL ROW	ZERO 369A	TL09-170
32	SCLC	1.75"	YES	YES	20	5/16", 1/4" LAMINATED, NON-RATED	1296	WOOD BEAD	NO	S88, DBL ROW	Pemko 234	TL11-224, 225
32	SCLC	1.75"	YES	YES	20	Optional***	1296	WOOD BEAD	NO	S88, DBL ROW	ZERO 369A	TL08-230
32	PB	1.75"	YES	YES	20	5/16", 1/4" LAMINATED, NON-RATED	1296	WOOD BEAD	NO	S88, DBL ROW	ZERO 369A	TL09-161
32	PB	1.75"	YES	YES	20	Optional***	1296	WOOD BEAD	NO	S88, DBL ROW	ZERO 369A	TL11-224
31	SCLC	1.75"	YES	YES	20	Optional***	1296	WOOD BEAD	NO	S88, DBL ROW	Pemko 234	TL11-224, 225
31	PB	1.75"	YES	YES	20	5/16", 1/4" LAMINATED, NON-RATED	1296	WOOD BEAD	NO	S88, DBL ROW	Pemko 234	TL11-224, 225
31	PB	1.75"	YES	YES	20	Optional***	1296	WOOD BEAD	NO	S88, DBL ROW	Pemko 234	TL11-225
31	PB	1.75"	YES	YES	20	Optional***	1296	WOOD BEAD	NO	S88, DBL ROW	ZERO 369A	TL08-228
31	MC 45, 60, 90 Min	1.75"	YES	YES	45-90	5/16", LAMINATED, RATED	1296	WOOD BEAD	NO	S88, DBL ROW	ZERO 369A	TL09-166
30	MC 45, 60, 90 Min	1.75"	YES	YES	45-90	5/16", LAMINATED, RATED	1296	WOOD BEAD	NO	S88, DBL ROW	Pemko 234	TL11-224, 225
29	MC 45, 60, 90 Min	1.75"	YES	YES	45-90	Optional***	1296	WOOD BEAD	NO	S88, DBL ROW	ZERO 369A	TL08-229
28	MC 45, 60, 90 Min	1.75"	YES	YES	45-90	Optional***	1296	WOOD BEAD	NO	S88, DBL ROW	Pemko 234	TL11-224, 225
28	PB	1.75"	YES	YES	20	Optional***	1296	WOOD BEAD	NO	S88, DBL ROW	NGP 225N	TL94-188
28	MC 45, 60, 90 Min	1.75"	YES	YES	45-90	Optional***	1296	WOOD BEAD	NO	S88, DBL ROW	NGP 225N	TL95-390

*** Laminated Glass with STC ≥35 to be used (will maintain desired STC rating), rated glass for fire doors, Cat.II impact rating

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Tech Report

ALGOMA HARDWOODS, INC.
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Environmentally Certified Wood Doors

When the job demands "green" doors, Algoma can respond with FSC certified Architectural Wood Doors.

Increasingly, architects, builders and owners are looking at environmental considerations in their selection of building materials. In the door segment of the buildings materials industry, this affects everything from reforestation and environmentally-friendly harvesting, to timber processing and, ultimately, to the manufacturing of assembled products. Those manufacturers looking to provide "green" products to the market use independent, third party certification as a primary means of improving public perceptions among purchasers who are concerned about the environment. Third party certification verifies that products are, in fact, environmentally-friendly, i.e. 'green." Chain-of-custody certification of primary and secondary manufacturers ensures that only wood that comes from certified forests is sold to consumers as certified product. Algoma Hardwoods has been granted a five-year FSC Certificate, signalling compliance of its sourcing and procedures with requirements of the FSC program, 3rd party certified by Smartwood of the Rainforest Alliance and approved by the Forest Stewardship Council (FSC). FSC guidelines include:

- Certification that trees were grown, managed and harvested under guidelines for "good forestry practices"
- Documentation that secondary processors (e.g. sawmills, veneer slicing mills, and door manufacturers) ensure that the certified lumber and veneers are used in the final, certified products

Algoma's status as a certified FSC supplier is maintained through annual audits to ensure compliance with guidelines relating to process, purchase and sale of certified products, as well as by the payment of annual certification fees.

Algoma endorses and practices the responsible use of material, energy and people resources and attempts to put that philosophy in practice in all of its products.

FSC Certified products (or certified "green doors") need to be specifically called out in Specifications.

Requests for Quotations and Purchase Orders. The following is offered as a guide-spec for your use:
Section 8210 - Wood Doors

For insertion in either Part 1 (General) or Part 2 (Products)

Construction and materials required to be per the FSC Certification Program, 3rd party certified by Smartwood of the Rainforest Alliance and accredited by the Forest Stewardship Council.

FSC

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Tech Report

ALGOMA HARDWOODS, INC.
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Advantages of Factory Finished Doors

The finish on a wood door serves two main purposes. First, it is a means to enhance the natural beauty of the wood veneer. The second is to protect the wood from the effects of natural deterioration and wear from daily use. The appearance of the door finish (along with the veneer species, cut, and match) determines the important first impression of an architectural wood door. Factory finished doors provide the best appearance and durability to ensure they meet both aesthetic and performance requirements of your project.

The Benefits of Factory Finishing Include:

A pleasing consistent appearance with more uniform color, texture, and sheen as doors are properly prepared (machine sanded) just prior to application of stain and finishes by state-of-the-art equipment.
Smoother finishes free of impurities as factory conditions provide a well lighted, temperature controlled, dust free environment for finishing.
Reliable compliance with environmental regulation as solvent (VOC) emissions and waste disposal are controlled at the door factory, meeting Environmental Protection Agency requirements.
Lower finishing costs in most cases as factory automation is more efficient than manual handling and finishing.
Protection from varying job site conditions (temperature and humidity levels, dust, dirt, etc.) as all surfaces are sealed and doors are individually packaged prior to leaving the factory.
Doors which look better for a longer period of time because chemical and wear resistance properties of factory finishes are higher than most field applied finishes.
Simplified service should there be any questions. Factory machined and finished doors have only one vendor to contact if there are service issues to be resolved.
Faster project completion since doors need only to be installed after delivery to the job site.

The Appearance of field finished doors is not covered by the manufacturer's warranty. Door manufactures' warranties do not cover the appearance of field applied finishes because of the many uncontrollable variables that may exist at a construction site (temperature and moisture variation, dust, and other factors). Field conditions may also limit sanding and preparation of the wood surfaces prior to applying stain, the most crucial step in any finishing process. Specify factory finished doors to avoid these problems.

Architectural Wood Doors are the building's permanent furniture. Why risk their appearance to anyone less than the manufacturer's trained craftsmen? Factory finished doors offer the best quality, warranty, environmental, and economical results.

Specify factory finishing for the wood doors on your next project.

Tech Report

ALGOMA HARDWOODS, INC.
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A Grade versus AA Grade Veneers

Prior to mid-1997 both the Architectural Woodwork Institute (AWI) and the Window and Door Manufacturers Association (WDMA) defined Premium grade doors identically. However, in mid-1997, the AWI published new standards in which the veneer grade requirement for a premium grade door went from grade A to grade AA. The change was made to ensure that doors were to match the panelling and casework on higher end projects, given that they are often grade AA. The change has created an inconsistency with WDMA standards, as well as confusion regarding veneer grade appropriateness for different applications. Grade A veneers are and should be specified on the majority of building projects, e.g. educational, medical, office and governmental building projects.

Following is a comparison of the implications resulting from the selection of each grade:

	Grade AA	Grade A
Economics	+10% to 30% upcharge to Grade A	Normal market pricing
Lead-times	Extended lead-times or not available	Normal lead-times
Wood Resource Use	Poor use of wood resources; decrease in yields	Optimal use of wood resources
"Marketability"	Limited need. Primarily to match architectural railwork or panels	Industry standard. Generally acceptable in all but a few select projects

It is the responsibility of the architect or specifier to select what veneer grade and appearance is required on a given project. Important in the decision-making process is an understanding of the terminology and implications of door and veneer grade. **Because of the conflicting veneer requirements between WDMA and AWI, it is critical that a specifier always indicates the door grade (premium or custom) and the veneer grade AA, A or B).**

For further information, please contact your Algoma Hardwoods representative.

Note: We welcome your making use of our Tech Reports. Please feel free to duplicate as appropriate.

Tech Report

ALGOMA HARDWOODS, INC.
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Positive Pressure and Wood Doors

The new Positive Pressure Tests (UBC 7-2-97 and UL 10C) are designed to be more consistent with real world fire conditions. Negative pressure testing, where the neutral pressure plane exists at the top of the door, assumes that all pressure acting on the fire side of the door is negative and equally distributed. Positive pressure testing recognizes a neutral pressure plane (40" or less above the sill) which separates negative pressure below the plane and positive pressure above the plane. Positive pressure intensifies the flow of gasses and fire to the cold side of the door. Doors meeting the new standards are designed to better withstand the phenomenon. All components in the opening must be positive pressure rated, i.e. the entire "opening assembly" requires labelling. This makes it critical to identify in advance all the components that will comprise the opening, e.g. frames, hardware, gasketting, doors and door details. There are two types of positive pressure openings which use intumescents to withstand the extremes of a positive pressure test. Intumescents expand under fire conditions to seal the gap between the door and frame.

Category A Openings: doors specifically constructed to meet the requirements, i.e. the door fulfills requirements without need of any special modifications or gasketting to the frame. The intumescent is built inside the door by being embedded beneath the outer stile and has no impact on door appearance or function.

Category B Openings: doors meet the requirements through the application of intumescent strips to the frame surface. While this is a less expensive option, it does require the proper surface installation of the intumescent strip. Installation instructions (and sometimes the strip itself) are provided by the door manufacturer. It is important that these instructions be appropriately followed and filed. The surface mounting of the strip does mean that there will be a modification in the appearance of the frame.

The S-label smoke rating is sometimes confused with positive pressure. The S-label smoke rating may require gasketting apart from any required for positive pressure. All S-label smoke rated doors are also required to be positive pressure rated. It is not the case, however, that all positive pressure doors must necessarily be S-label smoke rated.

There are also positive pressure requirements for other aspects of the door. Lites, louvres, applied mouldings and hardware attachment are all items that may require consultation with specific manufacturer procedures before final selection and/or installation.

Algoma Hardwoods has a full range of positive pressure approvals available to you, in either Category A or Category B. Please check with your Algoma Regional Sales Manager or Sales Service Specialist for more details. We also have additional materials which we can make available to you on request.

Tech Report

ALGOMA HARDWOODS, INC.
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Positive Pressure Approvals

Specifications calling for positive pressure doors or door systems are likely to increase over time. To aid you in responding to those needs, the following summarizes the positive pressure approvals that Algoma Hardwoods currently has.

Category A: No additional edge-sealing system is required. The intumescent is contained in the door itself.

20 minutes (UL and ITS/WHI):

- Single swing 4/0 x 8/0
- Pairs 8/0 x 8/0, standard swing and double egress
- S-Label for singles and pairs
- Hardware applications:
  - Manual or automatic flush bolts
  - Mortise or cylindrical locks
  - Rim exit device
  - Surface vertical rod (SVR)
  - No metal edges required on pairs
  - No treated edges required
  - No astragal required (except S-label)
  - Lites – 1,296 in2
  - Wood Frame 8/0 x 8/0

45 and 60 minutes (UL and ITS/WHI):

- Single swing 4/0 x 8/0
  - Mortise or cylindrical lock
  - Rim exit device
  - Surface vertical rod
- Pairs 8/0 x 8/0, standard swing
  - Manual or automatic flush bolts
  - Surface vertical rods (SVR), 4 point latch
  - SVR or flush bolt X mortise lock, 3 point latch
- S-Label for singles and pairs
- Additional hardware applications:
  - No metal edges required on pairs
  - No treated edges required
  - No astragal required (except S-label)
- Lites – 45 minutes – 1,296 in2
  - 60 minutes – 100 in2

90 minutes (UL and ITS/WHI):

- Single swing 4/0 x 8/0
- S-Label
- Hardware applications:
  - Mortise or cylindrical locks
  - Rim exit device
  - SVR
  - Lites – 100 in^2

Category B: Additional edge-sealing system required. The intumescent is surface applied to either the frame or the appropriately rated neutral pressure door.

NOTE: Algoma Hardwoods does not sell or supply intumescent.

Zero 20 Minutes Systems 820 and 850

Single swing	4/0 x 8/0
Pairs, standard swing	8/0 x 9/0

3M Graphite Intumescent Strip (GIS) 20 Minutes System

Single swing	4/0 x 8/0
Pairs, standard swing	8/0 x 8/0
Lite kit	1,296 in^2, wood beaded lite

3M GIS+ 20 Minutes System

All of the above, plus S-Label.

3M GIS 45 Minutes System

Single swing	4/0 x 8/0
Pairs, standard swing	8/0 x 8/0

3M GIS+ 45 Minutes System

All of the above, plus S-Label

For more information, please call
Mr. Larry Grzemkowski at 800.678.8910, extension 153.

Tech Report

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Positive Pressure Category A

Positive Pressure Cat. A	UL 20 Min. PB	UL 20 Min. SLC/SCLC	UL 45 Min.	UL 60 Min.	UL 90 Min.
Thickness	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"
Size					
Single	4/0 x 9/0	4/0 x 9/0	4/0 x 9/0	4/0 x 9/0	4/0 x 9/0
Pair Standard	8/0 x 9/0	8/0 x 9/0	8/0 x 9/0	8/0 x 9/0	8/0 x 9/0
Pair Double Egress	8/0 x 9/0	8/0 x 9/0	8/0 x 9/0	8/0 x 9/0	8/0 x 9/0
Metal Free Pair Std.	All Cat. A are metal free				
Metal Free Double Egress	All Cat. A are metal free				
Door/Transom	No	No	No	No	No
Transom Panel	4/0 x 4/0	4/0 x 4/0	4/0 x 4/0	4/0 x 4/0	4/0 x 4/0
Side Panel	4/0 x Height	4/0 x Height	4/0 x Height	4/0 x Height	4/0 x Height
Dutch Door	No	See Category B	No	No	No
Full Lite Door Single	No	4/0 x 9/0	No	No	No
Full Lite Door Pairs	No	See Category B	No	No	No
Acoustical	STC28	STC28/SCLC	STC 28	STC 28	STC 28
Lead Lined	No	No	n/a	n/a	n/a
Latching Options*					
Single Swing	1 or 2 Point	1 or 2 Point	1 or 2 Point	1 or 2 Point	1 or 2 Point
Pairs	3 or 4 Point	3 or 4 Point	3 or 4 Point	3 or 4 Point	3 or 4 Point
Latchsets					
Cylindrical	Yes	Yes	Yes	Yes	Yes
Mortise	Yes	Yes	Yes	Yes	Yes
Card	Yes	Yes	Yes	Yes	Yes
Dead Lock					
Cylindrical	Yes	Yes	Yes	Yes	Yes
Mortise	Yes	Yes	Yes	Yes	Yes
Unit Lock	Yes	Yes	Yes	Yes	Yes
Interconnected	Yes	Yes	Yes	Yes	Yes
Fire Exit Hardware					
Rim Single Swing	Yes	Yes	Yes	Yes	Yes
Mortise Single Swing	Yes	Yes	Yes	Yes	Yes
Flush Bolts x Mortise	Yes	Yes	Yes	Yes	Yes
SVR					
Standard Pair	Yes	Yes	Yes	Yes	Yes
Double Egress Pair	Yes	Yes	Yes	Yes	Yes
CVR					
Standard Pair	See Category B	See Category B	See Category B	See Category B	See Category B
Double Egress Pair	See Category B	See Category B	See Category B	See Category B	See Category B
SVR/LBR					
Standard Pair	Yes-No Hose	Yes-No Hose	Yes	Yes	Yes
Double Egress Pair	Yes-No Hose	Yes-No Hose	Yes	Yes	Yes
Sargent SVR Top & Center Latch					
Standard Pair	Yes	Yes	Yes	Yes	Yes
Double Egress Pair	Yes	Yes	Yes	Yes	Yes
CVR/LBR					
Standard Pair	See Category B	See Category B	A.R.3900-8/0 x 8/0	A.R.3900-8/0 x 8/0	A.R.3900-8/0 x 8/0
Dbl Egress Pair	See Category B	See Category B	No	No	No
Open Back Strike	Yes/No Hose	Yes/No Hose	Yes/Fire Bolts	Yes/Fire Bolts	Yes/Fire Bolts
Hinges (Cont. pg 2)	Per NFPA 80	Per NFPA 80	Per NFPA 80	Per NFPA 80	Per NFPA 80
Continuous	Yes	Yes	Yes	Yes	Yes
Pivot (Offset)	Yes	Yes	Yes	Yes	Yes
Spring	Yes	Yes	Yes	Yes	Yes

Tech Report

ALGOMA HARDWOODS, INC.
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Positive Pressure Category A

Positive Pressure Cat. A	UL 20 Min. PB	UL 20 Min. SLC/SCLC	UL 45 Min.	UL 60 Min.	UL 90 Min.
Hinges (Cont.)					
Flush Bolts					
Surface	Yes	Yes	Yes	Yes	Yes
Mortised	Yes	Yes	Yes	Yes	Yes
Auto	Yes	Yes	Yes	Yes	Yes
Manual	Yes	Yes	Yes	Yes	Yes
Extension	Yes	Yes	Yes	Yes	Yes
Drop Seals					
Surface	Yes	Yes	Yes	Yes	Yes
Mortised	Yes	Yes	Yes	Yes	Yes
Closers					
Mortised	No	No	No	No	No
Surface	Yes	Yes	Yes	Yes	Yes
Power Operated	Yes	Yes	Yes	Yes	Yes
Concealed/Fire Shield	No	No	No	No	No
Edge Guards**					
Surface	Yes-40" - High	Yes-40" - High	Yes-40" - High	Yes-40" - High	Yes-40" - High
Mortised	Yes-40" - High	Yes-40" - High	No	No	No
Miscellaneous					
Viewers	Yes	Yes	Yes	Yes	Yes
Raceways	Yes	Yes	Yes	Yes	Yes
Power Transfer	Yes	Yes	Yes	Yes	Yes
Magnetic Switch	Yes	Yes	Yes	Yes	Yes
Louvers	No	No	Yes	Yes	Yes
Kick Plates-Poly & Hpl	40"	40"	40"	40"	40"
Kick Plates- Metal	40"	40"	40"	40"	40"
Plant On Moulding	Yes	Yes	Yes	Yes	Yes
Veneer Banded Edges	Yes	Yes	Yes	Yes	Yes
Face Grooves	Yes	Yes	Yes	Yes	Yes
Lite Options(all measures in square inches of visable glass)					
MVP	1296	1296	1296	100	100
Wood Beads	1296	1296	No	No	No
1/2" Veneer Wrapped Beads	n/a	n/a	100	100	100
3/4" Veneer Wrapped Beads	n/a	n/a	1296	n/a	n/a
Wire Glass	1296	1296	1296	552	552
Other Glass Types	1296	1296	1296	552 Firelite	552 Firelite
Pyroedge 20 (32W x 87H)***	2784	2784	No	No	No
Full Lite	No	See Category B	No	No	No
Multiple Lites	Yes	Yes	Yes	Yes	Yes
Odd Shape Lites	Yes	Yes	Yes	Yes	Yes
***Latching Options**					
1-Point	Mortise or Cylindrical Latchsets, or Rim-Type or Mortise Fire Exit Devices.				
2-Point	Singles- Fire Exit Hardware (Surface-Mounted or Concealed Vertical Rods)				
	Pairs - (Active/Active) Exit Devices (Lbr) With Out Thermal Pin..				
	Pairs - Rim Exit Devices With Mullion Behind Pairs				
3-Point	Pairs - (Active/Inactive) Flushbolts x Mortise (or Cylindrical) Latchsets,				
	(Active/Active) Exit Devices (Lbr) With Thermal Pin (Door To Door)				
4-Point	Pairs - (Active/Active) Surface-Mounted Vertical Rod x Svr				
*** Pyroedge20 - Beads W9 + Fg3000s45 No Clips					
**** For Full Length Edge Guards Use Category B					
n/a = Not Applicable					

Tech Report

ALGOMA HARDWOODS, INC.
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Positive Pressure Category B

Wood & Plastic	UL20 PB	UL20SLC/SCLC	UL 45 Min.	UL 60 Min.	UL 90 Min.
Flush Bolts					
Surface	Yes	Yes	Yes	Yes	Yes
Mortised	Yes	Yes	Yes	Yes	Yes
Auto	Yes	Yes	Yes	Yes	Yes
Manual	Yes	Yes	Yes	Yes	Yes
Extension	Yes	Yes	Yes	Yes	Yes
Drop Seals					
Surface	Yes	Yes	Yes	Yes	Yes
Mortised	Yes	Yes	Yes	Yes	Yes
Closers					
Mortised	No	No	No	No	No
Surface	Yes	Yes	Yes	Yes	Yes
Power Operated	Yes-Saino	Yes-Saino	Yes-Saino	Yes-Saino	Yes-Saino
Concealed/Fire Shield	No	No	No	No	No
Edge Guards (Full Length)	Geon & Metal	Geon & Metal			
Surface	Yes L or U	Yes L or U	Yes L or U	Yes L or U	Yes L or U
Mortised	Yes	Yes	No	No	No
Miscellaneous					
Viewers	Yes	Yes	Yes	Yes	Yes
Raceways	Yes	Yes	Yes	Yes	Yes
Power Transfer	Yes	Yes	Yes	Yes	Yes
Magnetic Switch	Yes	Yes	Yes	Yes	Yes
Louvers	Yes	Yes	Yes	Yes	Yes
Kick Plates Poly & HPL	40"	40"	40"	40"	40"
Kick Plates - Metal	40"	40"	40"	40"	40"
Plant On Molding	Yes	Yes	Yes	Yes	Yes
Veneer Banded Edges	Yes	Yes	Yes	Yes	Yes
Face Grooves	Yes	Yes	Yes	Yes	Yes
Lite Options (all measures in square inches of visable glass)					
MVP	1296	1296	1296	100	100
Wood Beads	1296	1296	No	No	No
1/2" Veneer Wrapped	n/a	n/a	100	100	100
3/4" Veneer Wrap/Clip	n/a	n/a	1296	n/a	n/a
Wire Glass	1296	1296	1296	552	552
Other Glass Types	1296	1296	1296	552-Firelite	552-Firelite
Pyroedge 20 (32W x 87H)***	2784	2784	No	No	No
Full Lite****	No	2695-35W & 77H	No	No	No
Multiple Lites	Yes	Yes	Yes	Yes	Yes
Odd Shape Lites	Yes	Yes	Yes	Yes	Yes

(1) For Doors >8/0 Do Category A

*Latching Options

1-Point Mortise or cylindrical latchsets, or rim-type or mortise fire exit devices.

2-Point Singles- fire exit hardware (surface-mounted or concealed vertical rods)

Pairs - (active/active) exit devices (LBR) with out thermal pin.

Pairs - rim exit devices with mullion behind pairs

3-Point Pairs - (active/inactive) flushbolts x mortise (or cylindrical) latchsets,

(Active/active) exit devices (LBR) with thermal pin (door to door)

4-Point Pairs - (active/active) surface-mounted vertical rod x SVR

** Pemko S88 system uses only smoke gasket around perimeter & HSS2000 at meeting edges

*** Pyroedge20 - beads W9 + FG3000S45 no clips

**** Pairs require metal channels - note full lite construction refers to distance between the lite and lock cutout (<5")

n/a = Not Applicable

Tech Report

ALGOMA HARDWOODS, INC.
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Surface Vertical Rod/ Less Bottom Rod (SVR/LBR)

There are many desirable aspects to traditional surface mounted vertical rods.

Primary among them is the ease of access, should hardware require maintenance or repair. However, while ease of access may be desirable for maintenance or repair, it is certainly less than desirable for carts, gurneys, etc., that can easily hit the lower vertical rod and affect its performance or aesthetics. This exposure to lower vertical rod damage is heightened in environments with high levels of wheeled traffic, e.g. hospitals and medical centers.

Algoma Hardwoods now has approvals for many surface vertical rod/less bottom rod (SVR/LBR) devices that are listed for wood doors. Damage incidence, maintenance reduction, and ADA compliance are among the advantages of using the SVR/LBR devices.

At present, Algoma Hardwoods is aware of the following suppliers who have approved hardware:

Rated and Non-Rated Surface Vertical Rod LBR

Manufacturer	Opening Size	Device	Approved	Fire Rating	Heat Activated Spring Built
Yale	*See note.	7170-LBR	Yes	20-90 minute	Yes
Corbin/Russwin		ED5470-M55	Yes	20-90 minute	Yes
Von Duprin		9927LBR	Yes	20-90 minute	Yes
		9827LBR	Yes	20-90 minute	Yes
Monarch		F17VLBR	Yes	20-90 minute	Yes
		F18VLBR	Yes	20-90 minute	Yes
		F19VLBR	Yes	20-90 minute	Yes
		FXXVLBR	Yes	20-90 minute	Yes
Precision		FL1200	Yes	20-90 minute	Yes
Delex		F2101	Yes	20-90 minute	Yes
		F5101	Yes	20-90 minute	Yes
Sargent		PP8700	Yes	20-90 minute	Yes
		PR8700	Yes	20-90 minute	Yes
Dorma		F4400LB	Yes	20-90 minute	Yes
		F5400LB	Yes	20-90 minute	Yes
		F6400LB	Yes	20-90 minute	Yes
		F8400LB	Yes	20-90 minute	Yes
		F9400LB	Yes	20-90 minute	Yes

*Maximum size 8'0" x 9'0". See hardware manufacturer for listed size for wood doors.

For more information, or to add additional suppliers, please call Mr. Larry Grzemkowski at 800.678.8910, extension 153.

Tech Report

ALGOMA HARDWOODS, INC.
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Structural Composite Lumber (SCL)

Structural composite lumber is a substitute material for low density hardwood lumber. It is also referred to as LSL (laminated strand lumber) or LSL Timberstrand. The product has been on the market for a number of years and is used in a variety of applications as a structural component.

Door manufacturers use SCL as a rail and/or inner stile on architectural an commercial wood doors. An inner stile provides screw holding for the attachment of hinges to the edge of the door and is covered by a solid lumber outer stile that is either compatible or matching to the face veneer species. The rail provides screwholding strength for closers, holders, and other hardware types. SCL is also used as a substitute for stave lumber core (SLC) in a solid wood core door. This type of door is referred to as an SCLC-5 or SCLC-7 in place of the traditional SLC-5 and SLC-7.

The SCL material that Algoma uses has physical properties that are very similar to the low density hardwood solid lumber components previously used by many door manufacturers. The SCL material is actually hardwood that is cut into strands and reglued together. The key properties are the screw withdrawal and thickness change which are listed below.

	SCL	Low Density Hardwood	Test Method
Screw Withdrawal	795 lbs.	650 lbs.	NWWDA TM-10
Thickness Change	3%	4.8%	ASTM D 1037*

*Based on change in relative humidity from 50 to 90%.

In addition to being similar in physical properties, SCL is more economical and extends the natural resource of solid lumber. Because SCL is a manufactured composite product, it uses parts of the tree that are not usable with conventional solid lumber manufacturing.

Algoma recommends that specifiers allow SCL components as an alternate to solid lumber for inner stiles, rails, and core. Both door standards groups (AWI and NWWDA) recognize SCL as an acceptable substitute for solid lumber components. Algoma will always quote, submit, and manufacture particleboard core (PC) doors with SCL rails and inner stiles.

Pleas contact the factory if you have any questions or require more information.

Tech Report

ALGOMA HARDWOODS, INC.
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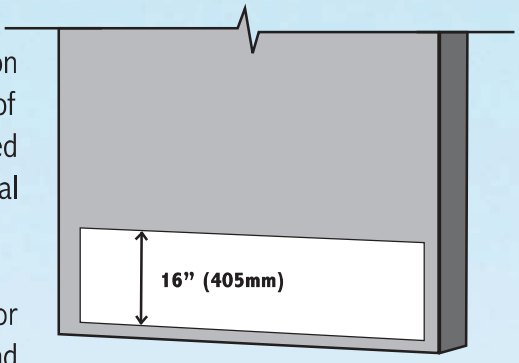
Protection Plates on Fire Doors

NFPA 80 PROTECTION PLATES

NFPA 80, Standard for Fire Doors and Fire Windows, 1995 Edition, limits protection plates or kickplates on fire doors to a 16" (405mm) high area at the bottom of the door. Protection plates attached above this area must be tested and approved and the plate material must be as indicated in the door manufacturer's individual published listings. **Algoma has approvals over 16" (405mm) in height.**

Plates are usually fastened to wood doors with adhesives, small screws or other mechanical fastener. The attachment method also has to be "tested and approved". Verify approvals with your door supplier to avoid problems as some building inspectors may reject installed fire doors with protection plates if the are not in accordance with NFPA 80 or the door manufacturer's published listings.



Unless otherwise tested and approved, protection plates are to be located within the lower 16" (405mm) area of the door.

Algoma Hardwoods, Inc. - Protection Plate Approvals

C-label and B-label Wood Fire Doors (45, 60, and 90 Minute):	
Materials:	U.L. Listed cladding materials for doors and frames (Rigid-PVC) or high- pressure laminates, maximum thickness .060" (1.5mm).
Maximum Size:	**48" (1220mm) from bottom of door, one or both faces of door.**
Attachment:	Can be applied with the peel and stick adhesive supplied on the back of the protective plate or with an adhesive as recommended by the cladding manufacturer or with Swifts #17383 contact cement.
Other Options:	May be used with full or partial height surface type Rigid-PVC or stainless steel edge guards.
20 Minute Wood Fire Doors:	
Materials:	U.L. Listed cladding materials for doors and frames (Rigid-PVC), aluminum, bronze, stainless steel, or high-pressure laminates, maximum thickness .060" (1.5mm).
Maximum Size:	**48" (1220mm) from bottom of door, one or both faces of door.**
Attachment:	Can be applied with the peel and stick adhesive supplied on the back of the protective plate or with an adhesive as recommended by the cladding manufacturer or with Swifts #17383 contact cement. Aluminum, bronze, or stainless steel protective plates may also be applied with metal wood screws.
Other Options:	May be used with full or partial height **surface** or **mortise** type Rigid-PVC or stainless steel edge guards.

Tech Report

ALGOMA HARDWOODS, INC.
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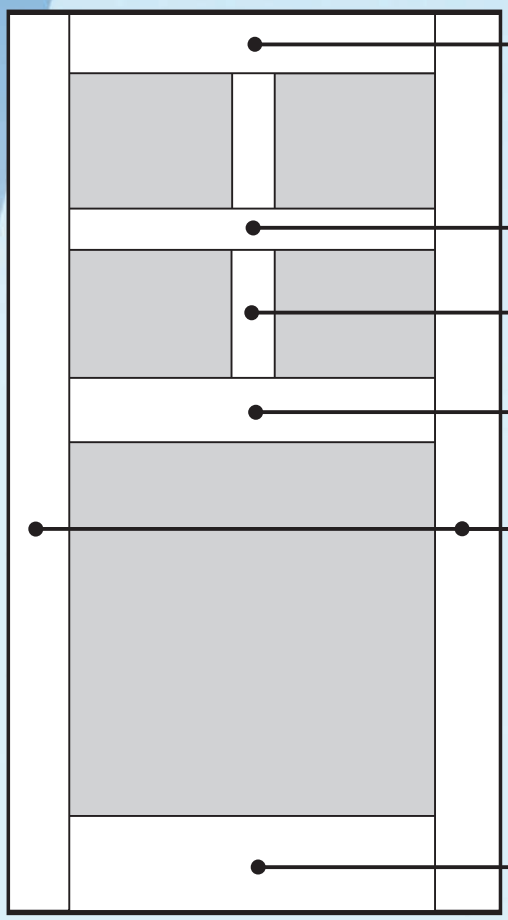
Stile and Rail Standard Component Dimensions



	NON-LABEL AND 20 MINUTE RATED	NON-LABEL UNDER 1'6" (460MM) WIDE
Top Rail	6" (152mm)	6" (152mm)
Intermediate Rail	4" (102mm)	3" (76mm)
Vertical Mullion	4" (102mm)	3" (76mm)
Lock Rail	6" (152mm)	6" (152mm)
Stile	6" (152mm)	3" (76mm)
Bottom Rail	9-1/2" (241mm)	9-1/2" (241mm)

NOTE: Stile and rail dimensions may vary to accommodate hardware, label and warranty requirements.

BEAD PROFILES FOR LITES & LOUVERS ON NON LABELED AND 20 MINUTE RATED STILE & RAIL DOORS

Standard quarter round

Optional square step bead

Quarter round muntin bar & bead (non labeled doors only)

Optional square bead

Optional ovalo bead

Wood Frames

Topic	Page
Non-rated & 1/3 Hour Wood Jamb Sets	3

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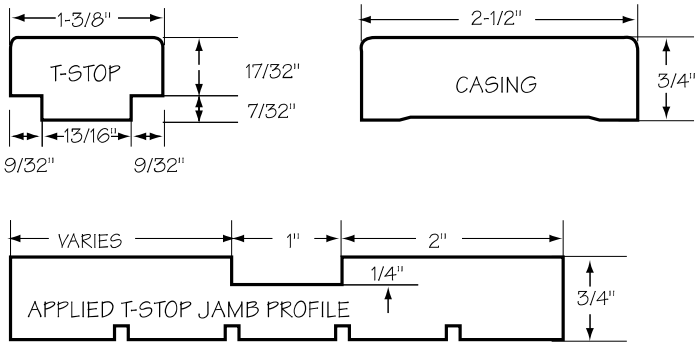
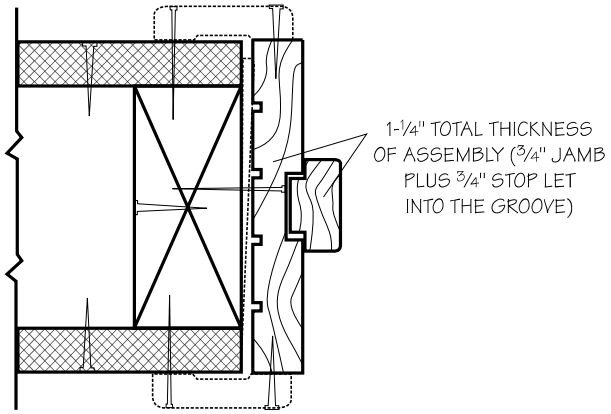
Non Rated & 1/3 Hour Solid Wood Jamb Sets

(Neutral or Positive Pressure)





Applied T-Stop Profile shown in one hour steel stud wall.

Product Features

Species	Standard species for 1/3 hour rated frames are Red Oak, White Oak, Birch, Cherry, Mahogany, and Maple. On special order, any commercially available species with density equal to or greater than 33.4 lbs/cubic ft. Any species can be specified for non rated frames.
Sizes	Maximum for 1/3 hour label is 4'0" x 9'0" (1220 x 2740mm) for single doors and 8'0" x 9'0" (2440 x 2740mm) for regular swing pair doors. Non-label frames are available in larger sizes.
Wall thickness	Minimum 3¾" (95mm). Jambs may be made from edge-glued lumber when wall thickness exceeds width of available lumber.
Wall conditions	Wood stud, steel stud, or masonry.
Profiles	Applied T-Stop (ploughed-in-stop) standard.
Casing	Standard or custom profile casing available with frames. Minimum size ½" x 1½" (13 x 38mm), any species with density equal to or greater than Mahogany (33.4PCF). Casing may be supplied by others but must meet minimum size and density requirements. Non rated frames have no restrictions for the casing.
Hardware machining	Available with hinge and strike machining as well as other hardware preparation. Fire rated frames must be machined for hardware at the factory or by a licensed machiner before they can be labeled.
Finishing	Available in finishes with performance characteristics equivalent to AWI System TR-6, standard or custom colors. Also available primed or sealed only.
Warranty	For interior, life of original installation. Exterior applications not recommended or warranted.
Industry Standard	Architectural Woodwork Institute Quality Standards, Section 900, Frames and Jambs, Custom Grade.
Label service	20 minute listed and labeled by Inchcape Testing Services – Warnock Hersey. And UL (Positive Pressure) UBC 7-2-1997.
Installation instructions	Jamb and head installation: 2" x #12 FHWS 24" (600mm) on center at stop dado. One each 2" x #12 FHWS at each hinge and two each 2½" x #10 FHWS at lock strike. Maximum spacing between back of frame and stud is ¼" (6mm). Spacing can be increased to ½" (13mm) maximum if gap is packed with fiberglass with no through openings. One shim required at each hinge and at strike. Positive pressure may not exceed 1/4" (6mm) gap between frame and stud, and must be packed with fiberglass. T-Stop installation: Nailed with 4d finishing nails 12" (300mm) on center. Casing installation: Minimum attachment of casing is 4d finishing nails 12" (300mm) on center into jamb and head and 5d finishing nails 12" (300mm) on center into wall. Casing may have various profiles. Minimum dimensions ½" thick x 1½" wide (13 x 38mm), Mahogany (33.4PCF) or denser species. Hardware: Butt hinges per NFPA 80, 1 each for every 30" (760mm) of height. Balance of hardware a function of door approval (must be self closing with positive latching device).

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DOORS

Topic	Page
Mineral Core:	
FD 1½ Hour Door	3
FD 1½ Hour Door Category A Positive Pressure Rated Door	5
FD 1 Hour Door	7
FD 1 Hour Door Category A Positive Pressure Rated Door	9
FD 3⁄4 Hour Door	11
FD 3⁄4 Hour Door Category A Positive Pressure Rated Door	13
FD 1½ Hour Door and Transom	15
Superstile	17
Metal Free Stiles for Pairs	18
Superfire Door Reinforcement Options	19
Particleboard Core:	
PC-5 Novodor FD 1⁄3 Hour Door	21
Commercial Cold Press (CCP) FD 1⁄3 Hour Door	23
FD 1⁄3 Hour Door andTransom	25
Lumber Core:	
SCLC-5 Structural Composite Lumber Core FD 1⁄3 Hour Door	27
SLC-5 Stave Lumber Core FD 1⁄3 Hour Door	29
Stile & Rail/Artisan:	
Stile and Rail FD 1⁄3 Hour Door	31
1⁄3 Hour Door Stile and Rail Fire Doors	32
Stile and Rail Standard Component Dimensions	33
Stile and Rail Descriptions	34
Artisan® 1⁄3 Hour Door	35
Artisan® 3⁄4, 1, 1½ Hour Door	37
Artisan® SF 3⁄4, 1, 1½ Hour Door	39
Specialty Doors:	
FGFW Full Glass Full Warranty 1/3 Hour Door	41
Acoustical FD 1⁄3 Hour Door	43
LL Lead Lined FD 1⁄3 Hour Door	45
HPDL (Plastic Laminate Doors)	47
Green Doors:	
FSC™ PC-5 Novodor FD 1⁄3 Hour Door	49
FSC™ SCLC-5 Structural Composite Lumber Core FD 1⁄3 Hour Door	51
FSC™ SLC-5 Stave Lumber Core FD 1⁄3 Hour Door	53
FSC™ Stile and Rail Door	55
NAUF PC-5 Novodor FD 1⁄3 Hour Door	57
NAUF SCLC-5 Structural Composite Lumber Core FD 1⁄3 Hour Door	59
NAUF SLC-5 Stave Lumber Core FD 1⁄3 Hour Door	61
RhinoDoor®:	
RhinoDoor® 1/3 Hour Door - Particleboard Core	63
RhinoDoor® 1/3 Hour Door - SCLC	65
RhinoDoor® 1/3 Hour Door - Stave Lumber Core	67
RhinoDoor® 1½ Hour Door	69
RhinoDoor® 1½ Hour Door Category A Positive Pressure Rated Door	71
RhinoDoor® 1 Hour Door	73
RhinoDoor® 1 Hour Door Category A Positive Pressure Rated Door	75
RhinoDoor® 3/4 Hour Door	77
RhinoDoor® 3/4 Hour Door Category A Positive Pressure Rated Door	79

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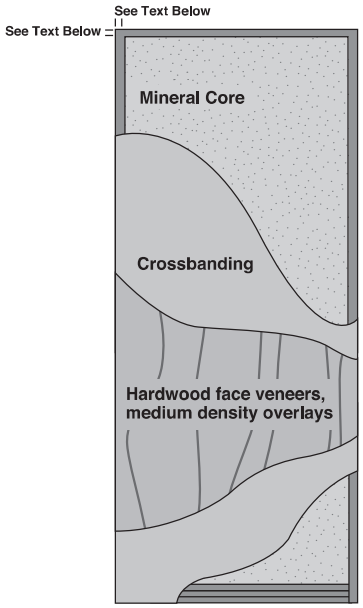
FD 1½ Hour Door

(Neutral or Category B Positive Pressure)*



Algoma Hardwoods, Inc. has been making mineral core fire doors for more than 50 years. The mineral core door listed here has stood the test of time. The Algoma Mineral Core is unusually light and remarkably stable.

The 1½ hour mineral core fire door, available in UL or ITS/WHI ratings, is suitable for room and corridor partition openings where rated doors are required.

The FD 1½ Hour is manufactured with the Superstile for superior screw holding strength and split resistance. Also, reinforcements can be specified which allow surface mounted hardware to be installed with screws.

Surface Vertical Rod/Less Bottom Rod (SVR/LBR) and Concealed Vertical Rod (CVR) exit devices can both provide compliance with the Americans with Disabilities Act (ADA). CVR exit devices require the addition of metal edge channels which are not required with SVR/LBR exit devices. In addition, SVR/LBR exit devices are less expensive to install and require less maintenance.

*Some constructions may only be available as Category A.

Product Features

Thickness		1¾" (44mm), 2¼" (57mm)
Maximum size		Available prefit up to: Singles: 4'0" x 9'0" (1219 x 2743mm). Pairs: 8'0" x 9'0" (2438 x 2743mm), including double egress pairs. Listed concealed vertical rods: 8'0" x 9'3" (2438 x 2819mm)
Stiles (Edge bands)		⅝" (16mm) Superstile
Top rail	**regular**	¼" (6.4mm) hardwood lumber.
	reinforced	See **Door** section table of contents.
Lockblocks		For exit device reinforcement, see **Door** section table of contents.
Bottom rail	**regular**	1⅛" (27mm) hardwood lumber
	reinforced	See **Door** section table of contents.
Faces		All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50 " (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Crossbands		1/16" (1.6mm) minimum wood-based composite.
Adhesives		Doors constructed using water-resistant adhesives (Type 1).
Veneer matching		Available as pairs, sets or matching transoms.
Wood beaded lite openings		Maximum 136 in^2 (0.088m^2) cutout or 100 in^2 (0.065m^2) visible glass. Larger lites available with special glazing. No temperature rise over 100 in^2. See **Detail** 11 for glass options.
Metal vision panels		Maximum 100 in^2 (0.065m^2) visible glass. Maximums: 12" (305mm) width, 33" (838mm) length. Larger lites available with special glass. No temperature rise over 100 in^2. See **Detail** 11 for glass options.
Louvers		Up to 24" x 24" (610 x 610mm). Louver(s) not allowed in doors with lite openings, exit devices or smoke control doors.
Machining		See reverse side.
Finishing		Available in finishes with performance characteristics equivalent to AWI and WDMA Systems TR-6, standard or custom colors. Also available primed four sides, sealer six sides or sealed top and bottom. Opaque finish (OP-6) on MDO only.
Warranty		For interior only, full warranty for life of original installation.
Standards met or exceeded		WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Positive Pressure		**Category B:** Singles and pairs require a category G edge seal plus a Category H smoke seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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FD 1½ Hour Door

COLUMN	1	2
LABEL / FEATURE		UL or ITS/WHI (Note: All items may not be available with both agencies.)
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Transom:** 4'0" x 4'0" in a separate frame only. **Side Panels**: 4'0" x 9'0" (1219 x 2743mm)	**Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm),
FACES	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.	
STILES AND RAILS	5/8" (16mm) Superstile with maple outer. Optional same species or plastic outer available. Top rail 1/4" (6.4mm). Bottom rail 1 1/16" (27mm). For rail and lock block reinforcement, see **Door** section table of contents.	
MAXIMUM WOOD VENEERED BEADED LITE	To 136 sq. in. (0.088m²) of cutout (100 sq. in. (0.065m²) of visible glass). Maximums: 13" (330mm) width, 34" (864mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. V-9 and V9C bead compatible with face veneer. To 1,296 sq. in. with special glass and approval of AHJ (authority having jurisdiction). No temperature rise over 100 in2. See **Detail** 11 for glass options.	
MAXIMUM METAL VISION PANEL (Visible glass)	To 100 sq. in. (0.065m²) visible glass. 10" x 10", 8" x 12", 3" x 33", 5" x 20", 4" x 25", 6" x 16" sizes available. (254 x 254mm, 203 x 305mm, 76 x 838mm, 127 x 508mm, 102 x 635mm, 152 x 406mm sizes available.) Maximums: 12" (305mm) width, 33" (838mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. Combined multiple openings up to 100 sq. in. (0.065m²). Circular openings up to 11" (279mm) diameter.To 1,296 sq. in. with special glass and approval of AHJ (authority having jurisdiction). No temperature rise over 100 in². See **Detail** 11 for glass options.	
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	24" x 24" (610 x 610mm) with 6" (152mm) perimeter at sides,10" (254mm) at bottom. Fusible link louvers only.	
HINGES	Per NFPA 80. Some specialty hinges allowed. Contact Algoma for information.	
LOCKSETS	All listed cylindrical, mortised, unit, card, electronic locks, and hospital push/pull to 5" (127mm) backset.	
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved. Pocket pivots not allowed. Intermediate pivots required for label and warranty.	
CLOSERS	Listed surface type. Throughbolt fastening required unless optional reinforcement is specified. Listed floor closers as approved. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 3/4" deep x 25" long.	
FIRE EXIT HARDWARE	**Singles:** Listed rim or mortise type with 5/8" (16mm) throw or surface vertical rods to 4'0" x 9'0" (1219 x 2743mm). **Pairs:** Mortise type on active and surface vertical rods on inactive. Listed rim devices with removable mullion. Surface vertical rods both doors get metal channels. Surface vertical rods without metal channels require special construction. (Matching veneer wrap optional.) Listed concealed vertical rod exit devices to 8'0" x 9'3" (2438 x 2819mm) with special channels on meeting edges with no overlapping astragal. Hardware must be listed for use on wood doors. SVR-LBR on both doors requires metal channels prepped for heat activated bolt between the leaves, no floor bolts required. Sargent PP and PR8700 SVR-LBR require special construction; metal edges are not required.	
OTHER PAIR HARDWARE	Pairs of doors with removable or fixed mullion **between** are considered as single swing.	Listed for use with wood doors. Surface or mortised door bolts. Manual, self-latching or automatic as codes allow.
Maximum trim: 3/4" (19mm) at bottom with standard rail. **Door Bottoms:** Max size 1"x1 15/16" listed surface or concealed.	**Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm). **Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Electric Raceway:** Available with label on all doors.

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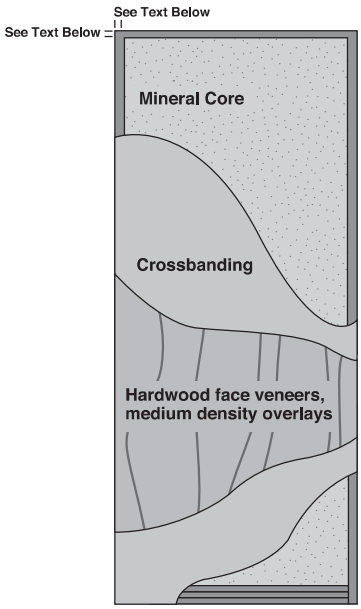
Positive Pressure Category A FD 1½ Hour Door



Note: Category A doors feature a concealed intumescent engineered into the construction of the door.

Algoma Hardwoods, Inc. has been making mineral core fire doors for more than 50 years. The mineral core door listed here has stood the test of time. The Algoma Mineral Core is unusually light and remarkably stable.

The 1½ hour mineral core fire door, available in UL rating, is suitable for room and corridor partition openings where rated doors are required.

The FD 1½ Hour is manufactured with the Superstile for superior screw holding strength and split resistance. Also, reinforcements can be specified which allow surface mounted hardware to be installed with screws.

Surface Vertical Rod/Less Bottom Rod (SVR/LBR) device provides compliance with the Americans with Disabilities Act (ADA) and does not require floor receivers on paired applications.

Product Features

Thickness		1¾" (44mm), 2¼" (57mm)
Maximum size		Available prefit up to: Singles: 4'0" x 9'0" (1219 x 2743mm). Pairs: 8'0" x 9'0" (2438 x 2743mm), including double egress pairs.
Stiles (Edge bands)		⅝" (16mm) Superstile
Top rail	**regular**	¼" (6.4mm) hardwood lumber.
	reinforced	See **Door** section table of contents.
Lockblocks		For exit device reinforcement, see **Door** section table of contents.
Bottom rail	**regular**	1⅛" (27mm) hardwood lumber
	reinforced	See **Door** section table of contents.
Faces		All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50 " (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Crossbands		1/16" (1.6mm) minimum wood-based composite.
Adhesives		Doors constructed using water-resistant adhesives (Type 1).
Veneer matching		Available as pairs, sets or matching transoms.
Wood beaded lite openings		Maximum 136 in^2 (0.088m^2) cutout or 100 in^2 (0.065m^2) visible glass. See **Detail** 12 for glass options.
Metal vision panels		Maximum 100 in^2 (0.065m^2) visible glass. Maximums: 12" (305mm) width, 33" (838mm) length. Larger lites available with special glass. No temperature rise over 100 in^2. See **Detail** 12 for glass options.
Louvers		Up to 24" x 24" (610 x 610mm). Louver(s) not allowed in doors with lite openings, exit devices or smoke control doors.
Machining		See reverse side.
Finishing		Available in finishes with performance characteristics equivalent to AWI and WDMA Systems TR-6, standard or custom colors. Also available primed four sides, sealer six sides or sealed top and bottom. Opaque finish (OP-6) on MDO only.
Warranty		For interior only, full warranty for life of original installation.
Standards met or exceeded		WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Positive Pressure		S-label doors require Category H - Smoke & Draft Control Gasketing surface applied gasketing on the frame and on the meeting edge of pairs.

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Positive Pressure Category A FD 1½ Hour Door

COLUMN	1	2
LABEL / FEATURE		**UL or ITS/WHI (Note:** All items may not be available with both agencies.)
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Transom:** 4'0" x 4'0" in a separate frame only. **Side Panels**: 4'0" x 9'0" (1219 x 2743mm)	**Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress
FACES	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.	
STILES AND RAILS	5/8" (16mm) Superstile with maple outer. Optional same species or plastic outer available. Top rail 1/4" (6.4mm). Bottom rail 1 1/16" (27mm). For rail and lock block reinforcement, see **Door** section table of contents.	
MAXIMUM WOOD VENEERED BEADED LITE	To 136 sq. in. (0.088m²) of cutout (100 sq. in. (0.065m²) of visible glass). Maximums: 13" (330mm) width, 34" (864mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. V-9 and V9C bead compatible with face veneer. See **Detail** 12 for glass options.	
MAXIMUM METAL VISION PANEL (Visible glass)	To 100 sq. in. (0.065m²) visible glass. 10" x 10", 8" x 12", 3" x 33", 5" x 20", 4" x 25", 6" x 16" sizes available. (254 x 254mm, 203 x 305mm, 76 x 838mm, 127 x 508mm, 102 x 635mm, 152 x 406mm sizes available.) Maximums: 12" (305mm) width, 33" (838mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. Combined multiple openings up to 100 sq. in. (0.065m²). Circular openings up to 11" (279mm) diameter. Larger lites available with special glass. No temperature rise over 100 in². See **Detail** 12 for glass options.	
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	24" x 24" (610 x 610mm) with 6" (152mm) perimeter at sides,10" (254mm) at bottom. Fusible link louvers only.	
HINGES	Per NFPA 80. Some specialty hinges allowed. Contact Algoma for information.	
LOCKSETS	All listed cylindrical, mortised, unit, card, electronic locks, and hospital push/pull to 5" (127mm) backset.	
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved. Pocket pivots not allowed. Intermediate pivots required for label and warranty.	
CLOSERS	Listed surface type. Throughbolt fastening required unless optional reinforcement is specified. Listed floor closers as approved. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 3/4" deep x 25" long.	
FIRE EXIT HARDWARE	**Singles:** Listed rim or mortise type with 5/8" (16mm) throw or surface vertical rods to 4'0" x 9'0" (1219 x 2743mm). **Pairs:** Mortise type on active and surface vertical rods on inactive. Listed rim devices with removable mullion. Surface vertical rods both doors. Hardware must be listed for use on wood doors. SVR-LBR on both doors, Sargent PP and PR8700 SVR-LBR. No floor holes required for SVR-LBR devices.	
OTHER PAIR HARDWARE	Pairs of doors with removable or fixed mullion **between** are considered as single swing.	Listed for use with wood doors. Surface or mortised door bolts. Manual, self-latching or automatic as codes allow.
Maximum trim: 3/4" (19mm) at bottom with standard rail. **Door Bottoms:** Max size 1"x1 15/16" listed surface or concealed.	**Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm). **Astragals and edge guards:** Are allowed on this construction.	**Electric Raceway:** Available with label on all doors.

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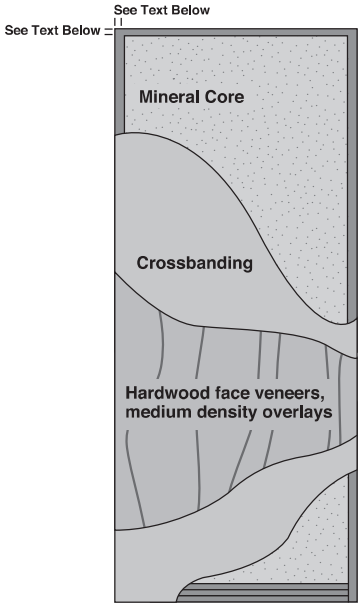
FD 1 Hour Door

(Neutral or Category B Positive Pressure)*



Algoma Hardwoods, Inc. has been making mineral core fire doors for more than 50 years. The mineral core door listed here has stood the test of time. The Algoma Mineral Core is unusually light and remarkably stable.

The 1 hour mineral core fire door, available in UL ratings, is suitable for room and corridor partition openings where rated doors are required.

The FD 1 Hour is manufactured with the Superstile for superior screw holding strength and split resistance. Also, reinforcements can be specified which allow surface mounted hardware to be installed with screws.

Surface Vertical Rod/Less Bottom Rod (SVR/LBR) and Concealed Vertical Rod (CVR) exit devices can both provide compliance with the Americans with Disabilities Act (ADA). CVR exit devices require the addition of metal edge channels which are not required with SVR/LBR exit devices. In addition, SVR/LBR exit devices are less expensive to install and require less maintenance.

*Some constructions may only be available as Category A.

Product Features

Thickness		1¾" (44mm), 2¼" (57mm)
Maximum size		Available prefit up to: Singles: 4'0" x 10'0" (1219 x 3048mm). Category B: 4'0" x 9'0" (1219 x 2743mm). Pairs: 8'0" x 9'0" (2438 x 2743mm), including double egress pairs. Listed concealed vertical rods: 8'0" x 9'3" (2438 x 2819mm)
Stiles (Edge bands)		⅝" (16mm) Superstile
Top rail	**regular**	¼" (6.4mm) hardwood lumber.
	reinforced	See **Door** section table of contents.
Lockblocks		For exit device reinforcement, see **Door** section table of contents.
Bottom rail	**regular**	1⅛" (27mm) hardwood lumber
	reinforced	See **Door** section table of contents.
Faces		All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Crossbands		1/16" (1.6mm) minimum wood-based composite.
Adhesives		Doors constructed using water-resistant adhesives (Type 1).
Veneer matching		Available as pairs, sets or matching transoms.
Wood beaded lite openings		Maximum 136 in^2 (0.088m^2) cutout or 100 in^2 (0.065m^2) visible glass. See **Detail** 12 for glass options.
Metal vision panels		Maximum 100 in^2 (0.065m^2) visible glass. Maximums: 12" (305mm) width, 33" (838mm) length. Larger lites available with special glass. No temperature rise over 100 in^2. See **Detail** 11 for glass options.
Louvers		Up to 24" x 24" (610 x 610mm). Louver(s) not allowed in doors with lite openings, exit devices or smoke control doors.
Machining		See reverse side.
Finishing		Available in finishes with performance characteristics equivalent to AWI and WDMA Systems TR-6, standard or custom colors. Also available primed four sides, sealer six sides or sealed top and bottom. Opaque finish (OP-6) on MDO only.
Warranty		For interior only, full warranty for life of original installation.
Standards met or exceeded		WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Positive Pressure		**Category B:** Singles and pairs require a category G edge seal plus a Category H smoke seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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FD 1 Hour Door

COLUMN	1	2
LABEL / FEATURE		**UL or ITS/WHI (Note:** All items may not be available with both agencies.)
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 10'0" (1219 x 3048mm); Category B: 4'0" x 9'0" (1219 x 2743mm). **Transom:** 4'0" x 4'0" (1219 x 1219mm) in a separate frame. Side Panels: 4'0" x 10'0" (1219 x 3048mm).	**Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress. **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm).
FACES	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.	
STILES AND RAILS	5/8" (16mm) Superstile with maple outer. Optional same species or plastic outer available. Top rail 1/4" (6.4mm). Bottom rail 1 1/16" (27mm). For rail and lock block reinforcement, see **Door** section table of contents.	
MAXIMUM WOOD VENEERED BEADED LITE	To 136 sq. in. (0.088m²) of cutout (100 sq. in. (0.065m²) of visible glass). Maximums: 13" (330mm) width, 34" (864mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. V-9 and V9C bead compatible with face veneer. To 1296 sq. in. with special glass and approval of AHJ (authority having jurisdiction). No temperature rise over 100 in². See **Detail** 11 for glass options.	
MAXIMUM METAL VISION PANEL (Visible glass)	To 100 sq. in. (0.065m²) visible glass. 10" x 10", 8" x 12", 3" x 33", 5" x 20", 4" x 25", 6" x 16" sizes available. (254 x 254mm, 203 x 305mm, 76 x 838mm, 127 x 508mm, 102 x 635mm, 152 x 406mm sizes available.) Maximums: 12" (305mm) width, 33" (838mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. Combined multiple openings up to 100 sq. in. (0.065m²). Circular openings up to 11" (279mm) diameter. To 1296 sq. in. with special glass and approval of AHJ (authority having jurisdiction). No temperature rise over 100 in². See **Detail** 11 for glass options.	
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	24" x 24" (610 x 610mm) with 6" (152mm) perimeter at sides,10" (254mm) at bottom. Fusible link louvers only.	
HINGES	Per NFPA 80. Some specialty hinges allowed. Contact Algoma for information.	
LOCKSETS	All listed cylindrical, mortised, unit, card, electronic locks, and hospital push/pull to 5" (127mm) backset.	
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved. Pocket pivots not allowed. Intermediate pivots required for label and warranty.	
CLOSERS	Listed surface type. Throughbolt fastening required unless optional reinforcement is specified. Listed floor closers as approved. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 3/4" deep x 25" long.	
FIRE EXIT HARDWARE	**Singles:** Listed rim or mortise type with 5/8" (16mm) throw or surface vertical rods to 4'0" x 9'0" (1219 x 2743mm). **Pairs:** Mortise type on active and surface vertical rods on inactive. Listed rim devices with removable mullion. Surface vertical rods without metal channels require special construction. (Matching veneer wrap optional.) Listed concealed vertical rod exit devices to 8'0" x 9'3" (2438 x 2819mm) with special channels on meeting edges with no overlapping astragal. Hardware must be listed for use on wood doors. SVR-LBR on both doors requires metal channels prepped for heat activated bolt between the leaves, no floor bolts required. Sargent PP and PR8700 SVR-LBR require special construction; metal edges are not required.	
OTHER PAIR HARDWARE	Pairs of doors with removable or fixed mullion **between** are considered as single swing.	Listed for use with wood doors. Surface or mortised door bolts. Manual, self-latching or automatic as codes allow.
Maximum trim: 3/4" (19mm) at bottom with standard rail. **Door Bottoms:** Max size 1"x1 15/16" listed surface or concealed.	**Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm). **Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Electric Raceway:** Available with label on all doors.

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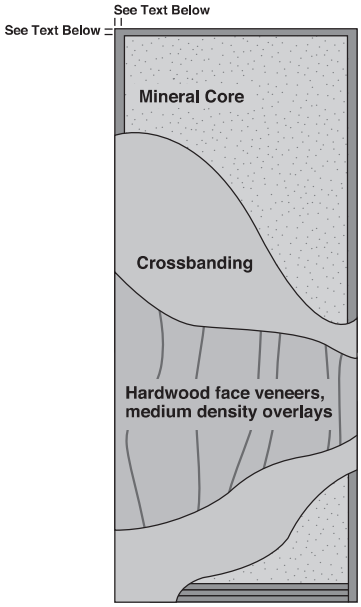
Positive Pressure Category A FD 1 Hour Door



Note: Category A doors feature a concealed intumescent engineered into the construction of the door.

Algoma Hardwoods, Inc. has been making mineral core fire doors for more than 50 years. The mineral core door listed here has stood the test of time. The Algoma Mineral Core is unusually light and remarkably stable.

The 1 hour mineral core fire door, available in UL rating, is suitable for room and corridor partition openings where rated doors are required.

The FD 1 Hour is manufactured with the Superstile for superior screw holding strength and split resistance. Also, reinforcements can be specified which allow surface mounted hardware to be installed with screws.

Surface Vertical Rod/Less Bottom Rod (SVR/LBR) device provides compliance with the Americans with Disabilities Act (ADA) and do not require floor receivers on paired applications.

Product Features

Thickness		1¾" (44mm), 2¼" (57mm)
Maximum size		Available prefit up to: Singles: 4'0" x 9'0" (1219 x 2743mm). Category B: 4'0" x 9'0" (1219 x 2743mm). Pairs: 8'0" x 9'0" (2438 x 2743mm), including double egress pairs.
Stiles (Edge bands)		⅝" (16mm) Superstile
Top rail	**regular**	¼" (6.4mm) hardwood lumber.
	reinforced	See **Door** section table of contents.
Lockblocks		For exit device reinforcement, see **Door** section table of contents.
Bottom rail	**regular**	1⅛" (27mm) hardwood lumber
	reinforced	See **Door** section table of contents.
Faces		All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Crossbands		1/16" (1.6mm) minimum wood-based composite.
Adhesives		Doors constructed using water-resistant adhesives (Type 1).
Veneer matching		Available as pairs, sets or matching transoms.
Wood beaded lite openings		Maximum 136 in² (0.088m²) cutout or 100 in² (0.065m²) visible glass. See **Detail** 12 for glass options. Larger lites available with special glass.
Metal vision panels		Maximum 100 in² (0.065m²) visible glass. Maximums: 12" (305mm) width, 33" (838mm) length. No temperature rise over 100 in². See **Detail** 12 for glass options.
Louvers		Up to 24" x 24" (610 x 610mm). Louver(s) not allowed in doors with lite openings, exit devices or smoke control doors.
Machining		See reverse side.
Finishing		Available in finishes with performance characteristics equivalent to AWI and WDMA Systems TR-6, standard or custom colors. Also available primed four sides, sealer six sides or sealed top and bottom. Opaque finish (OP-6) on MDO only.
Warranty		For interior only, full warranty for life of original installation.
Standards met or exceeded		WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Smoke Doors		S-label doors require Category H - Smoke & Draft Control Gasketing surface applied gasketing on the frame and on the meeting edge of pairs.

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Positive Pressure Category A FD 1 Hour Door

COLUMN	1	2
LABEL / FEATURE		**UL or ITS/WHI (Note:** All items may not be available with both agencies.)
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Transom:** 4'0" x 4'0" in a separate frame only. **Side Panels**: 4'0" x 9'0" (1219 x 2743mm)	**Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress
FACES	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.	
STILES AND RAILS	5/8" (16mm) Superstile with maple outer. Optional same species or plastic outer available. Top rail 1/4" (6.4mm). Bottom rail 1 1/16" (27mm). For rail and lock block reinforcement, see **Door** section table of contents.	
MAXIMUM WOOD VENEERED BEADED LITE	To 136 sq. in. (0.088m²) of cutout (100 sq. in. (0.065m²) of visible glass). Maximums: 13" (330mm) width, 34" (864mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. V-9 and V9C bead compatible with face veneer. See **Detail** 12 for glass options.	
MAXIMUM METAL VISION PANEL (Visible glass)	To 100 sq. in. (0.065m²) visible glass. 10" x 10", 8" x 12", 3" x 33", 5" x 20", 4" x 25", 6" x 16" sizes available. (254 x 254mm, 203 x 305mm, 76 x 838mm, 127 x 508mm, 102 x 635mm, 152 x 406mm sizes available.) Maximums: 12" (305mm) width, 33" (838mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. Combined multiple openings up to 100 sq. in. (0.065m²). Circular openings up to 11" (279mm) diameter. Larger lites available with special glass. No temperature rise over 100 in². See **Detail** 12 for glass options.	
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	24" x 24" (610 x 610mm) with 6" (152mm) perimeter at sides,10" (254mm) at bottom. Fusible link louvers only.	
HINGES	Per NFPA 80. Some specialty hinges allowed. Contact Algoma for information.	
LOCKSETS	All listed cylindrical, mortised, unit, card, electronic locks, and hospital push/pull to 5" (127mm) backset.	
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved. Pocket pivots not allowed. Intermediate pivots required for label and warranty.	
CLOSERS	Listed surface type. Throughbolt fastening required unless optional reinforcement is specified. Listed floor closers as approved. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 3/4" deep x 25" long.	
FIRE EXIT HARDWARE	**Singles:** Listed rim or mortise type with 5/8" (16mm) throw or surface vertical rods to 4'0" x 9'0" (1219 x 2743mm). **Pairs:** Mortise type on active and surface vertical rods on inactive. Listed rim devices with removable mullion. Hardware must be listed for use on wood doors. SVR-LBR on both doors, Sargent PP and PR 8700 SVR-LBR. No floor holes required for SVR-LBR devices.	
OTHER PAIR HARDWARE	Pairs of doors with removable or fixed mullion **between** are considered as single swing.	Listed for use with wood doors. Surface or mortised door bolts. Manual, self-latching or automatic as codes allow.
Maximum trim: 3/4" (19mm) at bottom with standard rail. **Door Bottoms:** Max size 1"x1 15/16" listed surface or concealed.	**Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm). **Astragals and edge guards:** Are allowed on this construction.	**Electric Raceway:** Available with label on all doors.

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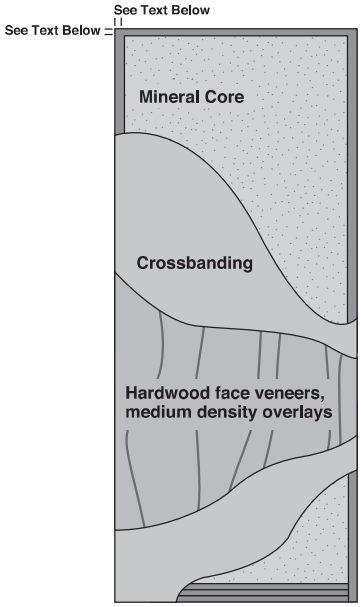
FD ¾ Hour Door

(Neutral or Category B Positive Pressure)*



Algoma Hardwoods, Inc. has been making mineral core fire doors for more than 50 years. The mineral core door listed here has stood the test of time. The Algoma Mineral Core is unusually light and remarkably stable.

The ¾-hour mineral core fire door, available in UL or ITS/WHI ratings, is suitable for room and corridor partition openings where rated doors are required.

The FD ¾ Hour is manufactured with the Superstile for superior screw holding strength and split resistance. Also, reinforcements can be specified which allow surface mounted hardware to be installed with screws.

Surface Vertical Rod/Less Bottom Rod (SVR/LBR) and Concealed Vertical Rod (CVR) exit devices can both provide compliance with the Americans with Disabilities Act (ADA). CVR exit devices require the addition of metal edge channels which are not required with SVR/LBR exit devices. In addition, SVR/LBR exit devices are less expensive to install and require less maintenance.

*Some constructions may only be available as Category A

Product Features

Thickness		1¾" (44mm), 2¼" (57mm)
Maximum size		Available prefit up to: Singles: 4'0" x 10'0" (1219 x 3048mm). Category B: 4'0" x 9'0" (1219 x 2743mm). Pairs: 8'0" x 9'0" (2438 x 2743mm), including double egress pairs. Listed concealed vertical rods: 8'0" x 9'3" (2438 x 2819mm)
Stiles (Edge bands)		⅝" (16mm) Superstile
Top rail	**regular**	¼" (6.4mm) hardwood lumber.
	reinforced	See **Door** section table of contents.
Lockblocks		For exit device reinforcement, see **Door** section table of contents.
Bottom rail	**regular**	1⅛" (27mm) hardwood lumber
	reinforced	See **Door** section table of contents.
Faces		All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Crossbands		1/16" (1.6mm) minimum wood-based composite.
Adhesives		Doors constructed using water-resistant adhesives (Type 1).
Veneer matching		Available as pairs, sets or matching transoms.
Wood beaded lite openings		Maximum 1415 in^2 (0.913m^2) cutout or 1296 in^2 (0.836m^2) visible glass. See **Detail** 11 for glass options.
Metal vision panels		Maximum 1296 in^2 (0.836m^2) visible glass. Maximums: 30" (762mm) width, 54" (1372mm) length. See **Detail** 11 for glass options.
Louvers		Up to 24" x 24" (610 x 610mm). Louver(s) not allowed in doors with lite openings, exit devices or smoke control doors.
Machining		See reverse side.
Finishing		Available in finishes with performance characteristics equivalent to AWI and WDMA Systems TR-6, standard or custom colors. Also available primed four sides, sealer six sides or sealed top and bottom. Opaque finish (OP-6) on MDO only.
Warranty		For interior only, full warranty for life of original installation.
Standards met or exceeded		WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Positive Pressure		**Category B:** Singles and pairs require a category G edge seal plus a Category H smoke seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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FD ¾ Hour Door

COLUMN	1	2
LABEL / FEATURE		**UL or ITS/WHI (Note:** All items may not be available with both agencies.)
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 10'0" (1219 x 3048mm). **Transom:** 4'0" x 4'0" in a separate frame only. **Side Panels**: 4'0" x 10'0" (1219 x 3048mm)	**Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm), UL only.
FACES	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.	
STILES AND RAILS	5/8" (16mm) Superstile with maple outer. Optional same species or plastic outer available. Top rail ¼" (6.4mm). Bottom rail 1 1/16" (27mm). For rail and lock block reinforcement, see **Door** section table of contents.	
MAXIMUM WOOD VENEERED BEADED LITE	To 1415 sq. in. (0.913m²) of cutout (1296 sq. in. (0.836m²) of visible glass). Maximums: 30" (762mm) width, 54" (1372mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. V-9 and V9C bead compatible with face veneer. See **Detail** 11 for glass options.	
MAXIMUM METAL VISION PANEL (Visible glass)	To 1296 sq. in. (0.836m2) visible glass. Combined multiple openings up to 1296 sq. in. (0.836m2). Minimum 5" (127mm) perimeter from cutout to top and sides or lock. Circular openings with 11" (279mm), 17" (432mm) or 23" (584mm) diameter visible glass. See **Detail** 11 for glass options.	
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	24" x 24" (610 x 610mm) with 6" (152mm) perimeter at sides,10" (254mm) at bottom.	
HINGES	Ball bearing steel mortised, half or full surfaced 4½" x 4½" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4½" x 4½" x .134". Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.	
LOCKSETS	All listed cylindrical, mortised, unit, and hospital push/pull to 5" (127mm) backset.	
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 ¼, Unichecks 65 thru 68, or equal. Others as approved. Pocket pivots not allowed. Pivots require blocking on top and bottom of door.	
CLOSERS	Listed surface type. Throughbolt fastening required unless optional reinforcement is specified. Listed floor closers as approved. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1⅜" wide x 1¾" deep x 25" long.	
FIRE EXIT HARDWARE	**Singles:** Listed rim or mortise type with 5/8" (16mm) throw or surface vertical rods to 4'0" x 9'0" (1219 x 2743mm). **Pairs:** Mortise type on active and surface vertical rods on inactive. Listed rim devices with removable mullion. Surface vertical rods both doors get metal channels. Surface vertical rods without metal channels require special construction. (Matching veneer wrap optional.) Listed concealed vertical rod exit devices to 8'0" x 9'3" (2438 x 2819mm) with special channels on meeting edges with no overlapping astragal. Hardware must be listed for use on wood doors. SVR-LBR on both doors requires metal channels prepped for heat activated bolt between the leaves, no floor bolts required. Sargent PP and PR8700 SVR-LBR require special construction; metal edges are not required.	
OTHER PAIR HARDWARE	Pairs of doors with removable or fixed mullion **between** are considered as single swing.	Listed for use with wood doors. Surface or mortised door bolts. Manual, self-latching or automatic as codes allow.
Maximum trim: ¾" (19mm) at bottom with standard rail. **Door Bottoms:** Max size 1"x1 15/16" listed surface or concealed.	**Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm). **Astragals and edge guards:** Must be supplied and cut for hardware under label on this construction.	**Electric Raceway:** Available with label on all doors.

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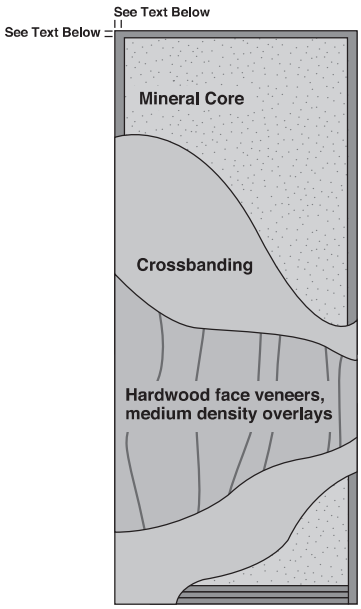
Positive Pressure Category A FD ¾ Hour Door



Note: Category A doors feature a concealed intumescent engineered into the construction of the door.

Algoma Hardwoods, Inc. has been making mineral core fire doors for more than 50 years. The mineral core door listed here has stood the test of time. The Algoma Mineral Core is unusually light and remarkably stable.

The ¾-hour mineral core fire door, available in UL rating, is suitable for room and corridor partition openings where rated doors are required.

The FD ¾ Hour is manufactured with the Superstile for superior screw holding strength and split resistance. Also, reinforcements can be specified which allow surface mounted hardware to be installed with screws.

Surface Vertical Rod/Less Bottom Rod (SVR/LBR) device provides compliance with the Americans with Disabilities Act (ADA) and do not require floor receivers in pair applications.

Product Features

Thickness		1¾" (44mm), 2¼" (57mm)
Maximum size		Available prefit up to: Singles: 4'0" x 9'0" (1219 x 2743mm). Category B: 8'0" x 9'0" (2438 x 2743mm), including double egress pairs.
Stiles (Edge bands)		Singles: ⅝" (16mm) Superstile
Top rail	**regular**	¼" (6.4mm) hardwood lumber.
	reinforced	See **Door** section table of contents.
Lockblocks		For exit device reinforcement, see **Door** section table of contents.
Bottom rail	**regular**	1⅛" (27mm) hardwood lumber
	reinforced	See **Door** section table of contents.
Faces		All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of ⅕₀" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Crossbands		1/16" (1.6mm) minimum wood-based composite.
Adhesives		Doors constructed using water-resistant adhesives (Type 1).
Veneer matching		Available as pairs, sets or matching transoms.
Wood beaded lite openings		Maximum 1415 in² (0.914m²) cutout or 1296 in² (0.836m²) visible glass. See **Detail** 12 for glass options.
Metal vision panels		Maximum 1296 in² (0.836m²) visible glass. Maximums: 30" (762mm) width, 54" (1372mm) length. See **Detail** 12 for glass options.
Louvers		Up to 24" x 24" (610 x 610mm). Louver(s) not allowed in doors with lite openings, exit devices or smoke control doors.
Machining		See reverse side.
Finishing		Available in finishes with performance characteristics equivalent to AWI and WDMA Systems TR-6, standard or custom colors. Also available primed four sides, sealer six sides or sealed top and bottom. Opaque finish (OP-6) on MDO only.
Warranty		For interior only, full warranty for life of original installation.
Standards met or exceeded		WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Smoke Doors		S-label doors require Category H - Smoke & Draft Control Gasketing surface applied gasketing on the frame and on the meeting edge of pairs.

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Positive Pressure Category A FD ¾ Hour Door

COLUMN	1	2
LABEL / FEATURE		**UL or ITS/WHI (Note:** All items may not be available with both agencies.)
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Transom:** 4'0" x 4'0" (1219 x 1219mm) in a separate frame only. **Side Panels**: 4'0" x 9'0" (1219 x 2743mm)	**Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress
FACES	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.	
STILES AND RAILS	5/8" (16mm) Superstile with maple outer. Optional same species or plastic outer available. Top rail ¼" (6.4mm). Bottom rail 1 1/16" (27mm). For rail and lock block reinforcement, see **Door** section table of contents.	
MAXIMUM WOOD VENEERED BEADED LITE	To 1415 sq. in. (0.904m²) of cutout (1296 sq. in. (0.836m²) of visible glass). Maximums: 30" (762mm) width, 54" (1372mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides. V-9C and V9C bead compatible with face veneer. See **Detail** 12 for glass options.	
MAXIMUM METAL VISION PANEL (Visible glass)	To 1296 sq. in. (0.836m²) visible glass. Combined multiple openings up to 1296 sq. in. (0.836m²). Minimum 5" (127mm) perimeter from cutout to top and sides. Circular openings with 11" (279mm), 17" (432mm) or 23" (584mm) diameter visible glass. See **Detail** 12 for glass options.	
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	24" x 24" (610 x 610mm) with 6" (152mm) perimeter at sides,10" (254mm) at bottom.	
HINGES	Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.	
LOCKSETS	All listed cylindrical, mortised, unit, and hospital push/pull to 5" (127mm) backset.	
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 ¼, Unichecks 65 thru 68, or equal. Others as approved. Pocket pivots not allowed. Pivots require blocking on top and bottom of door.	
CLOSERS	Listed surface type. Throughbolt fastening required unless optional reinforcement is specified. Listed floor closers as approved. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1⅜" wide x 1¾" deep x 25" long.	
FIRE EXIT HARDWARE	**Singles:** Listed rim or mortise type with 5/8" (16mm) throw or surface vertical rods to 4'0" x 9'0" (1219 x 2743mm). **Pairs:** Mortise type on active and surface vertical rods on inactive. Listed rim devices with removable mullion. Hardware must be listed for use on wood doors. SVR-LBR on both doors, Sargent PP and PR8700 SVR-LBR. No floor holes required for SVR-LBR devices.	
OTHER PAIR HARDWARE	Pairs of doors with removable or fixed mullion **between** are considered as single swing.	Listed for use with wood doors. Surface or mortised door bolts. Manual, self-latching or automatic as codes allow.
Maximum trim: ¾" (19mm) at bottom with standard rail. **Door Bottoms:** Max size 1"x1 15/16" listed surface or concealed.	**Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm). **Astragals and edge guards:** Are allowed on this construction.	**Electric Raceway:** Available with label on all doors.

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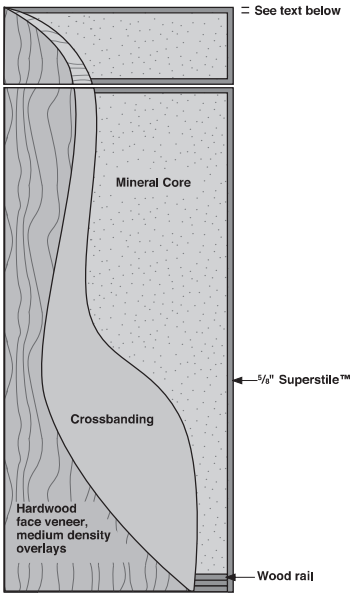
FD 1½ Hour Door and Transom

Model 11-DT



The Model 11-DT is ideal for installations where doors and transoms with any label through 1½ hour rating are required. Veneers on both sides are continuous matched with a rabbeted joint at the meeting edge. The 11-DT can also be used in ¾ or 1 hour installations.

The 11-DT is made with ⅝" Superstiles to ensure added screw holding power

Product Features

Thickness	1¾" (44mm)
Maximum size	4'0" x 11'0" (1219 x 3353mm). Door: 4'0" x 8'0" (1219 x 2438mm). Transom 4'0" x 4'0" (1219 x 1219mm).
Stiles (Edge bands)	Door and transom: ⅝" (16mm) multi-ply Superstile.
Top and bottom rails	Transom top is ¼" (6.4mm) nominal, outer hardwood lumber. Transom bottom and door top are 1½" (38mm) high density material. Door bottom is 1⅛" (27mm), outer hardwood lumber. Meeting rails are rabbeted ½" x ⅞" (13mm x 22mm). Meeting rails can be painted compatible with finished faces or veneer banded. Plastic doors require painted bottom rails. For reinforcements, see **Door** section table of contents.
Faces	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Crossbands	1/16" (1.6mm) minimum wood-based composite.
Adhesives	Doors constructed using water-resistant adhesives (Type 2).
Veneer matching	Veneer faces can be end matched from door to transom; pairs not allowed.
Wood beaded lite openings	Maximum 136 in^2 (0.088m^2) cutout or 100 in^2 (0.065m^2) visible glass. Larger lites available with special glazing. See Detail 11 for glass options.
Metal vision panels	Maximum 100 in^2 (0.065m^2) visible glass. Maximums: 12" (305mm) width, 33" (838mm) length. Larger lites available with special glass. No temperature rise if glass area is greater than 100 in^2. See Detail 11 for glass options.
Louvers	Up to 24" x 24" (610 x 610mm). Louver(s) not allowed in doors with lite openings, exit devices or smoke control doors.
Machining	Same as FD 1½ Hour Door, (page **Door 3**) except no pairs, top pivots or anchor hinges.
Finishing	Available in finishes with performance characteristics equivalent to AWI System TR-6, standard or custom colors. Also available primed four sides or sealed top and bottom. Opaque finish (OP-6) on medium density overlay only.
Warranty	For interior, full warranty for life of original installation.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5.

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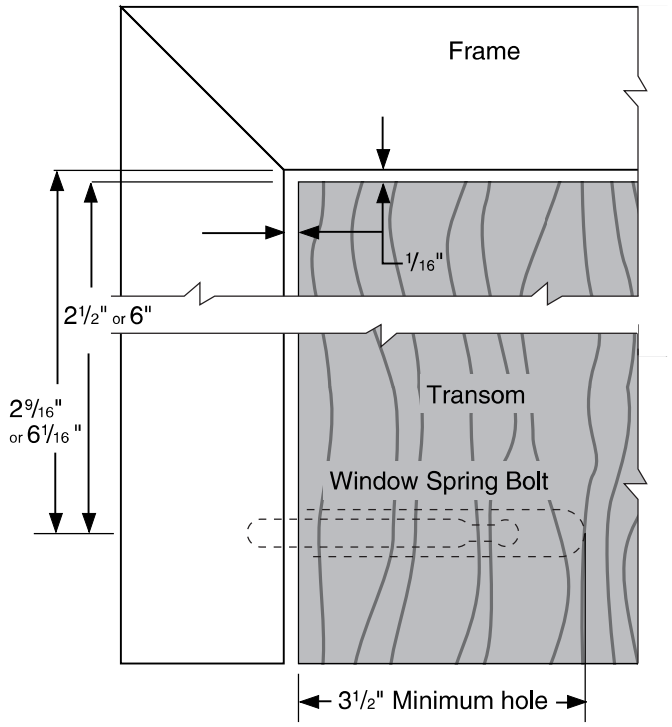
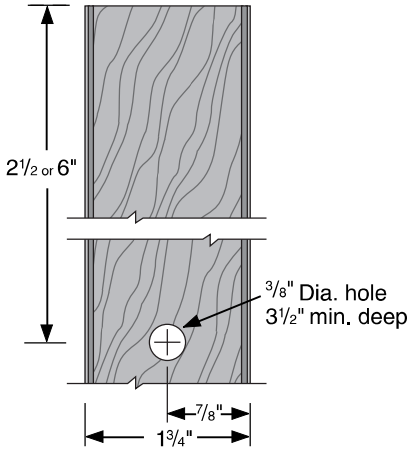
FD 1½ Hour Door and Transom

Transom Panel Installation with Concealed Fastener



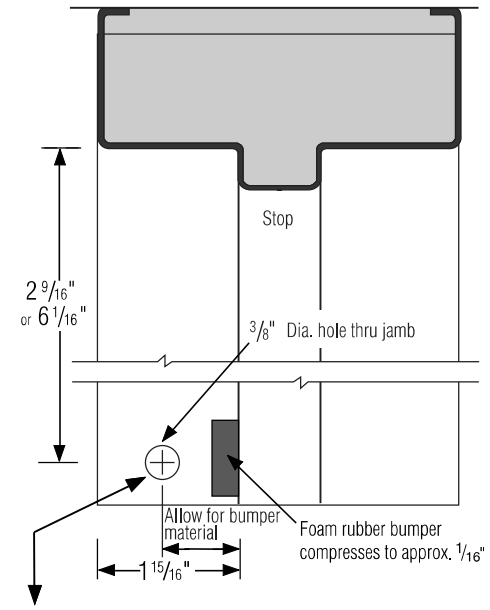
Transom In Place (elevation)



Edge of Transom (side view)

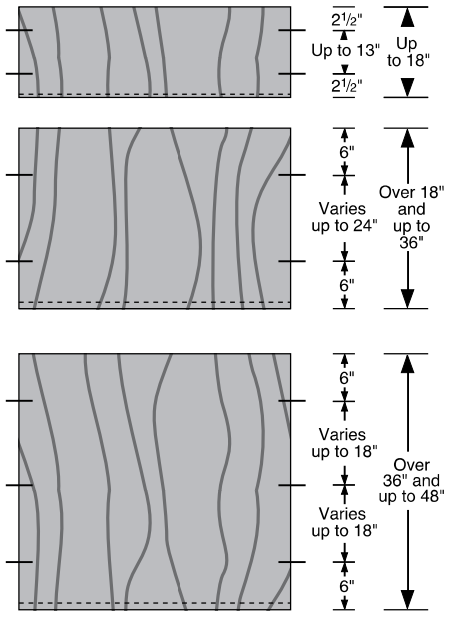
Procedure

1. Bore ⅜" x 3½" deep holes in edge of transom panel as indicated: 2 holes per side for a panel up to 36"; 3 holes per side for 36–48" panel. For panels less than 18" in height, spring bolts should be paced 2½" from the top and bottom edges.
2. Bore ⅜" holes through the jamb as indicated in same position as above relative to the stop.
3. Apply small pieces of ¼" thick self-adhering foam weatherstrip to edge of stop adjacent to holes in jamb.
4. Insert 3½" window spring bolts in transom (furnished by Algoma).
5. Install transom panel by engaging spring bolts at one side of transom in jamb holes, depress spring bolts at other side and close transom until depressed bolts spring open.

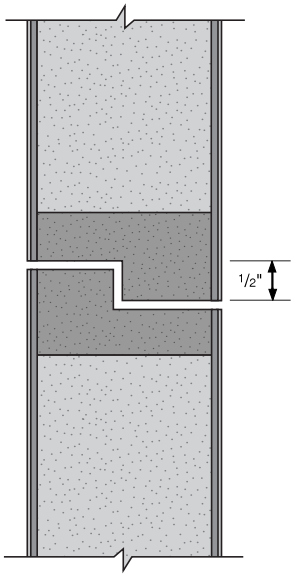


Frame hole to be drilled at time of installation to ensure alignment with spring bolt hole

Metal Frame (side view)



Typical Positioning of Fasteners



Rabbet Detail

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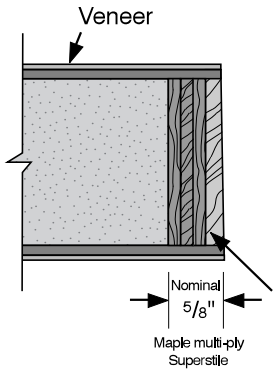
Superstile



Maple lumber outer stile is standard. **Outer stile may be specified to match face veneer or plastic laminate face.**

The Superstile — the best wood fire door stile edge available — is standard on all FD 1½, 1 and ¾ hour fire doors. Algoma Hardwoods FD 1½, 1 and ¾ hour fire doors are fully warranted for use with full mortise butt hinges.

The table below shows the split resistance and screw withdrawal of Algoma's solid wood Superstile. The multi-ply inner and the solid lumber outer are laminated into one solid piece to provide the necessary split resistance and screw withdrawal resistance needed for high-frequency use.

All Algoma Hardwoods FD 1½, 1 and ¾ hour fire doors are prefit and beveled at the factory. This allows the maximum amount of stile to ensure proper screw holding.

Specification Statement

All paired or single swing FD 1½, 1 and ¾ hour fire doors shall be supplied mortised for butts in Algoma Hardwoods' Superstile edge. The butts shall be installed with #12 x 1¼" fully threaded steel screws with constant diameter wood type threads. Pilot holes of 5/32" diameter must be used.

Algoma Superstile Specifications

1½ hour Stile Edge Doors	Cleavage (splitting) in pounds of pull/screw†	Screw Withdrawal in pounds of pull/screw†
5/8" Algoma Superstile	1305	877

† All tests were conducted on edges that were reduced in thickness by .134" from the dimension shown to represent the thickness of a hinge. All tests were conducted using a #12 x 1¼" fully threaded steel screw with constant diameter wood type threads. Test reports on Algoma's Superstile are available on request.

Note: All tests on Superstiles were conducted according to ASTM D-1037-78 for screw withdrawal and ASTM D-143-52(78) modified for cleavage (splitting).

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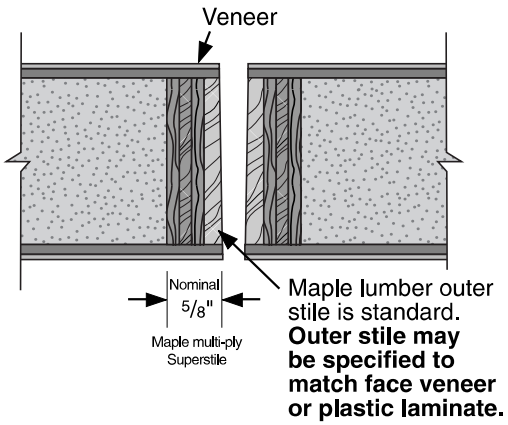
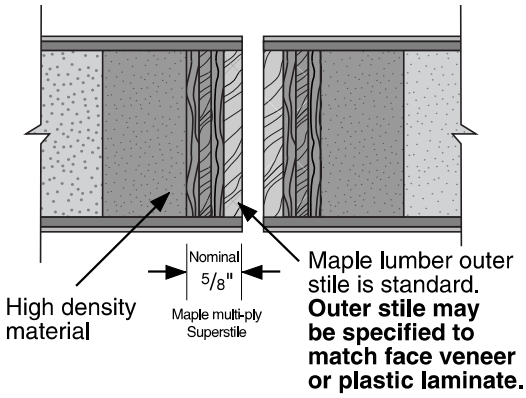
MetalFree Stiles for Pairs

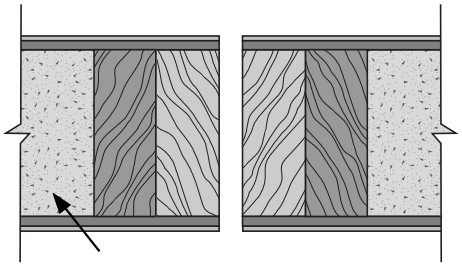
For Paired Fire Doors



FD 1 and ¾ Hour MetalFree Superstiles



FD 1½ Hour MetalFree Stiles



FD ⅓ Hour MetalFree Stiles

Details shown are available on paired fire doors.

Pairs in 1½, 1 and ¾ hour ratings are available **without** metal astragals or edge guards if listed surface vertical rod exit devices are used on both doors.

Pairs in ¾ , 1 and 1½ hour ratings are also available **without** metal astragals or edge guards when a listed mortise lock exit device is used on one leaf and a standard or open back strike and listed surface vertical rod exit device is used on the other leaf.

In addition, ¾ , 1 and 1½ hour ratings are available without metal astragals or edge guards when a listed lock is used in the active leaf, and a strike and listed wrap-around flush bolts are used in the inactive leaf.

All ⅓ hour pair doors are available **without** metal astragals or edge guards, except when listed concealed vertical rod exit devices are used.

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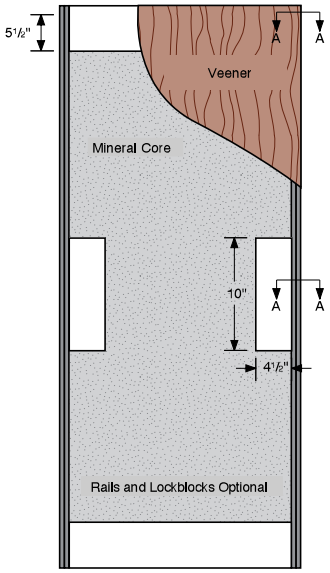
Superfire Door Reinforcement Options

Per National Fire Protection Association's Pamphlet #80



The Superfire Reinforcement System eliminates the need for throughbolts in mineral core fire doors.

Surface mounted items such as closers, vertical rod exit devices and push type panic devices, when mounted into the optional reinforcement with #12 fully threaded steel screws with constant diameter wood type threads, will withstand the strains and stresses that are typical of such hardware. Note: screw must penetrate door a minimum of 1¼". **Pilot holes must be drilled 5⁄32" in diameter. Do not use self-tapping or combination wood/metal screws.**

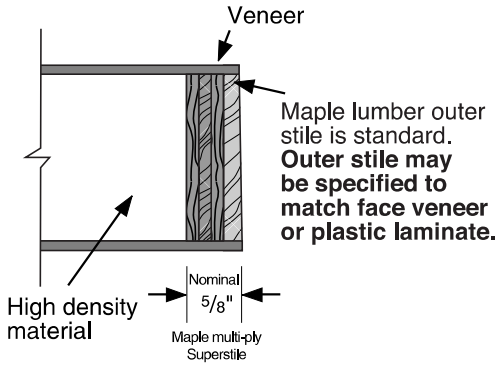
The table below shows the results of laboratory testing. **Screw withdrawal from the Algoma Superfire core reinforcement outperforms throughbolt withdrawal in any mineral core door.** When used with throughbolts, the blocking holds the throughbolts better than softwood stave, particleboard or mineral core.

Specification Statement
All paired or single swing FD1½, 1 and ¾ hour fire doors shall be supplied with core reinforcement material wherever surface mounted closers or fire exit devices are to be attached to the door. This hardware shall be installed with #12 fully threaded steel screws with constant diameter wood type threads, penetrating a minimum of 1½" into the door.

Algoma Reinforcement compared to other core materials

Core Material	Screw Withdrawal from Reinforcement in pounds of pull/screw	Throughbolt Withdrawal from Reinforcement in pounds of pull/throughbolt
Algoma's Rail & Lockblock Reinforcement*	**866**	**1472**
Structural Composite Lumber	850	–
Mineral Core	126	428

* Alternate high density materials with similar performance properties may be used at manufacturers discretion.



Section AA

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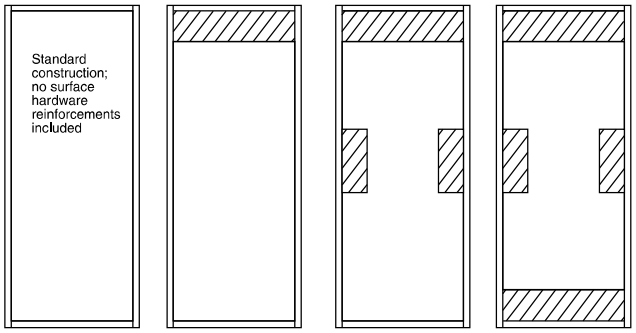
Superfire Door Reinforcement Options

Per National Fire Protection Association's Pamphlet #80

All surface mounted hardware can be attached to Algoma Hardwoods 1½, 1 and ¾ hour fire doors and door/transoms with screws rather than throughbolts. It is necessary to specify core reinforcements at the top or bottom rails, or at intermediate locations where surface mounted hardware is to be applied with screws, or when top, bottom and intermediate pivots are used.

Note: Single point latches (locks) do not require reinforcements.



A	B	C	D
• Mortised hinges • Locks • Throughbolt closer	• Screw attached closer	• Screw attached closer • Screw attached exit device	• Screw attached closer • Screw attached surface vertical rod exit device • Screw attached or mortised top and bottom pivots and intermediate pivot

Any configurations are available as pairs.

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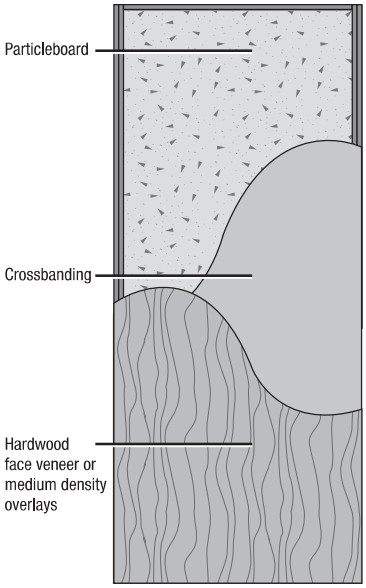
PC-5 Novodor® FD ⅓ Hour

(Neutral or Positive Pressure)



Algoma's Novodor is an architectural door made with a particleboard core.

Solid lumber outer stiles, along with Structural Composite Lumber (SCLC) rails and inner stiles, are securely bonded to the core under side pressure. To ensure strength, rigidity and freedom from telegraphing of core parts, this bonded core is then sanded before **hot pressing** a crossband and face on each side of the core assembly. This makes the highest quality assembly for fine hardwood veneers and composite overlays for solid color finishes.

Algoma uses only the better of two grades of particleboard conforming to ANSI Standard A208.1-1993, Type 1, Grade LD-2 with face screw holding power of 124 pounds, modulus of rupture of 725 psi, modulus of elasticity of 148,700 psi and density of 30–32 pounds per cubic foot.

Algoma uses only face veneers at least 1/50" (0.5mm) thick at 12% moisture content.

Positive Pressure Note: Algoma recommends using Category B 1/3 hour single swing doors. Please refer to Positive Pressure in Product Features Detail Section below. The selection of Category B 1/3 hour doors will offer cost savings and no aesthetic compromise.

Product Features

Thickness	1¾" (44mm) available FD ⅓ hour labeled. 1⅜" (35mm) available FD ⅓ hour labeled, neutral pressure only.
Maximum size	Available prefit up to 4'0" x 10'0" (1219 x 3048mm); **Category B:** 4'0" x 9'0" (1219 x 2743mm). In FD ⅓ hour, 4'0" x 10'0" is maximum for singles and 8'0" x 10'0" (2438 x 3048mm) pairs. Also available in double egress pairs up to 8'0" x 9'0".
Stiles (Edge bands)	1⅜" (35mm) prior to factory trimming, glued to core. CE–compatible edges standard. ME–same species available.
Special edge treatments	To reduce edge damage, polymer edges with FD ⅓ hour label available.
Top & bottom rails	⅞" (22mm) prior to factory trimming, glued to core; Structural Composite Lumber (SCL).
Core	Conforms to ANSI A208.1-1993, GRADE LD-2 covering mat-formed particleboard with face screw holding power of 124 pounds, modulus of rupture of 725 psi, modulus of elasticity of 148,700 psi and density of 30–32 pounds per cubic foot.
Reinforcement	Reinforced top and/or bottom rails are available to eliminate the need for through-bolting when installing closers or holders. Note: Screws must penetrate doors a minimum of 1½". Please see **Hardware 5** and **13** for PC-5 reinforcement options.
Crossbands	1/16" (1.6mm) minimum wood-based composite.
Faces	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Adhesive	Doors constructed using water-resistant adhesives (Type 1).
Veneer matching	Available in pairs, sets or matching transoms.
Details	Standard lites and louvers available not to exceed 40% of door area and 54" (1372mm) in length. Maximum glass opening on FD ⅓ hour doors is 1,296 sq. in. (0.836m²) with wood beads and clips or metal vision panels. Applied mouldings, quirks, and divided lites also available. Larger lites available with special glazing. (Contact Algoma for positive pressure approvals.) See Details 11 and 12.
Machining	Available with hinge and lock machining as well as rabbets, holders, drop seals, pivots, etc.
Finishing	Available in finishes with performance characteristics equivalent to AWI System TR-6, standard or custom colors. Also available primed four sides, painted, or sealed top and bottom. Opaque finish (OP-6) on medium density overlay only.
Warranty	For interior, full warranty for life of original installation. For exterior, see warranty.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Special services	Provides STC rating of 28 when supplied with gasketing. Provides detention security rating of Grade #40 with ASTM Impact Test F 476.
Positive Pressure	**Category A:** Singles and pairs have intumescent built into the door, and no additional fire seals are required. If smoke and draft control doors are also required, then a category H seal must be applied to the frame. **Category B:** Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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PC-5 Novodor® FD ⅓ Hour

COLUMN	1	2	3
LABEL / FEATURE	ITS/WHI	UL	UL or ITS/WHI AHI FD 1/3 Hour Door/Transom
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 10'0" (1219 x 3048mm). **Pairs:** 8'0" x 10'0" (2438 x 3048mm). Double egress 8'0" x 9'0" (2438 x 2743mm). Pairs over 8'0" (2438mm) in height need metal edge guards. (Positive pressure not available)	**Singles:** 4'0" x 10'0" (1219 x 3048mm); Category B: 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), neutral and positive pressure, including double egress. **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm).	**Total Opening:** 4'0" x 11'0" (1219 x 3353mm). **ITS/WHI Opening:** 4'0" x 10'0" (1219 x 3048mm). **Door:** 4'0" x 8'0" (1219 x 2438mm). **Transom:** 4'0" x 4'0" (1219 x 1219mm).
FACES	All foriegn and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S. 1-A face grades unless otherwise specified.		
STILES (VERTICAL EDGES) AND RAILS	All doors have either same species or compatible outers. Up to 13 1/2" (343mm) bottom rails allowed. Plastic laminate edges after faces.		Door/transom rabbeted 1/2" x 7/8" (13 x 22mm).
MAXIMUM WOOD VENEERED BEADED LITE	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glass and approval of AHJ (authority having jurisdiction). Contact Algoma for positive pressure approvals.		
MAXIMUM METAL VISION PANEL (Visible glass)	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glass and approval of AHJ (authority having jurisdiction). Contact Algoma for positive pressure approvals. 1 3/8" 20 minute doors limited to 100 sq. inch (.065m^2) metal vision panels only.		
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	Not allowed.	24" x 24" (610 x 610mm). Minimum 5" (127mm) from edge and 10" (203mm) from bottom. Neutral pressure only.	Not allowed.
HINGES Note: Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm).	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm).	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".
LOCKSETS	All listed cylindrical, mortised, unit, card, and hospital push/pull to 5" (127mm) backset.		
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved, including Pocket pivots.		Half or full mortised; top pivots not allowed unless frame is equipped with a fixed transom bar.
CLOSERS	Listed surface type or LCN using #420 Fireshield or Norton with Fire Block Liner #790, or Yale with Fire Block Liner #450.	UL listed surface type. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 3/4" deep x 25" long.	UL listed surface type.
FIRE EXIT HARDWARE (Allowed with vision panel if non-interfering)	**Singles:** Mortised, rim or surface vertical rods. **Pairs:** Rim (with mullion), surface vertical rods, or concealed vertical rods. Double egress allowed.	**Singles:** Mortised, rim, or surface vertical rods. **Pairs:** Mortised lock and strike, rim, surface or concealed vertical rods. Double egress allowed.	**Singles:** Mortised, rim or surface vertical rods. **Pairs:** Not available.
OTHER PAIR HARDWARE	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Listed for use with wood doors. Surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Not allowed
Maximum trim: 3/8" (19mm) with standard rail. **Door Bottoms:** Max size 1" x 1 15/16" listed surface or concealed.	**Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm). **Edges:** Polymer edges allowed where edge damage is likely.	**Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Wood Frames:** FD 1/3 Hour doors can be installed with 1/3 hour wood frames. **Electric Raceway:** Available with label on all doors.

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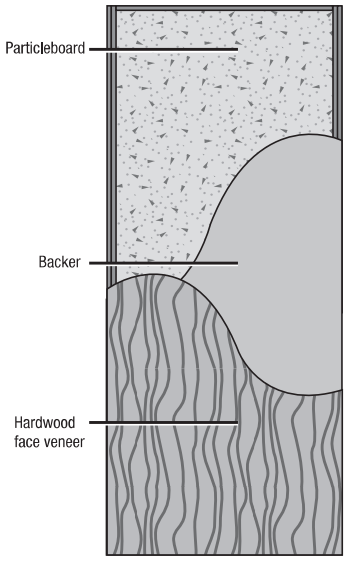
Commercial Cold Press FD ⅓ Hour Door



Algoma Hardwoods, Inc.CCP is a commercial door made with particleboard core and hardwood skins.

Solid lumber outer stiles along with Structural Composite Lumber (SCL) rails and inner stiles, are glued to the core prior to cold pressing a hardwood skin each side of the core at ambient air temperature.

Algoma Hardwoods, Inc uses only the better of two grades of door core particleboard conforming to ANSI Standard A208.1-1989, Grade LD-1.

Algoma Hardwoods, Inc. uses only skins with face veneers at least .020" (0.5mm) thick at 12% moisture content.

Product Features

Thickness	1¾" (44mm) available FD ⅓ hour labeled.
Maximum size	Available prefit up to 4'0" x 8'0" (1219 x 2743mm), 8'0" x 8'0" pairs.
Stiles (Edge bands)	1⅜" (35mm) prior to factory trimming, glued to core. Alternates: ME–matching edges or CE–compatible edges.
Top & bottom rails	⅞" (35mm) prior to factory trimming, glued to core; Structural Composite Lumber (SCL).
Core	Conforms to ANSI A208.1-1989, GRADE LD-1 covering mat-formed particleboard.
Faces	Skins 0.10" (2.5mm) of several veneer species. Faces shall be a minimum of .020" (0.5mm) at 12% moisture content.
Adhesives	Type II (interior).
Veneer matching	Available in pairs.
Details	Standard lites and louvers available not to exceed 40% of door area or 54" (1372mm) in length. Maximum glass opening on FD ⅓ hour doors is 1,296 sq. in. (0836m²) with wood beads and clips or metal vision panels. Applied mouldings also available.
Machining	Available with hinge and lock machining as well as other hardware.
Finishing	Available in finishes with performance characteristics equivalent to AWI System TR-6, standard or custom colors. Also available primed four sides, or sealed top and bottom.
Warranty	For interior, limited lifetime warranty. Exterior not warranted.
Standards met or exceeded	WDMA I.S. 1-A Series, WOOD FLUSH DOORS, AWS Section 9.

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Commercial Cold Press (CCP) FD ⅓ Hour Door

FEATURE	UL & ITS LABEL
Maximum opening size	**Singles:** 4'0" x 8'0" (1219 x 2438mm). **Pairs:** 8'0" x 8'0" (2438 x 2438mm).
Faces	Rotary Natural Birch, Sliced Red Oak, Paint Grade Birch, Rotary White Birch
Stiles (Vertical Edges) and rails	1⅜" (35mm) mill option stiles. All doors have either matching or mill option outers. Up to 12½" (318mm) bottom rails allowed.
Maximum wood veneered beaded lite	1296 sq. inches (0.836m²). Maximums: 30" (762mm) width, 54" (1372mm) length
Maximum metal vision panel (Visible lite)	1296 sq. inches (0.836m²). Maximums: 30" (762mm) width, 54" (1372mm) length
Maximum fusible link louver size (Not allowed with vision panel or exit devices)	Not allowed.
Hinges	Ball bearing steel mortised, half or full surfaced 4½" x 4½" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4½" x 4½" x .134"
Locksets	All listed cylindrical, mortised, unit, and hospital push/pull to 5" (127mm) backset. Unit locks only available with 2¾" (70mm) backset.
Pivots	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117¼, or equal. Others as approved.
Closers	UL listed surface type.
Fire Exit Hardware (Allowed with vision panel if non-interfering)	**Singles:** Mortised, rim or surface vertical rods. **Pairs:** Rim (with mullion) or surface vertical rods. Double egress allowed.
Other pair hardware	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.

Maximum trim: ⅜" (19mm) in the field.

Additional trim: Can be up to 11½" (292mm) if door is ordered with 12½" (318mm) bottom rail. Maximum undercut, ¾" (19mm).

Door Bottoms: Any listed surface or concealed.

Viewers: WHI up to 1" (25mm); UL up to ½" (12.7mm).

Astragals and edge guards: Must be supplied and cut for hardware under label service.

Wood Frames: FD ⅓ Hour doors can be installed with ⅓ hour wood frames.

Electric Raceway: Available with label on all doors.

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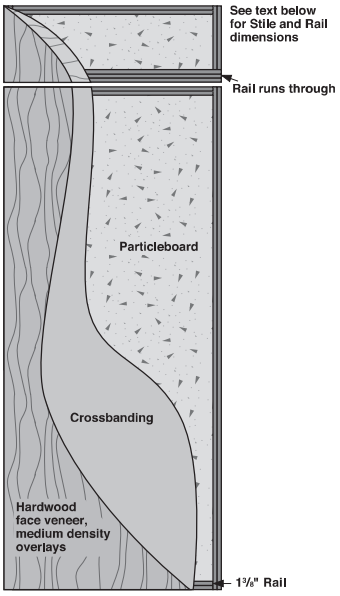
FD ⅓ Hour Door and Transom

(Neutral or Positive Pressure Category B)



Designed for openings where an FD ⅓ hour door is required and a door/transom combination fits the designer's needs. Continuous matched and rabbeted units are available.

Core construction is identical to the PC-5 Novodor®. Available in a wide selection of veneers.

Product Features

Thickness	1¾" (44mm) available FD ⅓ hour labeled.
Maximum size	Total Opening 4'0" x 11'0" (1219 x 3353mm). Door: 4'0" x 8'0" (1219 x 2438mm). Transom: 4'0" x 4'0" (1219 x 1219mm).
Stiles (Edge bands)	1⅜" (35mm) prior to factory trimming, glued to core.
Special edge treatments	To conceal crossbands and greatly reduce edge damage, polymer edges available with FD ⅓ hour label.
Top & bottom rails	Top of door and bottom of transom: 1⅜" (35mm) high density material. Meeting rails are rabbeted ½" x ⅞" (13mm x 22mm).
Core	Conforms to ANSI A208.1-1993, GRADE LD-2 covering mat-formed particleboard with face screw holding power of 124 pounds, modulus of rupture of 725 psi, modulus of elasticity of 148,700 psi and density of 30–32 pounds per cubic foot.
Crossbands	1/16" (1.6mm) minimum wood-based composite.
Faces	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Adhesive	Doors constructed using water-resistant adhesives (Type 2).
Veneer matching	Veneer faces can be continuous matched from door to transom; pairs not allowed.
Details	Standard lites and louvers available not to exceed 40% of door area and 54" (1372mm) in length. Maximum glass opening on FD ⅓ hour doors is 1,296 sq. in. (0.836m²) with wood beads and clips or metal vision panels. Applied mouldings, quirks, and divided lites also available. Larger lites available with special glazing. (Contact Algoma for positive pressure approvals.) See Details 11 and 12.
Machining	Available with hinge and lock machining as well as rabbets, drop seals, etc. See FD 1⁄3 Hour Door (page **Door 22**) column 3.
Finishing	Available in finishes with performance characteristics equivalent to AWI System TR-6, standard or custom colors. Also available primed four sides, painted, or sealed top and bottom. Opaque finishes (OP-6) on medium density overlay only.
Warranty	For interior, full warranty for life of original installation. For exterior, see warranty.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.

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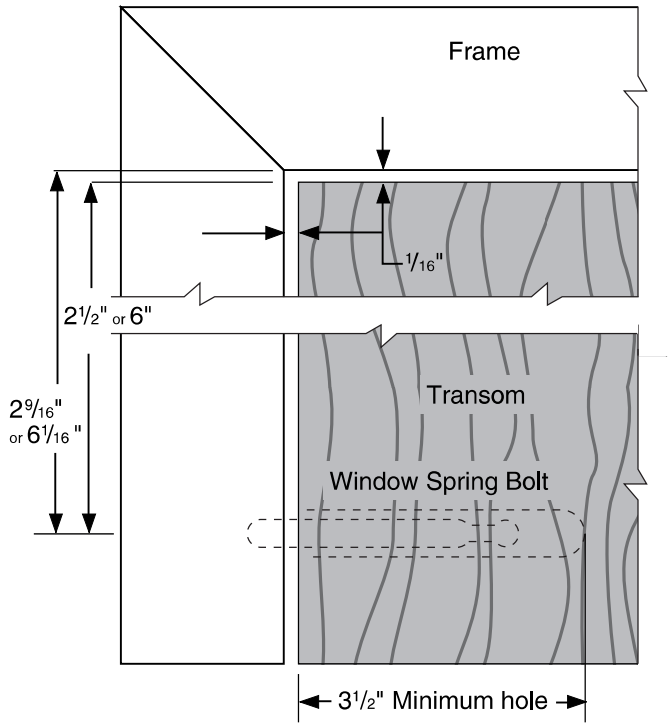
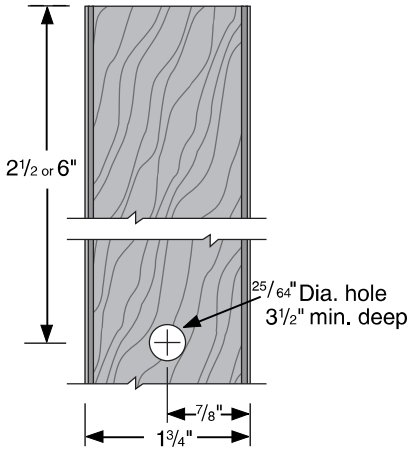
FD 1½ Hour Door and Transom

Transom Panel Installation with Concealed Fastener



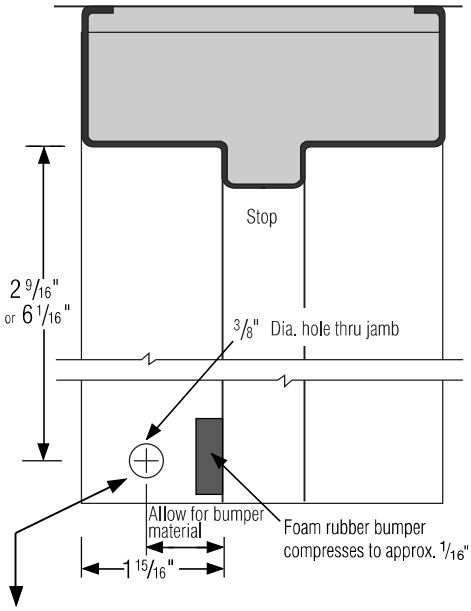
Transom In Place (elevation)



Edge of Transom (side view)

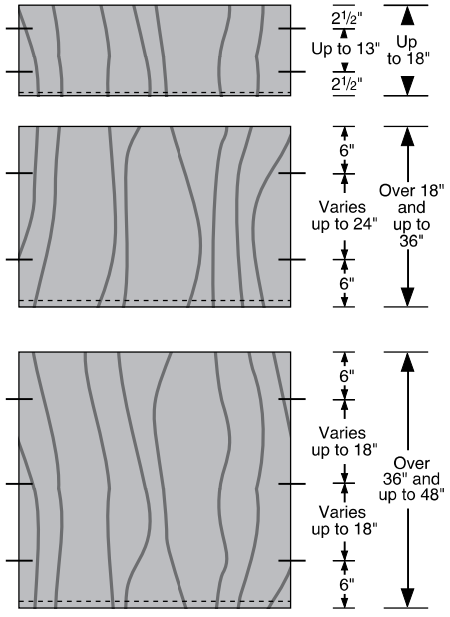
Procedure

1. Bore 25/64" x 3½" deep holes in edge of transom panel as indicated; 2 holes per side for a panel up to 36"; 3 holes per side for 36–48" panel.
2. Bore ⅜" holes through the jamb as indicated in same position as above relative to the stop.
3. Apply small pieces of ¼" thick self-adhering foam weatherstrip to edge of stop adjacent to holes in jamb.
4. Insert 3½" window spring bolts in transom (furnished by Algoma).
5. Install transom panel by engaging spring bolts at one side of transom in jamb holes, depress spring bolts at other side and close transom until depressed bolts spring open.

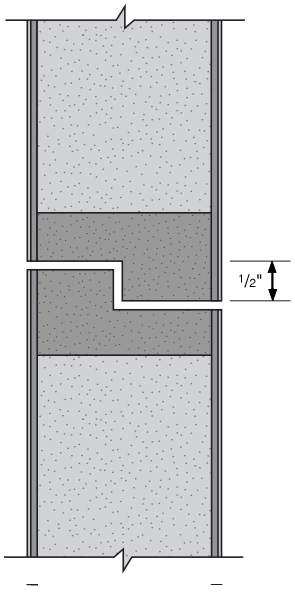


Frame hole to be drilled at time of installation to ensure alignment with spring bolt hole

Metal Frame (side view)



Typical Positioning of Fasteners



Rabbet Detail

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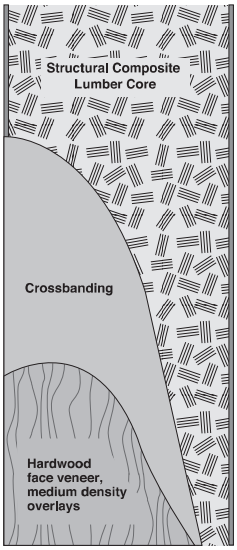
SCLC-5 Structural Composite Lumber Core

FD ⅓ Hour Door (Neutral or Positive Pressure)



Algoma's Architectural Structural Composite Lumber Core door utilizes an engineered hardwood strand board that is oriented and resin bonded to provide physical properties that equal or exceed solid lumber.

Stiles are securely bonded to the core. This construction provides strength, rigidity, and screw-holding power for surface mounted hardware to satisfy the most demanding applications.

Algoma uses only face veneers at least .020" (.5mm) thick at 12% moisture content.

Positive Pressure Note: Algoma recommends using Category B 1/3 hour single swing doors. Please refer to Positive Pressure in Product Features Detail Section below. The selection of Category B 1/3 hour doors will offer cost savings and no aesthetic compromise.

Product Features

Thickness	1¾" (44mm) available FD ⅓ hour labeled. 1⅜" (35mm) available non-labeled.
Maximum size	Available prefit up to 4'0" x 10'0" (1219 x 3048mm). In FD ⅓ hour, 4'0" x 9'0" (1219 x 2743mm) is maximum for singles and 8'0" x 9'0" (2438 x 2743mm) for pairs. Also available in double egress pairs up to 8'0" x 9'0" (2438 x 2743mm).
Stiles (Edge bands)	7⁄8" (22mm) prior to factory trimming, glued to core. Alternates: ME–same species or CE–compatible edges.
Special edge treatments	To reduce edge damage, polymer edges with ⅓ hour label available.
Top & bottom rails	Structural composite lumber (industry standard does not require separate rails on this construction).
Core	Structural composite lumber core.
Crossbands	1⁄16" (1.6mm) minimum wood-based composite.
Faces	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1⁄5 0 " (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Adhesive	Doors constructed using water-resistant adhesives (Type 2).
Veneer matching	Available in pairs, sets or matching transoms.
Details	Standard lites and louvers available not to exceed 40% of door area or 54" (1372mm) in length. Maximum glass opening on FD ⅓ hour doors is 1,296 sq. in. (0.836m²) with wood beads or metal vision panels. Applied mouldings and quirks also available. Contact Algoma for positive pressure approvals. See Details 11 and 12.
Machining	Available with hinge and lock machining as well as rabbets, holders, drop seals, pivots, etc.
Finishing	Available in finishes with performance characteristics equivalent to WDMA System TR-6, standard or custom colors. Also available primed, sealed, or sealed top and bottom edges only. Opaque finish (OP-6) on medium density overlay only.
Warranty	For interior, full warranty for life of original installation.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Special services	Provides detention security rating of Grade #40 with ASTM Impact Test F 476.
Positive Pressure	**Category A:** Singles and pairs have intumescent built into the door, and no additional fire seals are required. If smoke and draft control doors are also required, then a category H seal must be applied to the frame. **Category B:** Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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SCLC-5 Structural Composite Lumber Core

FD ⅓ Hour Door

FEATURE	LABEL		
	ITS/WHI	UL	UL or ITS/WHI AHI FD ⅓ Hour Door/Transom
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress. Pairs over 8'0" (2438mm) in height need metal edge guards. Positive pressure **4'0" x 8'0"** and **8'0" x 8'0"** double egress.	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), neutral and positive pressure, including double egress. **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm).	**UL Opening:** 4'0" x 11'0" (1219 x 3353mm). **ITS/WHI Opening:** 4'0" x 10'0" (1219 x 3048mm). **Door:** 4'0" x 8'0" (1219 x 2438mm). **Transom:** 4'0" x 4'0" (1219 x 1219mm).
FACES	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified		
STILES (VERTICAL EDGES) AND RAILS	All doors have either same species or compatible outers. Plastic laminate edges after faces.		Door/transom rabbeted ½" x ⅞" (13 x 22mm).
MAXIMUM WOOD BEADED LITE	1296 sq. inches (0.836m²). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM METAL VISION PANEL (Visible glass)	1296 sq. inches (0.836m²). Maximums: 30" (762mm) width, 54" (1372mm) length.Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	Not allowed.	24" x 24" (610 x 610mm). Minimum 5" (127mm) from edge and 10" (203mm) from bottom. Neutral pressure only.	Not allowed.
HINGES Note: Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.	Ball bearing steel mortised, half or full surfaced 4½" x 4½" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4½" x 4½" x .134".	Ball bearing steel mortised, half or full surfaced 4½" x 4½" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4½" x 4½" x .134". Anchor hinges allowed.	Ball bearing steel mortised, half or full surfaced 4½" x 4½" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4½" x 4½" x .134".
LOCKSETS	All listed cylindrical, mortise, unit, card, electric lock, and hospital push/pull to 5" (127mm) backset.		
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 ¼, Unichecks 65 thru 68, or equal. Others as approved, including pocket pivots.		Half or full mortised; top pivots not allowed unless frame is equipped with a fixed transom bar.
CLOSERS	Listed surface type or LCN using #420 Fireshield or Norton with Fire Block Liner #790, or Yale with Fire Block Liner #450.	Listed surface type. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1⅜" wide x 1¾" deep x 25" long.	Listed surface type.
FIRE EXIT HARDWARE (Allowed with vision panel if non-interfering)	**Singles:** Listed mortise, rim or surface vertical rods. **Pairs:** Listed rim (with mullion), surface vertical rods, or concealed vertical rods (5" metal channel/8'0" x 8'0"). Double egress allowed.	**Singles:** Listed mortise, rim, or surface vertical rods. **Pairs:** Listed rim (with mullion), surface vertical rods, or concealed vertical rods (5" metal channel/8'0" x 8'0"). Double egress allowed.	**Singles:** Listed mortise, rim or surface vertical rods. **Pairs:** Not available.
OTHER PAIR HARDWARE	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Not allowed
Maximum trim: ¾" (19mm) at bottom. **Undercut:** Maximum undercut, ¾" (19mm) per NFPA 80.	**Door Bottoms:** Max size 1"x1 15/16" listed surface or concealed. **Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm).	**Edges:** Polymer edges allowed where edge damage is likely. **Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Wood Frames:** FD ⅓ Hour doors can be installed with ⅓ hour wood frames. **Electric Raceway:** Available with label on all doors.

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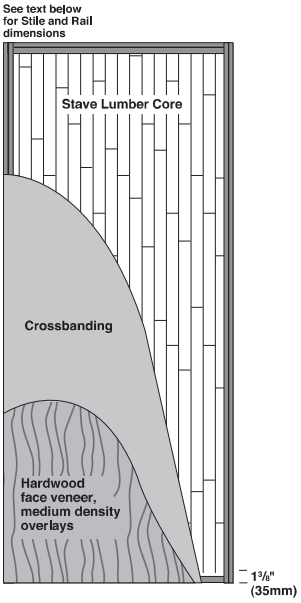
SLC-5 Stave Lumber Core FD ⅓ Hour Door

(Neutral or Positive Pressure)



Algoma's architectural Stave Lumber Core door features a kiln dried, low density wood block core which is bonded together under side pressure using the high frequency cure method.

Solid lumber stiles and rails are securely bonded to this core. To ensure strength, rigidity and freedom from telegraphing of core parts, this unitized core is then sanded before hot pressing a crossband and face on each side of the core assembly. This makes a high quality base for fine hardwood veneers and composite overlays for solid color finishes.

Algoma uses only face veneers at least .020" (0.5mm) thick at 12% moisture content.

Positive Pressure Note: Algoma recommends using Category B 1/3 hour single swing doors. Please refer to Positive Pressure in Product Features Detail Section below. The selection of Category B 1/3 hour doors will offer cost savings and no aesthetic compromise.

Product Features

Thickness	1¾" (44mm) or 2¼" (57mm) available FD ⅓ hour labeled. 1⅜" (35mm) available non-labeled.
Maximum size	Available prefit up to 4'0" x 10'0" (1219 x 3048mm). In FD ⅓ hour, 4'0" x 9'0" (1219 x 2743mm) is maximum for singles and 8'0" x 9'0" (2438 x 2743mm) for pairs. Also available in double egress pairs up to 8'0" x 9'0" (2438 x 2743mm). Paired construction will be SCLC core only.
Stiles (Edge bands)	1⅜" (35mm) prior to factory trimming, glued to core. ME-same species available, CE-compatible species standard.
Special edge treatments	To reduce edge damage, polymer edges with ⅓ hour label available.
Top rails	1⅜" (35mm) prior to factory trimming, glued to core.
Bottom rails	1⅜" (35mm) Structural Composite Lumber (SCL).
Core	Low density wood blocks, kiln dried, not more than 2½" wide; random lengths, joints well staggered.
Crossbands	1/16" (1.6mm) minimum wood-based composite.
Faces	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Adhesive	Doors constructed using water-resistant adhesives (Type 2).
Veneer matching	Available in pairs and sets (SCLC core only) or matching transoms.
Details	Standard lites and louvers available not to exceed 40% of door area or 54" (1372mm) in length. Maximum glass opening on FD ⅓ hour doors is 1,296 sq. in. (0.836m²) with wood beads and clips or metal vision panels. Applied mouldings, quirks, and divided lites also available. Specify flashing on exterior doors. Larger lites available with special glazing. Contact Algoma for positive pressure approvals. See Details 11 and 12.
Machining	Available with hinge and lock machining as well as rabbets, holders, drop seals, pivots, etc.
Finishing	Available in finishes with performance characteristics equivalent to AWI System TR-6, standard or custom colors. Also available primed, sealed, or sealed top and bottom edges only. Opaque finish (OP-6) on medium density overlay only.
Warranty	For interior, full warranty for life of original installation. For exterior, see warranty.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Special services	Provides detention security rating of Grade #40 with ASTM Impact Test F 476.
Positive Pressure	**Category A:** Singles and pairs have intumescent built into the door, and no additional fire seals are required. If smoke and draft control doors are also required, then a category H seal must be applied to the frame. Category B: Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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SLC-5 Stave Lumber Core FD 1/3 Hour Door

COLUMN	1	2	3
LABEL / FEATURE	ITS/WHI	UL	UL or ITS/WHI AHI FD ⅓ Hour Door/Transom
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress. Pairs over 8'0" (2438mm) in height need metal edge guards. Positive pressure **4'0" x 8'0"** and **8'0" x 8'0"** double egress. Paired construction will be SCLC core.	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), neutral and positive pressure, including double egress. **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm). Paired construction will be SCLC core.	**UL Opening:** 4'0" x 11'0" (1219 x 3353mm). **ITS/WHI Opening:** 4'0" x 10'0" (1219 x 3048mm). **Door:** 4'0" x 8'0" (1219 x 2438mm). **Transom:** 4'0" x 4'0" (1219 x 1219mm).
FACES	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified		
STILES (VERTICAL EDGES) AND RAILS	All doors have either same species or compatible outers. Plastic laminate edges after faces.		Door/transom rabbeted ½" x ⅞" (13 x 22mm). Matching or compatible edges will be provided when frame is equipped with fixed transom bar.
MAXIMUM WOOD BEADED LITE	1296 sq. inches (0.836m²). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM METAL VISION PANEL (Visible glass)	1296 sq. inches (0.836m²). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	Not allowed.	24" x 24" (610 x 610mm). Minimum 5" (127mm) from edge and 10" (203mm) from bottom. Neutral pressure only.	Not allowed.
HINGES Note: Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.	Ball bearing steel mortised, half or full surfaced 4½" x 4½" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4½" x 4½" x .134".	Ball bearing steel mortised, half or full surfaced 4½" x 4½" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4½" x 4½" x .134". Anchor hinges allowed.	Ball bearing steel mortised, half or full surfaced 4½" x 4½" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4½" x 4½" x .134".
LOCKSETS	All listed cylindrical, mortise, unit, card, electric lock, and hospital push/pull to 5" (127mm) backset.		
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 ¼, Unichecks 65 thru 68, or equal. Others as approved. Pocket pivots not allowed. Intermediate pivots required for label and warranty.		Half or full mortised; top pivots not allowed unless frame is equipped with a fixed transom bar.
CLOSERS	Listed surface type or LCN using #420 Fireshield or Norton with Fire Block Liner #790, or Yale with Fire Block Liner #450.	UL listed surface type. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1⅜" wide x 1¾" deep x 25" long.	UL listed surface type.
FIRE EXIT HARDWARE (Allowed with vision panel if non-interfering)	**Singles:** Mortise, rim or surface vertical rods. **Pairs:** Rim (with mullion) or surface and concealed vertical rods. Double egress allowed. Paired construction will be SCLC core.	**Singles:** Mortise, rim, or surface vertical rods. **Pairs:** Rim (with mullion) or surface and concealed vertical rods. Double egress allowed. Paired construction will be SCLC core.	**Singles:** Mortise, rim or surface vertical rods. **Pairs:** Not available.
OTHER PAIR HARDWARE	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Not allowed
Maximum trim: ¾" (19mm) at bottom with standard rail. **Undercut:** Maximum undercut, ¾" (19mm).	**Door Bottoms:** Max size 1"x1 15/16" listed surface or concealed. **Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm).	**Edges:** Polymer edges allowed where edge damage is likely. **Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Wood Frames:** FD ⅓ Hour doors can be installed with ⅓ hour wood frames. **Electric Raceway:** Available with label on all doors.

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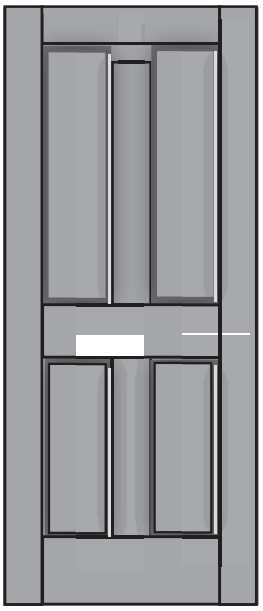
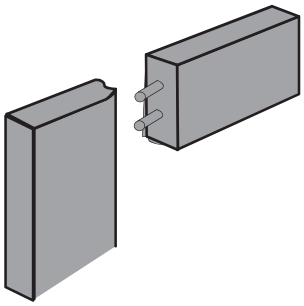
Stile and Rail FD 1/3 Hour Door

(Neutral or Positive Pressure)



Engineered hardwood FSC composite core. Hardwood lumber stile and rail banding.



Traditional construction with solid sticking, rails coped to stile profile, doweled together and glued under pressure.

Algoma Stile and Rail doors are manufactured with high quality hardwood lumber and veneers in Red Oak, White Oak, Cherry, Mahogany, Maple, and surfaces for paint finish. Other species are available on special order. Doors are available factory machined for hardware and factory finished to provide smooth, high quality installations. Stile and rail components are joined with dowels and glued under pressure. This construction combined with Algoma's craftsmanship provides maximum strength and durability.

Positive Pressure Note: Algoma recommends using Category B 1/3 hour single swing doors. Please refer to Positive Pressure in Product Features Detail Section below. The selection of Category B 1/3 hour doors will offer cost savings and no aesthetic compromise.

Product Features

Thickness	1¾" (44mm) or 2¼" (57mm) available FD 1/3 hour labeled. 1⅜" (35mm) available non-labeled.
Sizes	Available in prefit sizes from 1'0" x 6'8" (300 x 2030mm) to 4'0" x 9'0" (1220 x 2740mm). In FD 1/3 hour, 4'0" x 9'0" (1220 x 2740mm) is maximum for singles and 8'0" x 9'0" (2440 x 2740mm) for pairs.
Stiles (Edge banding)	7/8" (22mm) prior to factory trimming, glued to core. ME-same species available, CE-compatible species standard
Top and Bottom rails	SLC/SCLC (mill option).
Core	SLC/SCLC (mill option).
Stile & rail veneers	Most foreign and domestic species. Faces are a minimum of .062" (1.6mm) at 12% moisture content. All faces to be per WDMA I.S. 1-A face grades.
Adhesives	Doors constructed using water-resistant adhesives (Type 2).
Panels	Veneer wrapped raised panel. Lumber rim banded panel as an option. Flat panels with particleboard core also available. For configuration options see **Door** 37 and **Door** 38.
	Panels and door faces are the same grade and specie but are not from the same flitches. Color and grain variation will occur. Paint grade doors may have varying species.
Details	Standard lites and louvers available. Maximum glass opening for 1/3 hour rating with wire glass is 1296 sq. in. (.83m²). Glazed lite openings over 1296 sq. in. (.830m²) may be specified as 1/3 hour rated. This configuration requires factory glazing with ceramic glass and a special beading system. Lite openings may be a maximum of 35" (889mm) wide, 77" (1955mm) long and have an area of 2695 sq. in. (1739m²) or less.
Machining	Available with hinge and lock machining as well as drop seals, pivots and other hardware.
Finishing	Available in finishes with performance characteristics equivalent to AWI System TR-6, standard or custom colors. Also available primed, sealed, or sealed top and bottom edges only.
Warranty	For interior, full warranty for life of original installation. Exterior applications not recommended or warranted.
Component dimensions	Standard and 20 minute rated: Stiles 6" (152mm) Top rail 6" (152mm) Bottom rail 9.5" (241mm) Vertical mullions 4" (100mm) Intermediate rail 4" (100mm) Minimum for non-label and doors under 1'6" (460mm) wide: Stiles 3" (75mm) Top rail 6" (152mm) Bottom rail 9.5" (241mm) Vertical mullions 3" (75mm) Intermediate rail 3" (75mm)
Positive Pressure	**Category A**: Singles and pairs have intumescent built into the door, and no additional fire seals are required. If smoke and draft control doors are also required, then a category H seal must be applied to the frame. **Category B**: Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

Note: Stile, rail and mullion dimensions may vary to accommodate hardware, label and warranty requirements.

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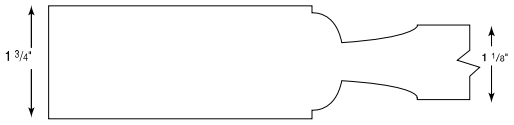
⅓ Hour Stile and Rail Fire Doors



1/3 HOUR FIRE DOOR DETAIL

Algoma Hardwoods has available ⅓ hour approved labeled stile and rail fire doors.

All ⅓ hour fire doors must be machined under a Labeling Service Program per NFPA.

The ⅓ hour doors require a Pemko S88 smoke gasket around the parameter of the frame on single doors. Paired ⅓ hour doors require an intumescent strip at the meeting edge and a Pemko S88 smoke gasket around the perimeter of the frame to comply with positive pressure requirements.

Fire Door Specifications. For Interior Use Only.

All Doors are labeled for compliance with UBC-7-2 1997 Positive Pressure Code and UL10B and UBC 7-2-1994 neutral pressure.

	⅓ Hour
Maximum Size Singles	4'0" x 9'0"
Maximum Size Pairs	8'0" x 9'0"
Thickness	1¾" – Standard 2¼" - Optional
Adhesive	Type I or Type II Water Resistant-Standard
Warranty	Lifetime
Labeling Source	ITS Warnock Hersey, UL Underwriters Laboratory
Maximum Raised Panel Size	39" x 70"
Minimum Raised Panel Thickness	1⅛"
Maximum Flat Panel Size	39" x 70"
Minimum Flat Panel Thickness	⅝"
Maximum Lite Opening	With ¼" wire glass 1296 sq. in. (0.83m^2). Larger glass openings on ⅓ hour doors available with the use of special glass. Maximum size of 35" (889mm) wide and 87" (1955mm) high with maximum area of 2695 sq. in. (1.73m^2).
Metal Edge & Astragal	Not required up to 8'0" (2438mm). Over 8'0" (2438mm) in height need either treated edges or metal edge guards.
Hardware	**Hinges**: 4½" x 4½" x .134 minimum butt or listed continuous hinge. per NFPA 80 some specialty hinges allowed. Contact Algoma for information. **Latching Devices**: Cylindrical, mortise, unit, surface vertical rods, rim exit devices, and cylinder dead bolts (in combination with approved latching device). **Closers**: Surface mounted, concealed overhead stops. (Some restrictions apply. Consult factory.) **Viewers**: One 1" diameter hole or two ½" diameter holes.
True Divided Lite Door	Available
Species	All commercially available hardwood species

If you utilize these options, your doors can arrive at the job site ready for hanging:
- Factory prefinish – standard or custom color match
- Factory machine for hardware

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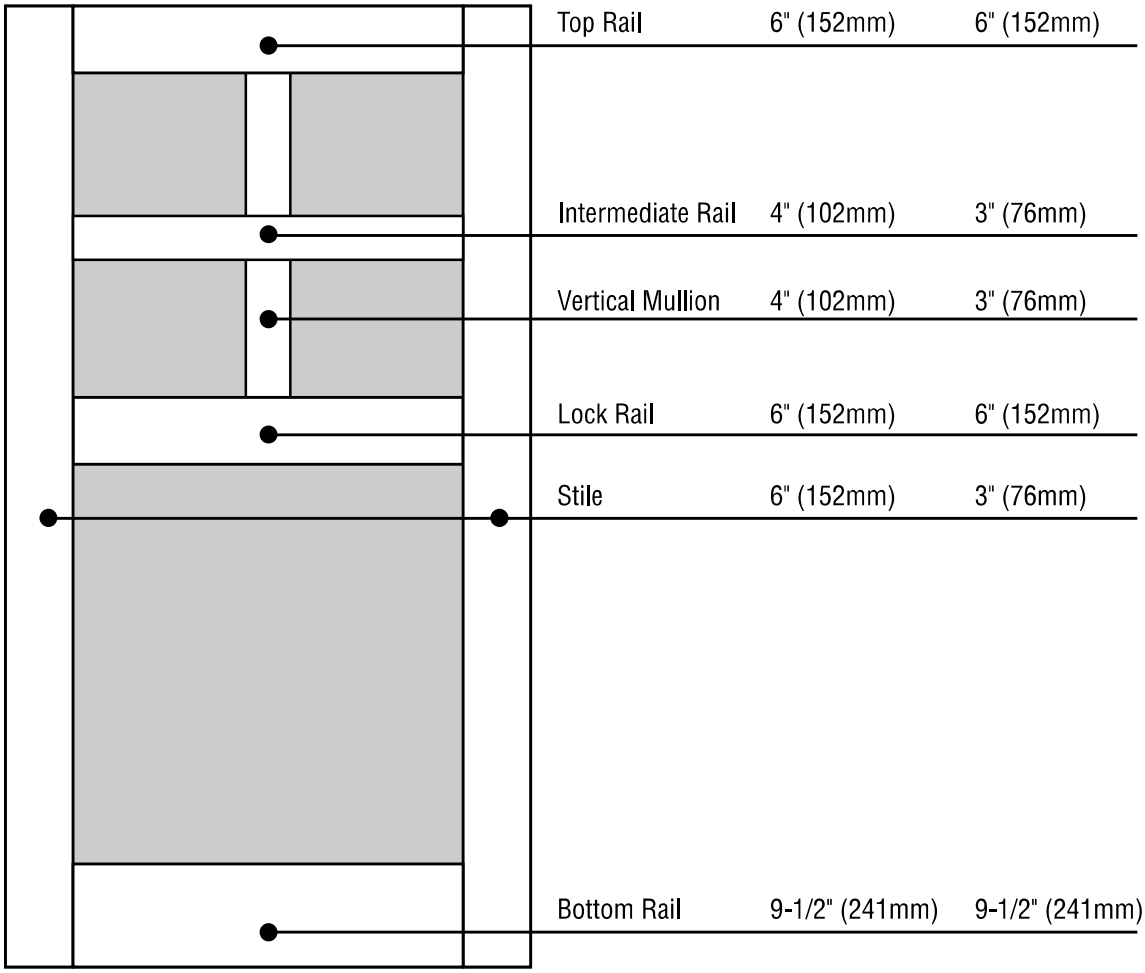
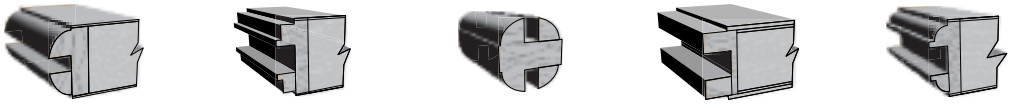
Stile and Rail Standard Component Dimensions



NOTE: Stile and rail dimensions may vary to accommodate hardware, label and warranty requirements.

BEAD PROFILES FOR LITES & LOUVERS ON NON LABELED AND 20 MINUTE RATED STILE & RAIL DOORS



Standard quarter round | Optional square step bead | Quarter round muntin bar & bead | Optional square bead | Optional ovalo bead

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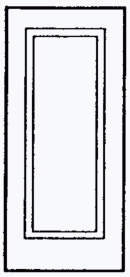
Stile and Rail Descriptions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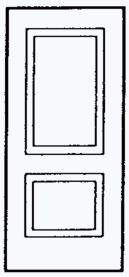
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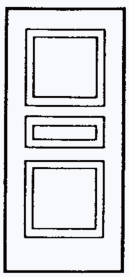
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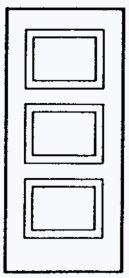
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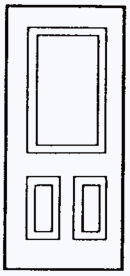
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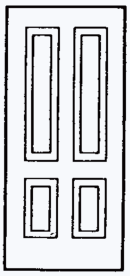
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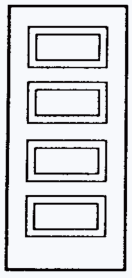
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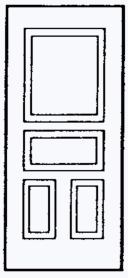
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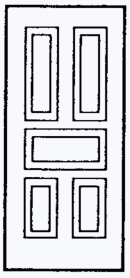
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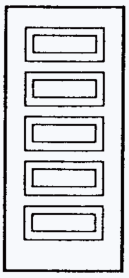
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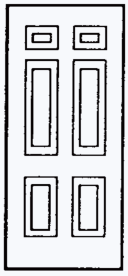
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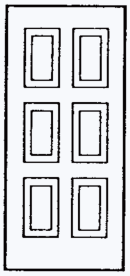
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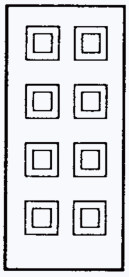
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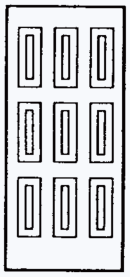
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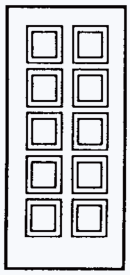
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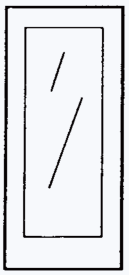
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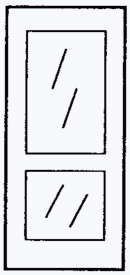
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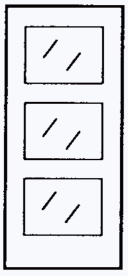
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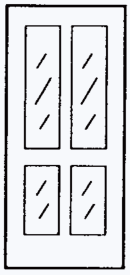
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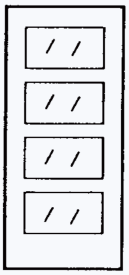
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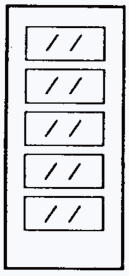
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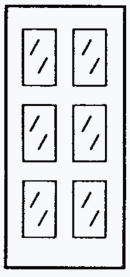
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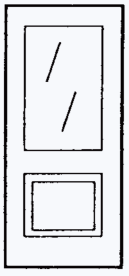
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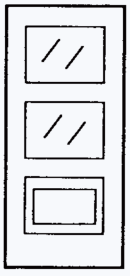
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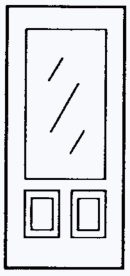
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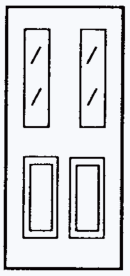
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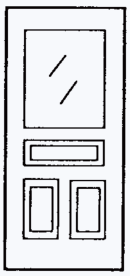
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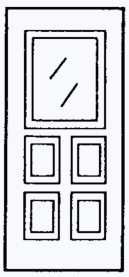
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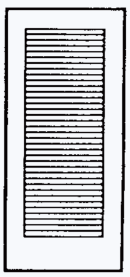
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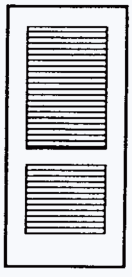
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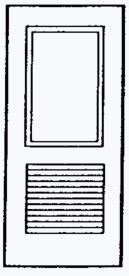
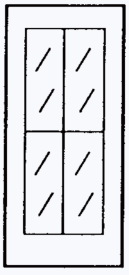

411A

Divided lites shown in typical layouts, modifications may be made to suit your needs. ➡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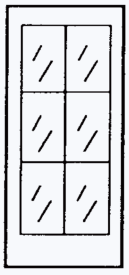
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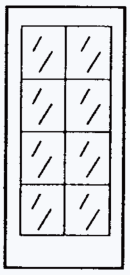
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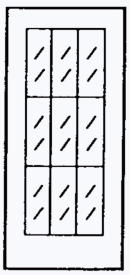
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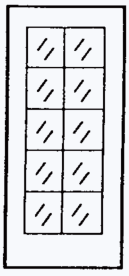
10 Divided

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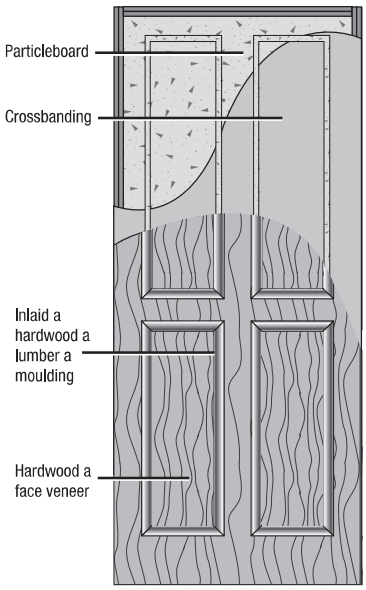
Artisan® Panel Door FD ⅓ Hour

(Neutral or Positive Pressure)



To ensure the structural integrity needed for this style of door, the Algoma Artisan door begins with high quality PC-5 door construction. The door is machined in a number of different patterns and configurations. Inlaid mouldings are installed to simulate stile and rail appearance at a substantial savings over traditional stile and rail/raised panel doors.

Face veneers all run vertically, resulting in cleaner lines and a more pleasing appearance than traditional stile and rail construction.

Algoma uses only the better of two grades of particleboard conforming to ANSI Standard A208.1-1989, Type 1, Grade LD-2 with face screw holding power of 125 pounds, modulus of rupture of 800 psi, modulus of elasticity of 150,000 psi and density of 30–32 pounds per cubic foot.

Algoma uses only face veneers at least 1/50" (0.5mm) thick at 12% moisture content.

Positive Pressure Note: Algoma recommends using Category B 1/3 hour single swing doors. Please refer to Positive Pressure in Product Features Detail Section below. The selection of Category B 1/3 hour doors will offer cost savings and no aesthetic compromise.

Product Features

Thickness	1¾" (44mm) available FD ⅓ hour labeled.
Maximum size	In FD ⅓ hour, 4'0" x 9'0" (1219 x 2743mm) is maximum for singles and 8'0" x 9'0" (2438 x 2743mm) for pairs, including double egress.
Stiles (Edge bands)	1⅜" (35mm) prior to factory trimming, glued to core. ME-same species or CE-compatible edges.
Top & bottom rails	1⅜" (35mm) top and 1⅜" (35mm) bottom prior to factory trimming, glued to core; SCLC.
Core	Conforms to ANSI A208.1-1989, GRADE 1-LD-2 covering mat-formed particleboard with face screw holding power of 125 pounds, modulus of rupture of 800 psi, modulus of elasticity of 150,000 psi and density of 30–32 pounds per cubic foot.
Reinforcement	Reinforced top and/or bottom rails are available to eliminate the need for through-bolting when installing closers or holders. Note: Screws must penetrate doors a minimum of 1½". Please see Hardware 13 for PC-5 reinforcement options.
Crossbands	1/16" (1.6mm) minimum wood-based composite.
Faces	Select domestic species. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades. Red oak, white maple, mahogany and cherry are standard available species.
Adhesive	Doors constructed using water-resistant adhesives (Type 2).
Veneer matching	Available in pairs, sets (door faces only, not panels).
Panels	One, two, four, and six panel standard configurations. Custom patterns, available upon request. Standard stile, rail and lock rail sizes are 7". Mullions and cross rails are 4".
Details	Standard lites and louvers available not to exceed 40% of door area and 54" (1372mm) in length. Maximum glass opening on FD ⅓ hour doors is 1,296 sq. in. (0.836m²) with wood beads and clips or metal vision panels.
Machining	Available with hinge and lock machining as well as holders, drop seals, pivots, etc.
Finishing	Available in finishes with performance characteristics equivalent to AWI System TR-6, standard or custom colors. Also available sealed or sealed top and bottom edges only.
Warranty	For interior, full warranty for life of original installation.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Positive Pressure	**Category A:** Singles and pairs have intumescent built into the door, and no additional fire seals are required. If smoke and draft control doors are also required, then a category H seal must be applied to the frame. **Category B:** Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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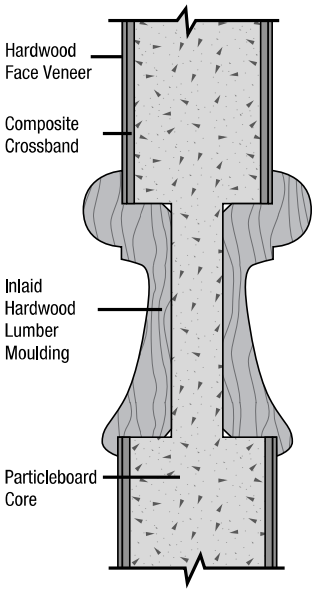
Artisan® Panel Door FD ⅓ Hour

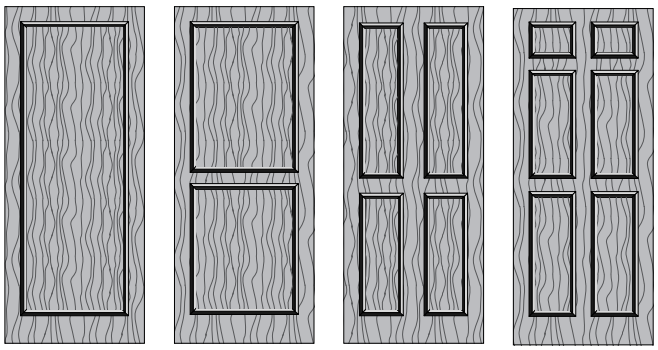
(Neutral or Positive Pressure)

UL FD⅓ HOUR FIRE DOOR APPROVAL	
MAXIMUM FRAME OPENING SIZE	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm). Treated meeting edges or metal edge guards/astragals available on pairs if desired.
FACES	Select domestic wood species.
STILES (VERTICAL EDGES)	All doors have either same species or compatible stiles.
MAXIMUM RAISED PANEL SIZE (per panel)	864 sq. inches (.557m²). Maximums: 36" (914mm) width, 66" (1676mm) length.
MAXIMUM WOOD BEADED LITE (cutout area)	1296 sq. inches (0.836m²). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glass and approval of AHJ (authority having jurisdiction). Contact Algoma for positive pressure approvals.
MAXIMUM METAL VISION PANEL (visible glass)	1296 sq. inches (0.836m²). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glass and approval of AHJ (authority having jurisdiction). Contact Algoma for positive pressure approvals.
HINGES Note: Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.	Ball bearing steel, full mortise, half surface, or full surface, or listed spring hinges. Minimum size 4½" x .134" (114.3 x 114.3 x 3.4mm).
LOCKSETS	Listed mortise locks, unit locks, and cylindrical locks or hospital push-pull latches to 5" (127mm) backset.
PIVOTS	Listed offset top, bottom, and intermediate pivots, or listed pocket door pivots.
CLOSERS	Listed surface mounted closers.
FIRE EXIT HARDWARE (Check design and hardware locations carefully, as panels and moulding may interfere with touchbars)	Singles: Mortise, rim, or surface vertical rods. Pairs: Rim (with mullion) or surface vertical rods.
OTHER PAIR HARDWARE	Listed surface or mortised door bolts. Manual, self latching, or automatic as codes allow.

Artisan® Cross Section Detail



Standard Configurations (other configurations available per request)



Standard Artisan Door Dimensions
1/3 Hour Rated Door
3'0" x 7'0" (914 x 2134mm) Size[1]

Stiles	7"	(178mm)
Top Rail	7"	(178mm)
Lock Rail	7"	(178mm)
Bottom Rail	9½"	(241mm)
Mullion	4"	(102mm)
Cross Rail	4"	(102mm)

[1]Dimensions above are for a prefit door 35 13/16" x 83⅜" (908 x 2118mm) and are to the edges of the panel cutouts. Lockset to be a standard cylindrical lockset with 2¾" (70mm) backset located at 43⅜" (1106mm) from top of prefit door to centerline of lock. Location of strike would be 40⅝" (1024mm) from bottom of frame to centerline of strike.

Dimensions of stiles, rails, and panels will vary to accommodate other hardware or design requirements.

Maximum trim: 1" (25mm) at bottom with standard rail.

Undercut: Maximum undercut, ¾" (19mm).

Door Bottoms: Max size 1"x1 15/16" listed surface or concealed.

Listed Viewers: Up to 1" (25mm) diameter.

Astragals and edge guards: When supplied must be cut for hardware under label service.

Wood Frames: FD ⅓ Hour doors can be installed with ⅓ hour wood frames.

Electric Raceway: Call Algoma for availability.

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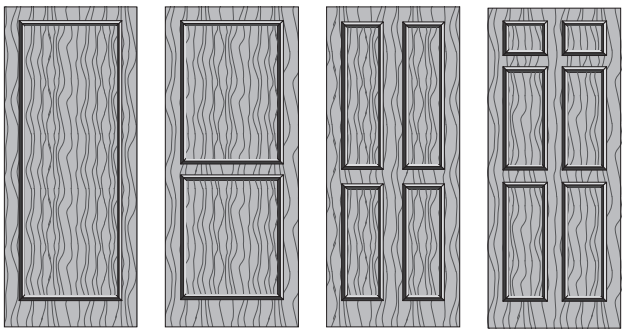
ARTISAN® DOORS

THE COST-SAVING, STAINABLE, WOOD-VENEERED "STILE AND RAIL" DOOR

The new ARTISAN® DOOR series from Algoma Hardwoods offers a true "value-engineered" cost-saving alternative to traditional stile and rail construction doors. Built to the same exacting standards and quality levels for which Algoma Hardwoods is known, the ARTISAN® DOOR series can offer meaningful dollar savings (20% to 50% over true stile and rail doors) while offering aesthetics that will satisfy the owner or architect looking for a stile and rail appearance. The ARTISAN® DOOR series is available in a variety of configurations and veneers, with ratings 45, 60 and 90 minutes, both positive and neutral pressure.

STANDARD CONFIGURATIONS



One, two, four and six panels (others available)

STANDARD VENEERS

Red Oak, Cherry, Mahogany and Maple (others available)

AVAILABLE RATINGS

45, 60 or 90 minute doors
Neutral or positive pressure, category A or B.

ALGOMA HARDWOODS, INC.
1001 Perry Street • Algoma, Wisconsin 54201
920.487.5221 • 1.800.678.8910 • FAX 920.487.3636
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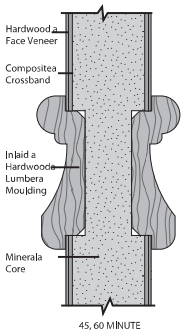
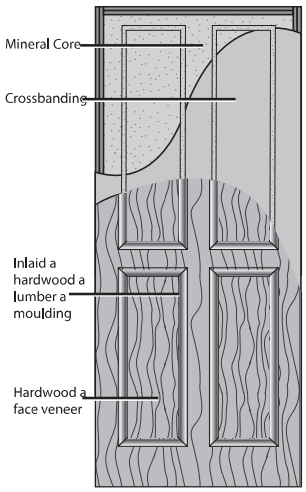
Typical Artisan® Cross Section





	Artisan 45 & 60 Minute	Artisan 90 Minute
THICKNESS AND MAXIMUM SIZE	1¾", 2¼" 4-0 X 9-0 Single 8-0 x 9-0 Pairs	1¾", 2¼" 4-0 X 9-0 Single 8-0 x 9-0 Pairs
STILES	⅝" Superstile with maple outer. Optional same species outer available.	⅝" Superstile with maple outer. Optional same species outer available.
RAILS	¼" top rail and 1⅛" bottom rail. Heavy duty rails and lock blocks optional.	¼" top rail and 1⅛" bottom rail. Heavy duty rails and lock blocks optional.
CORE	Mineral core manufactured by Algoma Hardwoods	Mineral core manufactured by Algoma Hardwoods
CROSSBANDS	1/16" minimum wood based composite	1/16" minimum wood based composite
FACES	Red Oak, cherry, mahogany, and maple are standard available species. Others upon request.	Red Oak, cherry, mahogany, and maple are standard available species. Others upon request.
ADHESIVE	Water resistant glue for assembling core parts and bonding faces and crossbands to core.	Water resistant glue for assembling core parts and bonding faces and crossbands to core.
VENEER MATCHING	Available in pairs, sets	Available in pairs, sets
PANELS	One, two, four, or six panel standard configurations. Custom patterns available upon request.	One, two, four, or six panel standard configurations. Custom patterns available upon request.
DETAILS	Standard lites available not to exceed 40% of door area and 54" in length. Maximum glass opening on 45 minute doors is 1296 sq. in. and 100 sq. in. on 60 minute doors. Available with wood beads or metal vision panels.	Maximum glass opening on 90 minute doors is 100 sq. in. with wood beads or metal vision panels.
MACHINING	Available with hinge and lock machining as well as holders, drop seals, pivots, etc.	Available with hinge and lock machining as well as holders, drop seals, pivots, etc.
FINISHING	Meets WDMA 1.S. 1-A Finish System TR-6.	Meets WDMA 1.S. 1-A Finish System TR-6.
WARRANTY	For interior, full warranty for life of original installation.	For interior, full warranty for life of original installation.
STANDARDS	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
POSITIVE PRESSURE	Category A or Category B	Category A or Category B

Standard Artisan Door Dimensions

Stiles	7"	(178mm)
Top Rail	7"	(178mm)
Lock Rail	7"	(178mm)
Bottom Rail	9½"	(241mm)
Mullion	4"	(102mm)
Cross Rail	4"	(102mm)
Centerline of Lock to Finished Floor	40⅜16"	(1024mm)

Dimensions of stiles, rails, and panels will vary to accommodate other hardware or design requirements.

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ARTISAN® SF DOORS

IDENTICAL TWINS? ALMOST.

The ARTISAN® SF DOOR series from Algoma Hardwoods offers a cost-effective alternative to the traditional 90 minute (or 45 or 60 minute) stile and rail door. Using a sketch face veneer assembly and the recessed mouldings of the ARTISAN® SF DOOR series, the ARTISAN® SF DOOR series simulates the look and matches the performance of rated stile and rail doors at a significantly lower price per door, and lower cost per project. These doors are built to the same exacting standards and quality levels for which Algoma Hardwoods is known.

STANDARD SF CONFIGURATIONS

One, two, four and six panels (others available)

STANDARD VENEERS

Red Oak, Cherry, Mahogany and Maple (others available)

AVAILABLE RATINGS

45, 60, 90 minute doors
Neutral or Positive Pressure, Category A or B.

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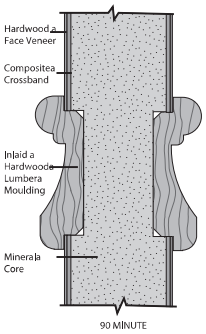
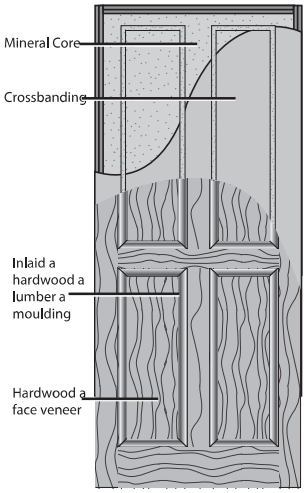
Typical Artisan® SF Cross Section





	Artisan 45 & 60 Minute	Artisan 90 Minute
THICKNESS AND MAXIMUM SIZE	1¾", 2¼" 4-0 X 9-0 Single 8-0 x 9-0 Pairs	1¾", 2¼" 4-0 X 9-0 Single 8-0 x 9-0 Pairs
STILES	⅝" Superstile with maple outer. Optional same species outer available.	⅝" Superstile with maple outer. Optional same species outer available.
RAILS	¼" top rail and 1⅛" bottom rail. Heavy duty rails and lock blocks optional.	¼" top rail and 1⅛" bottom rail. Heavy duty rails and lock blocks optional.
CORE	Mineral core manufactured by Algoma Hardwoods	Mineral core manufactured by Algoma Hardwoods
CROSSBANDS	⅛" minimum wood based composite	⅛" minimum wood based composite
FACES	Red Oak, cherry, mahogany, and maple are standard available species. Others upon request.	Red Oak, cherry, mahogany, and maple are standard available species. Others upon request.
ADHESIVE	Water resistant glue for assembling core parts and bonding faces and crossbands to core.	Water resistant glue for assembling core parts and bonding faces and crossbands to core.
VENEER MATCHING	Available in pairs, sets	Available in pairs, sets
PANELS	One, two, four, or six panel standard configurations. Custom patterns available upon request.	One, two, four, or six panel standard configurations. Custom patterns available upon request.
DETAILS	Standard lites available not to exceed 40% of door area and 54" in length. Maximum glass opening on 45 minute doors is 1296 sq. in. and 100 sq. in. on 60 minute doors. Available with wood beads or metal vision panels.	Maximum glass opening on 90 minute doors is 100 sq. in. with wood beads or metal vision panels.
MACHINING	Available with hinge and lock machining as well as holders, drop seals, pivots, etc.	Available with hinge and lock machining as well as holders, drop seals, pivots, etc.
FINISHING	Meets WDMA 1.S. 1-A Finish System TR-6.	Meets WDMA 1.S. 1-A Finish System TR-6.
WARRANTY	For interior, full warranty for life of original installation.	For interior, full warranty for life of original installation.
STANDARDS	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
POSITIVE PRESSURE	Category A or Category B	Category A or Category B

Standard Artisan Door Dimensions

Stiles	7"	(152mm)
Top Rail	7"	(152mm)
Lock Rail	7"	(152mm)
Bottom Rail	9½"	(241mm)
Mullion	4"	(102mm)
Cross Rail	4"	(102mm)
Centerline of lock to finished floor	40⅝"	(1024mm)

Dimensions of stiles, rails, and panels will vary to accommodate other hardware or design requirements.

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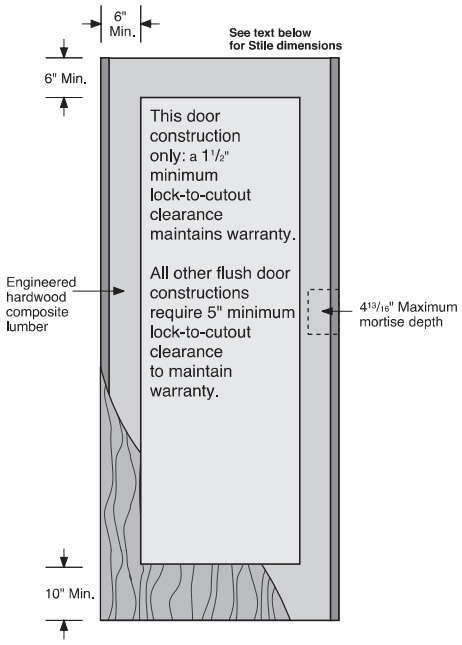
FGFW Full Glass Full Warranty ⅓ Hour Door

(Neutral or Positive Pressure)



For interior applications where the lite exceeds ½ the length of the door, 54" in height, or 40% of the door area.

One and one half inch (1½") lite to lock clearance.

The FGFW door comes with a full lifetime warranty.

Product Features

Thickness	1¾" (44mm) and 2¼" (57mm).
Maximum size	Singles: 4'0" x 9'0" (1219 x 2743mm). Pairs: 8'0" x 9'0" (2438 x 2743mm) labeled.
Stiles (Edge bands)	⅞" (22mm) prior to factory trimming, glued to core. Alternates: ME–same species or CE–compatible edges.
Top & bottom rails	Structural composite lumber (industry standard does not require separate rails on this construction).
Core	Structural composite lumber.
Crossbands	1/16" (1.6mm) minimum wood based composite.
Faces	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Adhesives	Doors constructed using water-resistant adhesives (Type 2).
Veneer matching	Available as pairs, sets, or end matching.
Details	Standard wood beaded lites, metal vision panels, and louvers available. Must maintain minimum 6" (152mm) stile and top rail dimension and a 10" (203mm) bottom rail dimension. If lite size exceeds 1,296 sq. in. (0.836m²) or 54" (1370mm) and a ⅓ hour rating is required, special ceramic glass and beading is available. Maximum width is 35" (889mm), length 77" (1,955mm) and area of 2,596 sq. in. (1.67m²).
Machining	Available with hinge and lock machining, as well as rabbets, holders, drop seals, pivots, etc.
Finishing	Available in finishes with performance characteristics equivalent to AWI System TR-6, standard or custom colors. Also available primed four sides, painted, or sealed.
Warranty	For interior, full warranty for life of original installation.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Positive Pressure	**Category B:** Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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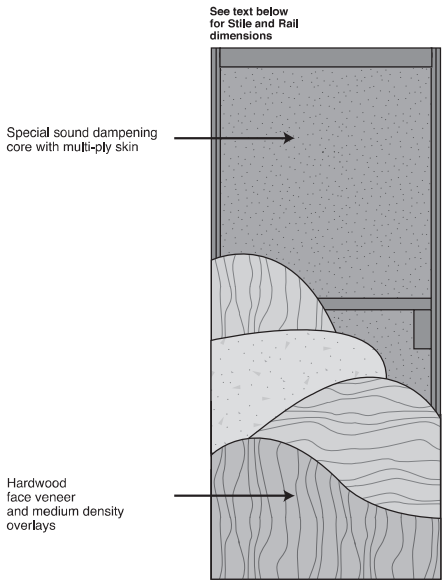
Acoustical & Acoustical FD ⅓ Hour Door

(Neutral or Positive Pressure)



STC 40/STC 45
STC 43 with 1/3 Hour Label
STC 39 with Lite Opening

Algoma's Acoustical doors were tested as operating units in a complete system with hollow metal framing back-filled with mortar, gasketing, drop seal and threshold, where applicable — the same as supplied to the jobsite — thus ensuring that the specified STC ratings are achieved.

Sound Transmission Class (STC) 40 Acoustical doors should be used wherever the degree of sound insulation desired is higher than an ordinary solid core door can provide.

If a still higher degree of sound reduction is required, such as in hospitals, doctors' offices or conference rooms, the STC 45 Acoustical door may be specified.STC 43 Acoustical doors are available for openings which require both sound control and 1/3-hour fire ratings.

When job requirements include doors with glass openings, STC 39 Acoustical doors are available, non-labeled.

And for communicating doors, a STC-54 rating is achieved when two STC-40 Acoustical doors are installed back-to-back in the same opening.

Testing was conducted by Riverbank Acoustical Laboratories in accordance with ASTM E90-90 and E413-87.

Algoma uses only face veneers at least .020" (0.5mm) thick at 12% moisture content.

Product Features

Thickness	1¾" (44mm).
Maximum size	Non-labeled singles up to 4'0" x 10'0" (1220 x 3050mm) and pairs up to 8'0" x 10'0". In FD 1⁄3 hour, 4'0" x 8'0" (1220 x 2440mm) singles and 8'0" x 8'0" in STC-28 and STC-43. STC ratings not verifiable in pairs. STC-43 available in 1/3 hour Category B.
Stiles (Edge bands)	4⅞" (124mm) prior to factory trimming, veneer banded.
Special edge treatments	Polymer edges for better impact resistance available.
Top & bottom rails	4⅞" (124mm) prior to factory trimming. Structural composite lumber.
Core	Special core construction with acoustical dampening materials.
Hardware Reinforcement	None required.
Faces	All foreign and domestic species and medium density overlay. Face veneers are a minimum of .020" (0.5mm) thick at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Adhesives	Doors constructed using water-resistant adhesives (Type 2).
Veneer matching	Pairs or matching transoms non-labeled. Note: Pairs and door/transom units have not been tested and may not maintain STC ratings.
Details	STC 39 doors with acoustical lites not to exceed 400 sq. in. (0.258m²) visible glass with an acoustical lite kit, gasketing and double-glazed glass. Factory glazing required. Applied molding not available. Lites not allowed in fire rated STC-43.
Machining	Available with hinge and lock machining as well as other hardware. Factory machined for drop seal.
Finishing	Available in finishes with performance characteristics equivalent to WDMA System TR-6, standard or custom colors. Also available primed, sealed, or sealed top and bottom edges only. Opaque finish (OP-6) on medium density overlay only.
Warranty	For interior, full warranty for life of original installation.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish. Tested by Riverbanks Acoustical Laboratories in accordance with ASTM E90-90 and E413-87 as operating units rather than "sealed in place." STC ratings are verifiable only on single doors.
Special services	Gasketing and drop seal are supplied with doors. Threshold supplied with STC 45, STC 43 and STC 39 doors.
Positive Pressure	**Category B:** Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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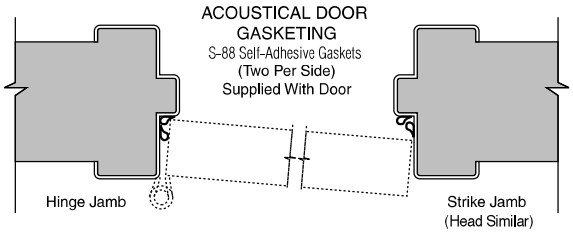
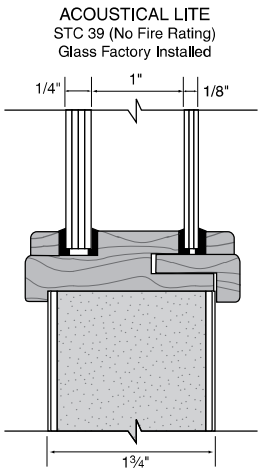
Acoustical & Acoustical FD ⅓ Hour Door

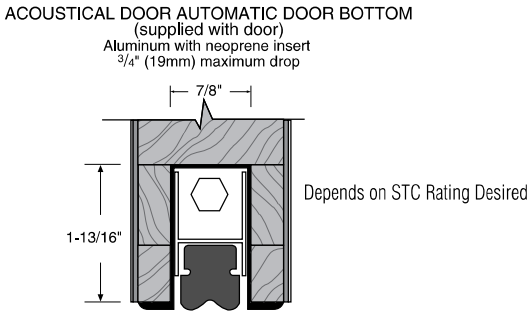
UNDERWRITERS LABORATORIES, INC.
FD 1/3 HOUR FIRE DOOR APPROVAL (STC 28 and STC 43)

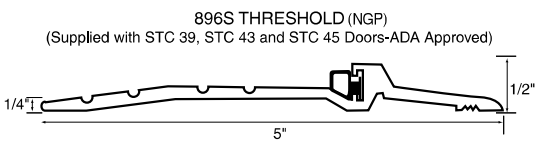
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 8'0" (1220 x 2440mm). **Pairs:** 8'0" x 8'0" (2440 x 2440mm).
FACES	All domestic and imported wood species.
STILES (VERTICAL EDGES)	4⅞" (124 mm) hardwood stiles veneer banded to match face species.
MAXIMUM WOOD BEADED LITE	Not allowed.
MAXIMUM METAL VISION PANEL	Not allowed.
HINGES* **Note: Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.**	Ball bearing steel, full mortise, half surface, or full surface. Minimum size 4½" x .134" (114 x 3.4mm) .
LOCKSETS*	Listed mortise locks, unit locks, and cylindrical locks or hospital push-pull latches to 3¾" (95mm) backset.
CLOSERS*	Listed surface mounted closures.
FIRE EXIT HARDWARE*	Mortise or rim type devices
Door Bottoms:	Doors are supplied with concealed type automatic drop seal.
Maximum trim:	Doors should be ordered factory prefit for height since the bottom is grooved for drop seal.
Prefit:	Standard undercut on STC 39, 43, and 45 will receive a 7/16" undercut to accommodate the ¼" high threshhold. Undercut can be adjusted if floor conditions warrant.

ACOUSTICAL DOOR ACCESSORIES









Sound Transmission Loss Ratings and Door Weight*

Type of installation	Sound Transmission Class (STC)	Transmission loss at various frequencies (Hertz) 125	250	500	1000	2000	4000	Door weight* lbs/sq ft	kg/M²
Single door (with lite opening)	39	26	31	38	41	40	44	6.5	31.7
Single door	40	24	38	40	43	40	41	6.4	31.3
Single door 20 minute label	43	24	35	42	44	45	50	7.1	34.7
Single door with threshold	45	26	39	42	44	48	51	6.4	31.3
Two STC 40 as communicating doors	54	36	47	50	55	57	59	6.4	31.3

* Door size and weight should be considered when determining hardware requirements.

The maximum benefit of acoustical doors is obtained from openings with uniform door/frame edge clearance, correct positioning of gasketing, and proper adjustment of the automatic bottom seal.

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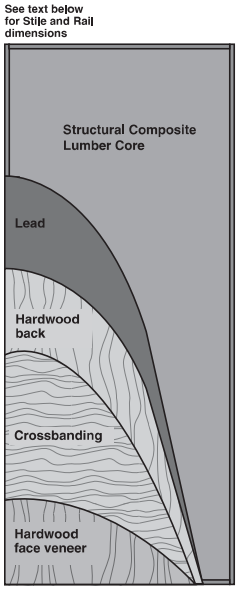
LL Lead Lined FD ⅓ Hour Door

(Neutral or Category B Positive Pressure)



Algoma's Lead Lined architectural door provides hospitals and labs with a handsome appearance while it protects against X-rays.

Lead Lined doors are made with SCLC core. Lead is then applied to both sides of this core to a total thickness from 1/16" to 1/4".

Solid lumber stiles and rails are securely bonded to this core. To ensure strength, rigidity and freedom from telegraphing of core parts, this unitized core is then sanded before pressing a lead sheet and 3-ply skin on each side of the core assembly. This makes a high quality base for fine hardwood veneers and composite overlays for solid color finishes.

Algoma only uses skins with face veneers at least .020"(0.5mm) thick at 12% moisture content.

Product Features

Thickness	1¾" (44mm) or 2¼" (57mm). Available FD ⅓ hour labeled with up to ⅛" (3.2mm) lead.
Maximum size	Available prefit up to 4'0" x 10'0" (1219 x 3048mm). In FD ⅓ hour, 4'0" x 8'0" (1219 x 2438mm) is maximum for singles. Pairs available up to 8'0" x 10'0" (2438 x 3048mm) non-labeled; 8'0" x 8'0" (2438 x 2438mm) ⅓ hour labeled
Stiles (Edge bands)	⅞" (22.2mm) prior to factory trimming, glued to core. Alternates: ME–same species or CE–compatible edges.
Special edge treatments	To reduce edge damage, polymer edges available.
Top & bottom rails	1 ½" prior to factory trimming
Core	Structural Composite Lumber Core
Faces	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Adhesives	Doors constructed using water-resistant adhesives (Type 2).
Veneer matching	Available in pairs, sets or matching transoms (non-labeled).
Details	Special lead lined lite available not to exceed 40% of door area or 54" (1372mm) in length. Lead lined vision panels available. Lites, louvers and vision panels not available in fire rated doors.
Lead	From 1/32" (.79mm) to ⅛" (3.2mm) lead applied to each side of core under the plys of veneer (1/16" [1.6mm] to ⅛" [3.2mm] total lead thickness). Maximum total lead thickness ⅛" (3.2mm) for FD ⅓ hour.
Machining	Available with hinge and lock machining as well as rabbets, holders, drop seals, pivots, etc. Door size and weight should be considered when determining hardware requirements.
Finishing	Available in finishes with performance characteristics equivalent to AWS Section 5, standard or custom colors. Also available primed, sealed, or sealed top and bottom edges only. Opaque finish (OP-6) on medium density overlay only.
Warranty	For interior, full warranty for life of original installation.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Special services	Provides detention security rating of Grade #40 with ASTM Impact Test F 476.
Positive Pressure	**Category B**: Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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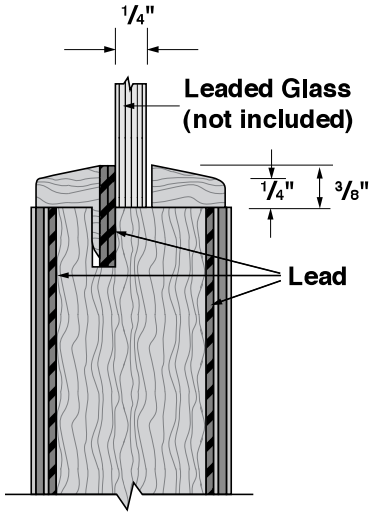
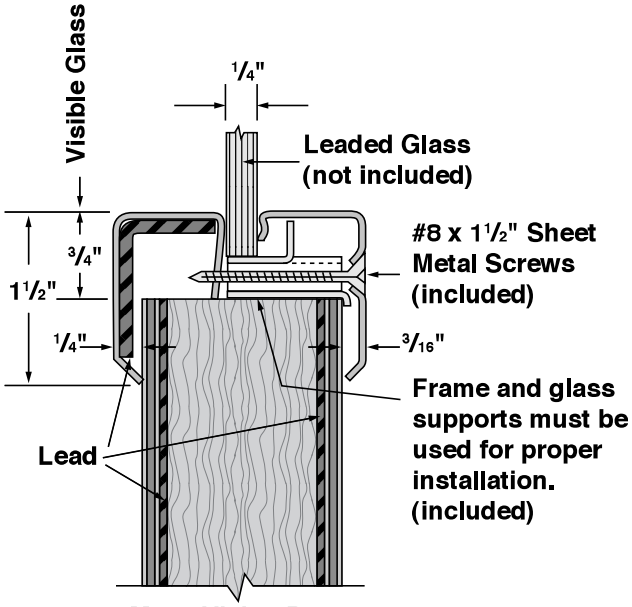
LL Lead Lined FD ⅓ Hour Door

COLUMN	1
LABEL / FEATURE	UL
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 8'0" (1219 x 2438mm). Maximum total lead thickness ⅛" (3.2mm). **Pairs:** 8'0" x 8'0" (2438 x 2438mm) with a lead lined astragal.
FACES	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified
STILES (VERTICAL EDGES) AND RAILS	All doors have either same species or compatible outers. Up to 1 1/2" (38mm) rails. Plastic laminate applied edges after faces.
MAXIMUM WOOD BEADED LITE	Not allowed.
MAXIMUM METAL VISION PANEL (Visible glass)	Not allowed.
MAXIMUM LOUVER SIZE	Not allowed.
HINGES (Heavy weight hinges or pivots are recommended)	Ball bearing steel mortised, half or full surfaced 4½" x 4½" x .134" (114.3 x 114.3 x 3.4mm) to 8'0" (2438mm). Anchor hinges allowed.
LOCKSETS	All listed cylindrical, mortise, unit, and hospital push/pull to 5" (127mm) backset.
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 ¼, Unichecks 65 thru 68, or equal. Others as approved, including pocket pivots.
CLOSERS	UL listed surface type.
FIRE EXIT HARDWARE (Allowed with vision panel if non-interfering)	**Singles:** Mortise, rim, or surface vertical rods.
OTHER PAIR HARDWARE	Not allowed.

Standard Lite Opening Details For Non-Labeled Lead Lined Doors



Recessed Bead
W-4LL
(No fire rating)



Metal Vision Panel
Style #115LL2F
(No fire rating)

Maximum trim: ¾" (19mm) with standard rail.

Undercut: Maximum undercut, ¾" (19mm).

Door Bottoms: Any listed surface or concealed.

Viewers: UL up to 1" (25mm).

Edges: Polymer or laminated lumber edges allowed on doors where edge damage is likely.

Electric Raceway: Available with label on all doors.

Note: Door size and weight should be considered when determining hardware requirements.

ALGOMA HARDWOODS, INC.
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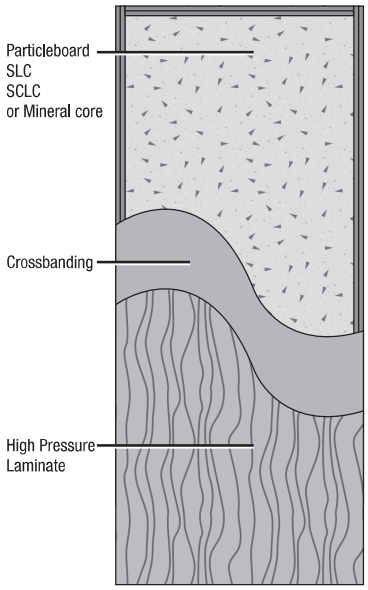
Plastic Laminate Doors

High Pressure Decorative Laminate



Algoma's plastic laminate doors come in a variety of constructions.

To ensure strength, rigidity and freedom from telegraphing of core parts, the unitized core is sanded before cold pressing a high pressure decorative laminate on each side of the core assembly.

Doors are available in most low sheen, high pressure decorative laminate solid solors and wood grains.

Product Features	
Thickness	1¾" (44mm).
Maximum size	Sizes are based upon fire ratings; see appropriate Door sections for details.
Stiles (Edge bands)	Inner stiles subject to fire ratings. Plastic banded to match face.
Special edge treatments	To reduce edge damage, optional polymer edges may be used. Available with FD 1⁄3 hour label.
Top & bottom rails	Rail options subject to fire door construction.
Core	Cores available are particle core (wood or Agrifibre), stave, structural composite and mineral core Category A and B.
Crossbands	1⁄16" (1.6mm) minimum wood-based composite.
Faces	Manufacturers standard, high pressure decorative laminates of .050" (1.33mm) thickness.
Adhesives	Type II (interior).
Details	See appropriate door construction to verify size and warranty requirements.
Machining	Available with hinge and lock machining as well as rabbets, holders, drop seals, pivots, etc.
Warranty	For interior, full warranty for life of original installation.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.

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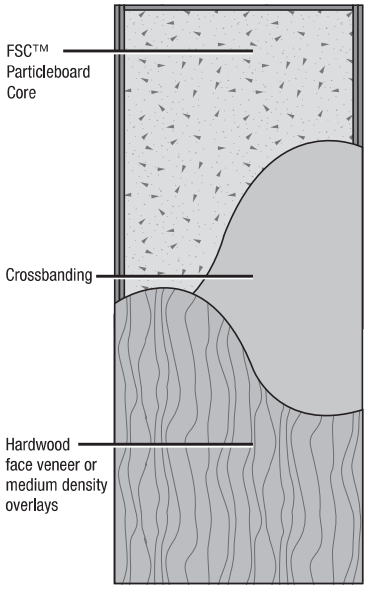
FSC™ PC-5 Novodor®

FD ⅓ Hour Door (Neutral or Positive Pressure)



Algoma's Novodor is an architectural door made with FSC Certified particleboard core.

Solid lumber outer stiles, along with Structural Composite Lumber (SCLC) rails and inner stiles, are securely bonded to the core under side pressure. To ensure strength, rigidity and freedom from telegraphing of core parts, this bonded core is then sanded before **hot pressing** a crossband and face on each side of the core assembly. This makes the highest quality assembly for fine hardwood veneers and composite overlays for solid color finishes. **Algoma uses only the better of two grades of particleboard** conforming to ANSI Standard A208.1-1993, Grade LD-2 with face screw holding power of 124 pounds, modulus of rupture of 725 psi, modulus of elasticity of 148,700 psi and density of 30–32 pounds per cubic foot.

Algoma uses only face veneers at least 1/50" (0.5mm) thick at 12% moisture content.

Positive Pressure Note: Algoma recommends using Category B 1/3 hour single swing doors. Please refer to Positive Pressure in Product Features Detail Section below. The selection of Category B 1/3 hour doors will offer cost savings and no aesthetic compromise.

Product Features

Thickness	1¾" (44mm) available FD ⅓ hour labeled. 1⅜" (35mm) available FD ⅓ hour labeled. 2¼, neutral pressure only.
Maximum size	Available prefit up to 4'0" x 10'0" (1219 x 3048mm); Category B: 4'0" x 9'0" (1219 x 2743mm). In FD ⅓ hour, 4'0" x 10'0" is maximum for singles and 8'0" x 10'0" (2438 x 3048mm) pairs. Also available in double egress pairs up to 8'0" x 9'0".
Stiles (Edge bands)	1⅜" (35mm) prior to factory trimming, glued to core. CE–compatible edges standard. ME–same species available.
Special edge treatments	To reduce edge damage, polymer edges with FD ⅓ hour label available.
Top & bottom rails	⅞" (22mm) prior to factory trimming, glued to core; Structural Composite Lumber (SCL).
Core	FSC Certified, Conforms to ANSI A208.1-1993, GRADE LD-2 covering mat-formed particleboard with face screw holding power of 124 pounds, modulus of rupture of 725 psi, modulus of elasticity of 148,700 psi and density of 30–32 pounds per cubic foot.
Reinforcement	Reinforced top and/or bottom rails are available to eliminate the need for through-bolting when installing closers or holders. Note: Screws must penetrate doors a minimum of 1½". Please see Hardware 5 and 13 for PC-5 reinforcement options.
Crossbands	1/16" (1.6mm) minimum wood-based composite.
Faces	Various foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Adhesive	Doors constructed using water-resistant adhesives (Type 1).
Veneer matching	Available in pairs, sets or matching transoms.
Details	Standard lites and louvers available not to exceed 40% of door area and 54" (1372mm) in length. Maximum glass opening on FD ⅓ hour doors is 1,296 sq. in. (0.836m²) with wood beads and clips or metal vision panels. Applied mouldings, quirks, and divided lites also available. Larger lites available with special glazing. (Contact Algoma for positive pressure approvals.)
Machining	Available with hinge and lock machining as well as rabbets, holders, drop seals, pivots, etc.
Finishing	Available in finishes with performance characteristics equivalent to AWI System TR-6, standard or custom colors. Also available primed four sides, painted, or sealed top and bottom. Opaque finish (OP-6) on medium density overlay only.
Warranty	For interior, full warranty for life of original installation.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Special services	Provides STC rating of 28-32 when supplied with gasketing/drop seal. Provides detention security rating of Grade #40 with ASTM Impact Test F 476.
Positive Pressure	**Category A:** Singles and pairs have intumescent built into the door, and no additional fire seals are required. If smoke and draft control doors are also required, then a category H seal must be applied to the frame. **Category B:** Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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FSC™ PC-5 Novodor®

FD ⅓ Hour Door (Neutral or Positive Pressure)

COLUMN	1	2	3
LABEL / FEATURE	ITS/WHI	UL	UL or ITS/WHI AHI FD 1/3 Hour Door/Transom
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 10'0" (1219 x 3048mm). **Pairs:** 8'0" x 10'0" (2438 x 3048mm). Double egress 8'0" x 9'0" (2438 x 2743mm). Pairs over 8'0" (2438mm) in height need metal edge guards. (Positive pressure not available)	**Singles:** 4'0" x 10'0" (1219 x 3048mm); Category B: 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), neutral and positive pressure, including double egress. **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm).	**Total Opening:** 4'0" x 11'0" (1219 x 3353mm). **ITS/WHI Opening:** 4'0" x 10'0" (1219 x 3048mm). **Door:** 4'0" x 8'0" (1219 x 2438mm). **Transom:** 4'0" x 4'0" (1219 x 1219mm).
FACES	Various foriegn and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S. 1-A face grades unless otherwise specified.		
STILES (VERTICAL EDGES) AND RAILS	All doors have either same species or compatible outers. Up to 13 1/2" (343mm) bottom rails allowed. Plastic laminate edges after faces.		Door/transom rabbeted 1/2" x 7/8" (13 x 22mm).
MAXIMUM WOOD VENEERED BEADED LITE	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glass and approval of AHJ (authority having jurisdiction). Contact Algoma for positive pressure approvals.		
MAXIMUM METAL VISION PANEL (Visible glass)	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glass and approval of AHJ (authority having jurisdiction). Contact Algoma for positive pressure approvals. 1 3/8" 20 minute doors limited to 100 sq. inch (.065m^2) metal vision panels only.		
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	Not allowed.	24" x 24" (610 x 610mm). Minimum 5" (127mm) from edge and 10" (203mm) from bottom. Neutral pressure only.	Not allowed.
HINGES Note: Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm).	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm).	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".
LOCKSETS	All listed cylindrical, mortised, unit, card, and hospital push/pull to 5" (127mm) backset.		
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved, including Pocket pivots.		Half or full mortised; top pivots not allowed unless frame is equipped with a fixed transom bar.
CLOSERS	Listed surface type or LCN using #420 Fireshield or Norton with Fire Block Liner #790, or Yale with Fire Block Liner #450.	Listed surface type. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 3/4" deep x 25" long.	UL listed surface type.
FIRE EXIT HARDWARE (Allowed with vision panel if non-interfering)	**Singles:** Mortised, rim or surface vertical rods. **Pairs:** Rim (with mullion), surface vertical rods, or concealed vertical rods (5" metal channel/8'0" x 9'3"). Double egress allowed.	**Singles:** Mortised, rim, or surface vertical rods. **Pairs:** Mortised lock and strike, rim, surface or concealed vertical rods (5" channel/8'0" x 9'3"). Double egress allowed.	**Singles:** Mortised, rim or surface vertical rods. **Pairs:** Not available.
OTHER PAIR HARDWARE	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Listed for use with wood doors. Surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Not allowed
Maximum trim: 3/8" (19mm) with standard rail. **Door Bottoms:** Max size 1" x 1 15/16" listed surface or concealed.	**Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm). **Edges:** Polymer edges allowed where edge damage is likely.	**Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Wood Frames:** FD 1/3 Hour doors can be installed with 1/3 hour wood frames. **Electric Raceway:** Available with label on all doors.

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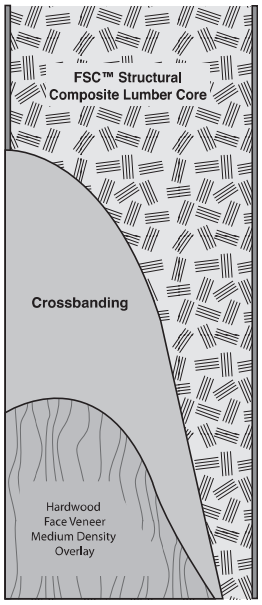
FSC™ SCLC-5 Structural Composite Lumber Core

FD ⅓ Hour Door (Neutral or Positive Pressure)



Algoma's FSC™ Structural Composite Lumber Core door utilizes an engineered hardwood strand board that is oriented and resin bonded to provide physical properties that equal or exceed solid lumber.

Stiles are securely bonded to the core. This construction provides strength, rigidity, and screw-holding power for surface mounted hardware to satisfy the most demanding applications.

Algoma uses only face veneers at least .020" (.5mm) thick at 12% moisture content.

Positive Pressure Note: Algoma recommends using Category B 1/3 hour single swing doors. Please refer to Positive Pressure in Product Features Detail Section below. The selection of Category B 1/3 hour doors will offer cost savings and no aesthetic compromise.

Product Features

Thickness	1¾" (44mm) available FD ⅓ hour labeled. 1⅜" (35mm) available non-labeled. 2¼" (57mm) available.
Maximum size	Available prefit up to 4'0" x 10'0" (1219 x 3048mm). In FD ⅓ hour, 4'0" x 9'0" (1219 x 2743mm) is maximum for singles and 8'0" x 9'0" (2438 x 2743mm) for pairs. Also available in double egress pairs up to 8'0" x 9'0" (2438 x 2743mm).
Stiles (Edge bands)	⅞" (22mm) prior to factory trimming, glued to core. CE–compatible edges standard. ME–same species available.
Special edge treatments	To reduce edge damage, polymer edges with FD ⅓ hour label available.
Top & bottom rails	⅞" (22mm) prior to factory trimming, glued to core. Alternates: ME–same species or CE–compatible edges.
Core	FSC™ Structural composite lumber core.
Crossbands	1/16" (1.6mm) minimum wood-based composite.
Faces	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Adhesive	Doors constructed using water-resistant adhesives (Type 2).
Veneer matching	Available in pairs, sets or matching transoms.
Details	Standard lites and louvers available not to exceed 40% of door area or 54" (1372mm) in length. Maximum glass opening on FD ⅓ hour doors is 1,296 sq. in. (0.836m²) with wood beads or metal vision panels. Applied mouldings and quirks also available. Contact Algoma for positive pressure approvals.
Machining	Available with hinge and lock machining as well as rabbets, holders, drop seals, pivots, etc.
Finishing	Available in finishes with performance characteristics equivalent to WDMA System TR-6, standard or custom colors. Also available primed, sealed, or sealed top and bottom edges only. Opaque finish (OP-6) on medium density overlay only.
Warranty	For interior, full warranty for life of original installation.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Special services	Provides detention security rating of Grade #40 with ASTM Impact Test F 476.
Positive Pressure	**Category A:** Singles and pairs have intumescent built into the door, and no additional fire seals are required. If smoke and draft control doors are also required, then a category H seal must be applied to the frame. **Category B:** Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges

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FSC™ SCLC-5 Structural Composite Lumber Core

FD ⅓ Hour Door (Neutral or Positive Pressure)

FEATURE	LABEL		
	ITS/WHI	UL	UL or ITS/WHI AHI FD 1/3 Hour Door/Transom
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress. Pairs over 8'0" (2438mm) in height need metal edge guards. Positive pressure 4'0" x 8'0" and 8'0" x 8'0" double egress.	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), neutral and positive pressure, including double egress. **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm).	**UL Opening:** 4'0" x 11'0" (1219 x 3353mm). **ITS/WHI Opening:** 4'0" x 10'0" (1219 x 3048mm). **Door:** 4'0" x 8'0" (1219 x 2438mm). **Transom:** 4'0" x 4'0" (1219 x 1219mm).
FACES	Various foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.		
STILES (VERTICAL EDGES) AND RAILS	All doors have either same species or compatible outers. Plastic laminate edges after faces.		Door/transom rabbeted 1/2" x 7/8" (13 x 22mm).
MAXIMUM WOOD BEADED LITE	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM METAL VISION PANEL (Visible glass)	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	Not allowed.	24" x 24" (610 x 610mm). Minimum 5" (127mm) from edge and 10" (203mm) from bottom. Neutral pressure only.	Not allowed.
HINGES Note: Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134". Anchor hinges allowed.	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".
LOCKSETS	All listed cylindrical, mortise, unit, card, electric lock, and hospital push/pull to 5" (127mm) backset.		
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved, including Pocket pivots.		Half or full mortised; top pivots not allowed unless frame is equipped with a fixed transom bar.
CLOSERS	Listed surface type or LCN using #420 Fireshield or Norton with Fire Block Liner #790, or Yale with Fire Block Liner #450.	Listed surface type. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 13/16" deep x 25" long.	Listed surface type.
FIRE EXIT HARDWARE (Allowed with vision panel if non-interfering)	**Singles:** Listed mortised, rim or surface vertical rods. **Pairs:** Listed rim (with mullion), surface vertical rods, or concealed vertical rods (5" metal channel/8'0" x 9'3"). Double egress allowed.	**Singles:** Listed mortised, rim, or surface vertical rods. **Pairs:** Listed rim (with mullion), surface vertical rods, or concealed vertical rods (5" metal channel/8'0" x 9'3"). Double egress allowed.	**Singles:** Listed mortise, rim or surface vertical rods. **Pairs:** Not available.
OTHER PAIR HARDWARE	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Not allowed
Maximum trim: 3/4" (19mm) at bottom. **Undercut:** Maximum undercut, 3/4" (19mm) per NFPA 80.	**Door Bottoms:** Max size 1" x 1 15/16" listed surface or concealed. **Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm).	**Edges:** Polymer edges allowed where edge damage is likely. **Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Wood Frames:** FD 1/3 Hour doors can be installed with 1/3 hour wood frames. **Electric Raceway:** Available with label on all doors.

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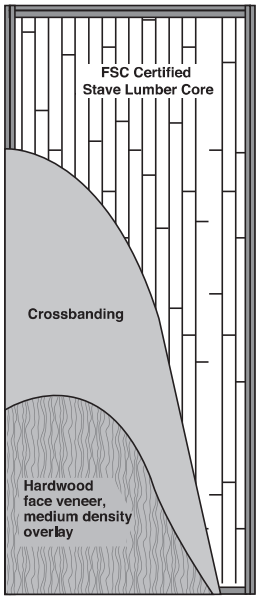
FSC™ SLC-5 Stave Lumber Core

FD ⅓ Hour Door (Neutral or Positive Pressure)



Algoma's architectural FSC Certified Stave Lumber Core door features a kiln dried, low density wood block core which is bonded together under side pressure using the high frequency cure method.

Solid lumber stiles and rails are securely bonded to this core. To ensure strength, rigidity and freedom from telegraphing of core parts, this unitized core is then sanded before hot pressing a crossband and face on each side of the core assembly. This makes a high quality base for fine hardwood veneers and composite overlays for solid color finishes.

Algoma uses only face veneers at least .020" (0.5mm) thick at 12% moisture content.

Positive Pressure Note: Algoma recommends using Category B 1/3 hour single swing doors. Please refer to Positive Pressure in Product Features Detail Section below. The selection of Category B 1/3 hour doors will offer cost savings and no aesthetic compromise.

Product Features

Thickness	1¾" (44mm) or 2¼" (57mm) available FD ⅓ hour labeled. 1⅜" (35mm) available non-labeled. 2¼" (57mm) available.
Maximum size	Available prefit up to 4'0" x 10'0" (1219 x 3048mm). In FD ⅓ hour, 4'0" x 9'0" (1219 x 2743mm) is maximum for singles and 8'0" x 9'0" (2438 x 2743mm) for pairs. Also available in double egress pairs up to 8'0" x 9'0" (2438 x 2743mm). Paired construction will be FSC™ SCLC core only.
Stiles (Edge bands)	1⅜" (35mm) prior to factory trimming, glued to core. ME-same species available, CE-compatible species standard.
Special edge treatments	To reduce edge damage, polymer edges with FD ⅓ hour label available.
Top rail	1⅜" (35mm) prior to factory trimming, glued to core.
Bottom rail	1⅜" (35mm) Structural Composite Lumber (SCL).
Core	FSC Certified low density wood blocks, kiln dried, not more than 2 1/2" wide; random lengths, joints well staggered.
Crossbands	1/16" (1.6mm) minimum wood-based composite.
Faces	Various foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Adhesive	Doors constructed using water-resistant adhesives (Type 1).
Veneer matching	Available in pairs and sets (SCLC core only) or matching transoms.
Details	Standard lites and louvers available not to exceed 40% of door area or 54" (1372mm) in length. Maximum glass opening on FD ⅓ hour doors is 1,296 sq. in. (0.836m²) with wood beads and clips or metal vision panels. Applied mouldings, quirks, and divided lites also available. Specify flashing on exterior doors. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.
Machining	Available with hinge and lock machining as well as rabbets, holders, drop seals, pivots, etc.
Finishing	Available in finishes with performance characteristics equivalent to AWI System TR-6, standard or custom colors. Also available primed four sides, painted, or sealed top and bottom. Opaque finish (OP-6) on medium density overlay only.
Warranty	For interior, full warranty for life of original installation.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Special services	Provides detention security rating of Grade #40 with ASTM Impact Test F 476.
Positive Pressure	**Category A:** Singles and pairs have intumescent built into the door, and no additional fire seals are required. If smoke and draft control doors are also required, then a category H seal must be applied to the frame. **Category B:** Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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FSC™ SLC-5 Stave Lumber Core

FD ⅓ Hour Door (Neutral or Positive Pressure)

COLUMN	1	2	3
LABEL / FEATURE	ITS/WHI	UL	UL or ITS/WHI AHI FD 1/3 Hour Door/Transom
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress. Pairs over 8'0" (2438mm) in height need metal edge guards. Positive pressure 4'0" x 8'0" and 8'0" x 8'0" double egress. Paired construction will be FSC™ SCLC Core.	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), neutral and positive pressure, including double egress. **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm). Paired construction will be FSC™ SCLC Core.	**UL Opening:** 4'0" x 11'0" (1219 x 3353mm). **ITS/WHI Opening:** 4'0" x 10'0" (1219 x 3048mm). **Door:** 4'0" x 8'0" (1219 x 2438mm). **Transom:** 4'0" x 4'0" (1219 x 1219mm).
FACES	Various foriegn and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S. 1-A face grades unless otherwise specified.		
STILES (VERTICAL EDGES) AND RAILS	All doors have either same species or compatible outers. Plastic laminate edges after faces.		Door/transom rabbeted 1/2" x 7/8" (13 x 22mm). Matching or compatible edges will be provided when frame is equipped with fixed transom bar.
MAXIMUM WOOD BEADED LITE	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM METAL VISION PANEL (Visible glass)	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	Not allowed.	24" x 24" (610 x 610mm). Minimum 5" (127mm) from edge and 10" (203mm) from bottom. Neutral pressure only.	Not allowed.
HINGES Note: Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134". Anchor hinges allowed.	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".
LOCKSETS	All listed cylindrical, mortise, unit, card, electric lock, and hospital push/pull to 5" (127mm) backset.		
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved. Pocket pivots not allowed. Intermediate pivots required for label and warranty.		Half or full mortised; top pivots not allowed unless frame is equipped with a fixed transom bar.
CLOSERS	Listed surface type or LCN using #420 Fireshield or Norton with Fire Block Liner #790, or Yale with Fire Block Liner #450.	UL listed surface type. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 3/4" deep x 25" long.	UL listed surface type.
FIRE EXIT HARDWARE (Allowed with vision panel if non-interfering)	**Singles:** Mortised, rim or surface vertical rods. **Pairs:** Rim (with mullion) or surface and concealed vertical rods. Double egress allowed. Paired construction will be FSC™ SCLC Core.	**Singles:** Mortised, rim, or surface vertical rods. **Pairs:** Rim (with mullion) or surface and concealed vertical rods. Double egress allowed. Paired construction will be FSC™ SCLC Core.	**Singles:** Mortised, rim or surface vertical rods. **Pairs:** Not available.
OTHER PAIR HARDWARE	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Not allowed
Maximum trim: 3/4" (19mm) at bottom with standard rail. **Undercut:** Maximum undercut, 3/4" (19mm).	**Door Bottoms:** Max size 1" x 1 15/16" listed surface or concealed. **Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm).	**Edges:** Polymer edges allowed where edge damage is likely. **Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Wood Frames:** FD 1/3 Hour doors can be installed with 1/3 hour wood frames. **Electric Raceway:** Available with label on all doors.

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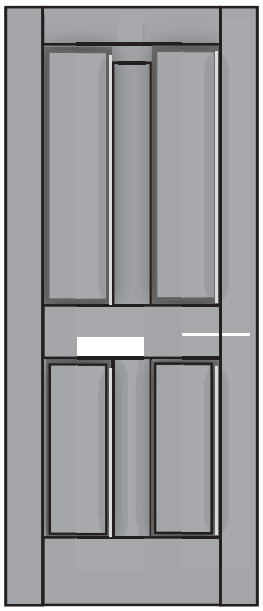
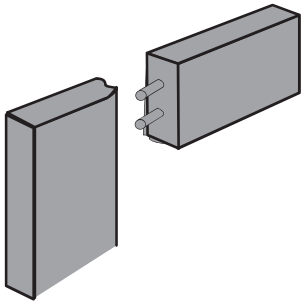
FSC™ Stile and Rail Door



Engineered hardwood FSC composite core.
Hardwood lumber stile and rail banding.



Traditional construction with solid sticking, rails coped to stile profile, doweled together and glued under pressure.

Algoma Stile and Rail doors are manufactured with high quality hardwood lumber, a variety of foreign & domestic veneers and surfaces for paint finish.

Doors are available factory machined for hardware and factory finished to provide smooth, high quality installations. Stile and rail components are joined with dowels and glued under pressure. This construction combined with Algoma's craftsmanship provides maximum strength and durability.

Positive Pressure Note: Algoma recommends using Category B 1/3 hour single swing doors. Please refer to Positive Pressure in Product Features Detail Section below. The selection of Category B 1/3 hour doors will offer cost savings and no aesthetic compromise.

Product Features

Thickness	1¾" (44mm) or 2¼" (57mm) 1⅜" (35mm) available non-labeled.
Sizes	Available in prefit sizes from 1'0" x 6'8" (300 x 2030mm) to 4'0" x 9'0" (1220 x 2740mm). In FD ⅓ hour, 4'0" x 9'0" (1220 x 2740mm) is maximum for singles and 8'0" x 9'0" (2440 x 2740mm) for pairs.
Stiles (Edge bands)	⅞" prior to factory trimming, glued to core. ME-same species available, CE-compatible species standard.
Top & bottom rails	SLC/SCLC (mill option).
Core	FSC Certified stave lumber core.
Stile & Rail veneers	Various foreign and domestic species. Faces are a minimum of .062" (1.6mm) at 12% moisture content. All faces to be per WDMA I.S. 1-A face grades.
Adhesive	Doors constructed using water-resistant adhesives (Type 2).
Panels	Veneer wrapped raised panel, flat panels and Full Lite constructions are available. Panels and door faces are the same grade and specie but are not from the same flitches. Color and grain variation will occur. Paint grade doors may have varying species.
Details	Standard lites and louvers available. Maximum glass opening for 1/3 hour rating with wire glass is 1296 sq. in. (.83m²). Glazed lite openings over 1296 sq. in. (.830m²) may be specified as 1/3 hour rated. This configuration requires factory glazing with ceramic glass and a special beading system. Lite openings may be a maximum of 35" (889mm) wide, 77" (1955mm) long and have an area of 2695 sq. in. (1739m²) or less.
Machining	Available with hinge and lock machining as well as drop seals, pivots and other hardware.
Finishing	Available in finishes with performance characteristics equivalent to AWI System TR-6, standard or custom colors. Also available primed, sealed, or sealed top and bottom edges only.
Warranty	For interior, full warranty for life of original installation.
Component dimensions	Standard and 20 minute rated: Stiles 6" (152mm) Top rail 6" (152mm) Bottom rail 9.5" (241mm) Vertical mullions 4" (100mm) Intermediate rail 4" (100mm) Minimum for non-label and doors under 1'6" (460mm) wide: Stiles 3" (75mm) Top rail 6" (152mm) Bottom rail 9.5" (241mm) Vertical mullions 3" (75mm) Intermediate rail 3" (75mm)
Positive Pressure	**Category A:** Singles and pairs have intumescent built into the door, and no additional fire seals are required. If smoke and draft control doors are also required, then a category H seal must be applied to the frame. **Category B:** Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.
Fire ratings	Full Lite & veneer wrapped raised panel are available in 20 minute ratings only.

Note: Stile, rail and mullion dimensions may vary to accommodate hardware, label and warranty requirements.

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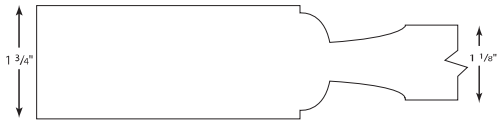
FSC™ Stile and Rail Door



1/3 HOUR FIRE DOOR DETAIL

Algoma Hardwoods has available 1/3 hour approved labeled stile and rail fire doors.

All 1/3 hour fire doors must be machined under a Labeling Service Program per NFPA.

The 1/3 hour doors require a Pemko S88 smoke gasket around the parameter of the frame on single doors. Paired 1/3 hour doors require an intumescent strip at the meeting edge and a Pemko S88 smoke gasket around the perimeter of the frame to comply with positive pressure requirements.

Fire Door Specifications. For Interior Use Only.

All Doors are labeled for compliance with UBC-7-2 1997 Positive Pressure Code and UL10B and UBC 7-2-1994 neutral pressure.

	1/3 Hour
Maximum Size Singles	4'0" x 9'0"
Maximum Size Pairs	8'0" x 9'0"
Thickness	1 3/4" – Standard 2 1/4" – Optional
Adhesive	Type I or Type II Water Resistant-Standard
Warranty	Lifetime
Labeling Source	ITS Warnock Hersey, UL Underwriters Laboratory
Maximum Raised Panel Size	39" x 70"
Minimum Raised Panel Thickness	1 1/8"
Maximum Flat Panel Size	39" x 70"
Minimum Flat Panel Thickness	5/8"
Maximum Lite Opening	With 1/4" wire glass 1296 sq. in. (0.83m2). Larger glass openings on 1/3 hour doors available with the use of spe Maximum size of 35" (889mm) wide and 87" (1955mm) high with maximum area of 2695 sq. in. (1.73m2).
Metal Edge & Astragal	Not required up to 8'0" (2438mm). Over 8'0" (2438mm) in height need either treated edges or metal edge guar
Hardware	Hinges: 4 1/2" x 4 1/2" x .134 minimum butt or listed continuous hinge. per NFPA 80 some specialty hinges allowe Algoma for information. Latching Devices: Cylindrical, mortise, unit, surface vertical rods, rim exit devices, and cylinder dead bolts (in co with approved latching device). Closers: Surface mounted, concealed overhead stops. (Some restrictions apply. Consult factory.) Viewers: One 1" diameter hole or two 1/2" diameter holes.
True Divided Lite Door	Available
Species	All commercially available hardwood species

If you utilize these options, your doors can arrive at the job site ready for hanging:
Factory prefinish – standard or custom color match
Factory machine for hardware

Note: Stile, rail and mullion dimensions may vary to accommodate hardware, label and warranty requirements.

FSC-C005458

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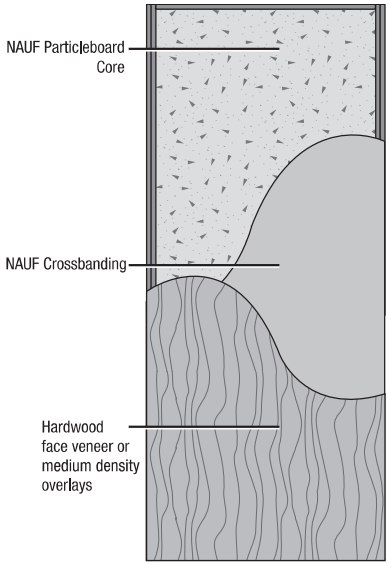
NAUF PC-5 Novodor®

FD ⅓ Hour Door (Neutral or Positive Pressure)



Algoma's Novodor is an architectural door made with NAUF particleboard core.

Solid lumber outer stiles, along with Structural Composite Lumber (SCLC) rails and inner stiles, are securely bonded to the core under side pressure. To ensure strength, rigidity and freedom from telegraphing of core parts, this bonded core is then sanded before **hot pressing** a crossband and face on each side of the core assembly. This makes the highest quality assembly for fine hardwood veneers and composite overlays for solid color finishes. **Algoma uses only the better of two grades of particleboard** conforming to ANSI Standard A208.1-1993, Grade LD-2 with face screw holding power of 124 pounds, modulus of rupture of 725 psi, modulus of elasticity of 148,700 psi and density of 30–32 pounds per cubic foot.

Algoma uses only face veneers at least 1/50" (0.5mm) thick at 12% moisture content.

Positive Pressure Note: Algoma recommends using Category B 1/3 hour single swing doors. Please refer to Positive Pressure in Product Features Detail Section below. The selection of Category B 1/3 hour doors will offer cost savings and no aesthetic compromise.

Product Features

Thickness	1¾" (44mm) available FD ⅓ hour labeled. 1⅜" (35mm) available FD ⅓ hour labeled, 2¼ (57mm) available, neutral pressure only.
Maximum size	Available prefit up to 4'0" x 10'0" (1219 x 3048mm); Category B: 4'0" x 9'0" (1219 x 2743mm). In FD 1/3 hour, 4'0" x 10'0" is maximum for singles and 8'0" x 10'0" (2438 x 3048mm) pairs. Also available in double egress pairs up to 8'0" x 9'0".
Stiles (Edge bands)	1⅜" (35mm) prior to factory trimming, glued to core. CE–compatible edges standard. ME–same species available
Special edge treatments	To reduce edge damage, polymer edges with FD ⅓ hour label available.
Top & bottom rails	⅞" (22mm) prior to factory trimming, glued to core; Structural Composite Lumber (SCL).
NAUF particleboard core	Conforms to ANSI A208.1-1993, GRADE LD-2 covering mat-formed particleboard with face screw holding power of 124 pounds, modulus of rupture of 725 psi, modulus of elasticity of 148,700 psi and density of 30–32 pounds per cubic foot.
Reinforcement	Reinforced top and/or bottom rails are available to eliminate the need for through-bolting when installing closers or holders. Note: Screws must penetrate doors a minimum of 1½". Please see Hardware 5 and 13 for PC-5 reinforcement options.
NAUF Crossbands	1/16" (1.6mm) minimum wood-based composite.
Faces	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Adhesive	Doors constructed using water-resistant NAUF adhesives (Type 1).
Veneer matching	Available in pairs, sets or matching transoms
Details	Standard lites and louvers available not to exceed 40% of door area and 54" (1372mm) in length. Maximum glass opening on FD ⅓ hour doors is 1,296 sq. in. (0.836m²) with wood beads and clips or metal vision panels. Applied mouldings, quirks, and divided lites also available. Larger lites available with special glazing. (Contact Algoma for positive pressure approvals.)
Machining	Available with hinge and lock machining as well as rabbets, holders, drop seals, pivots, etc.
Finishing	Available in finishes with performance characteristics equivalent to AWI System TR-6, standard or custom colors. Also available primed four sides, painted, or sealed top and bottom. Opaque finish (OP-6) on medium density overlay only.
Warranty	For interior, full warranty for life of original installation.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Special services	Provides STC rating of 28-32 when supplied with gasketing/drop seal. Provides detention security rating of Grade #40 with ASTM Impact Test F 476.
Positive Pressure	**Category A:** Singles and pairs have intumescent built into the door, and no additional fire seals are required. If smoke and draft control doors are also required, then a category H seal must be applied to the frame. **Category B:** Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges

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NAUF PC-5 Novodor®

FD ⅓ Hour Door (Neutral or Positive Pressure)

COLUMN	1	2	3
LABEL / FEATURE	ITS/WHI	UL	UL or ITS/WHI AHI FD 1/3 Hour Door/Transom
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 10'0" (1219 x 3048mm). **Pairs:** 8'0" x 10'0" (2438 x 3048mm). Double egress 8'0" x 9'0" (2438 x 2743mm). Pairs over 8'0" (2438mm) in height need metal edge guards. (Positive pressure not available)	**Singles:** 4'0" x 10'0" (1219 x 3048mm); Category B: 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), neutral and positive pressure, including double egress. **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm).	**Total Opening:** 4'0" x 11'0" (1219 x 3353mm). **ITS/WHI Opening:** 4'0" x 10'0" (1219 x 3048mm). **Door:** 4'0" x 8'0" (1219 x 2438mm). **Transom:** 4'0" x 4'0" (1219 x 1219mm).
FACES	All foriegn and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S. 1-A face grades unless otherwise specified.		
STILES (VERTICAL EDGES) AND RAILS	All doors have either same species or compatible outers. Up to 13 1/2" (343mm) bottom rails allowed. Plastic laminate edges after faces.		Door/transom rabbeted 1/2" x 7/8" (13 x 22mm).
MAXIMUM WOOD VENEERED BEADED LITE	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glass and approval of AHJ (authority having jurisdiction). Contact Algoma for positive pressure approvals.		
MAXIMUM METAL VISION PANEL (Visible glass)	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glass and approval of AHJ (authority having jurisdiction). Contact Algoma for positive pressure approvals. 1 3/8" 20 minute doors limited to 100 sq. inch (.065m^2) metal vision panels only.		
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	Not allowed.	24" x 24" (610 x 610mm). Minimum 5" (127mm) from edge and 10" (203mm) from bottom. Neutral pressure only.	Not allowed.
HINGES Note: Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm).	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".
LOCKSETS	All listed cylindrical, mortised, unit, card, and hospital push/pull to 5" (127mm) backset.		
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved, including Pocket pivots.		Half or full mortised; top pivots not allowed unless frame is equipped with a fixed transom bar.
CLOSERS	Listed surface type or LCN using #420 Fireshield or Norton with Fire Block Liner #790, or Yale with Fire Block Liner #450.	UL listed surface type. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 3/4" deep x 25" long.	UL listed surface type.
FIRE EXIT HARDWARE (Allowed with vision panel if non-interfering)	**Singles:** Mortised, rim or surface vertical rods. **Pairs:** Rim (with mullion), surface vertical rods, or concealed vertical rods (5" metal channel/8'0" x 9'3"). Double egress allowed.	**Singles:** Mortised, rim, or surface vertical rods. **Pairs:** Mortised lock and strike, rim, surface or concealed vertical rods (5" metal channel/8'0" x 9'3"). Double egress allowed.	**Singles:** Mortised, rim or surface vertical rods. **Pairs:** Not available.
OTHER PAIR HARDWARE	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Listed for use with wood doors. Surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Not allowed
Maximum trim: 3/8" (19mm) with standard rail. **Door Bottoms:** Max size 1" x 1 15/16" listed surface or concealed.	**Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm). **Edges:** Polymer edges allowed where edge damage is likely.	**Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Wood Frames:** FD 1/3 Hour doors can be installed with 1/3 hour wood frames. **Electric Raceway:** Available with label on all doors.

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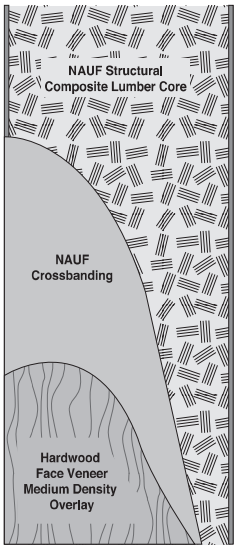
NAUF SCLC-5 Structural Composite Lumber Core

FD ⅓ Hour Door (Neutral or Positive Pressure)



Algoma's Architectural NAUF Structural Composite Lumber Core door utilizes an engineered hardwood strand board that is oriented and NAUF resin bonded to provide physical properties that equal or exceed solid lumber.

Stiles are securely bonded to the core. This construction provides strength, rigidity, and screw-holding power for surface mounted hardware to satisfy the most demanding applications.

Algoma uses only face veneers at least .020" (.5mm) thick at 12% moisture content.

Positive Pressure Note: Algoma recommends using Category B 1/3 hour single swing doors. Please refer to Positive Pressure in Product Features Detail Section below. The selection of Category B 1/3 hour doors will offer cost savings and no aesthetic compromise.

Product Features

Thickness	1¾" (44mm) available FD ⅓ hour labeled. 1⅜" (35mm) available non-labeled, 2¼" (57mm) available.
Maximum size	Available prefit up to 4'0" x 10'0" (1219 x 3048mm). In FD ⅓ hour, 4'0" x 9'0" (1219 x 2743mm) is maximum for singles and 8'0" x 9'0" (2438 x 2743mm) for pairs. Also available in double egress pairs up to 8'0" x 9'0" (2438 x 2743mm).
Stiles (Edge bands)	⅞" (22mm) prior to factory trimming, glued to core. Alternates: ME–same species or CE–compatible edges.
Special edge treatments	To reduce edge damage, polymer edges with FD ⅓ hour label available.
Top & Bottom rails	Structural composite lumber (industry standard does not require separate rails on this construction).
NAUF Core	Structural composite lumber core.
NAUF Crossbands	1/16" (1.6mm) minimum wood-based composite.
Faces	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Adhesives	Doors constructed using water-resistant NAUF adhesives (Type 2).
Veneer matching	Available in pairs, sets or matching transoms.
Details	Standard lites and louvers available not to exceed 40% of door area or 54" (1372mm) in length. Maximum glass opening on FD ⅓ hour doors is 1,296 sq. in. (0.836m²) with wood beads or metal vision panels. Applied mouldings and quirks also available. Contact Algoma for positive pressure approvals.
Machining	Available with hinge and lock machining as well as rabbets, holders, drop seals, pivots, etc.
Finishing	Available in finishes with performance characteristics equivalent to WDMA System TR-6, standard or custom colors. Also available primed, sealed, or sealed top and bottom edges only. Opaque finish (OP-6) on medium density overlay only.
Warranty	For interior, full warranty for life of original installation.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Special Services	Provides detention security rating of Grade #40 with ASTM Impact Test F 476.
Positive Pressure	**Category A:** Singles and pairs have intumescent built into the door, and no additional fire seals are required. If smoke and draft control doors are also required, then a category H seal must be applied to the frame. **Category B:** Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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NAUF SCLC-5 Structural Composite Lumber Core

FD ⅓ Hour Door (Neutral or Positive Pressure)

FEATURE	LABEL		
	ITS/WHI	UL	UL or ITS/WHI AHI FD 1/3 Hour Door/Transom
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress. Pairs over 8'0" (2438mm) in height need metal edge guards. Positive pressure 4'0" x 8'0" and 8'0" x 8'0" double egress.	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), neutral and positive pressure, including double egress. **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm).	**UL Opening:** 4'0" x 11'0" (1219 x 3353mm). **ITS/WHI Opening:** 4'0" x 10'0" (1219 x 3048mm). **Door:** 4'0" x 8'0" (1219 x 2438mm). **Transom:** 4'0" x 4'0" (1219 x 1219mm).
FACES	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.		
STILES (VERTICAL EDGES) AND RAILS	All doors have either same species or compatible outers. Plastic laminate edges after faces.		Door/transom rabbeted 1/2" x 7/8" (13 x 22mm).
MAXIMUM WOOD BEADED LITE	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM METAL VISION PANEL (Visible glass)	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	Not allowed.	24" x 24" (610 x 610mm). Minimum 5" (127mm) from edge and 10" (203mm) from bottom. Neutral pressure only.	Not allowed.
HINGES Note: Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134". Anchor hinges allowed.	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".
LOCKSETS	All listed cylindrical, mortise, unit, card, electric lock, and hospital push/pull to 5" (127mm) backset.		
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved, including Pocket pivots.		Half or full mortised; top pivots not allowed unless frame is equipped with a fixed transom bar.
CLOSERS	Listed surface type or LCN using #420 Fireshield or Norton with Fire Block Liner #790, or Yale with Fire Block Liner #450.	Listed surface type. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 13/16" deep x 25" long.	Listed surface type.
FIRE EXIT HARDWARE (Allowed with vision panel if non-interfering)	**Singles:** Listed mortised, rim or surface vertical rods. **Pairs:** Listed rim (with mullion), surface vertical rods, or concealed vertical rods (5" metal channel/8'0" x 8'0"). Double egress allowed.	**Singles:** Listed mortised, rim, or surface vertical rods. **Pairs:** Listed rim (with mullion), surface vertical rods, or concealed vertical rods (5" metal channel/8'0" x 8'0"). Double egress allowed.	**Singles:** Listed mortise, rim or surface vertical rods. **Pairs:** Not available.
OTHER PAIR HARDWARE	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Not allowed
Maximum trim: 3/4" (19mm) at bottom. **Undercut:** Maximum undercut, 3/4" (19mm) per NFPA 80.	**Door Bottoms:** Max size 1" x 1 15/16" listed surface or concealed. **Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm).	**Edges:** Polymer edges allowed where edge damage is likely. **Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Wood Frames:** FD 1/3 Hour doors can be installed with 1/3 hour wood frames. **Electric Raceway:** Available with label on all doors.

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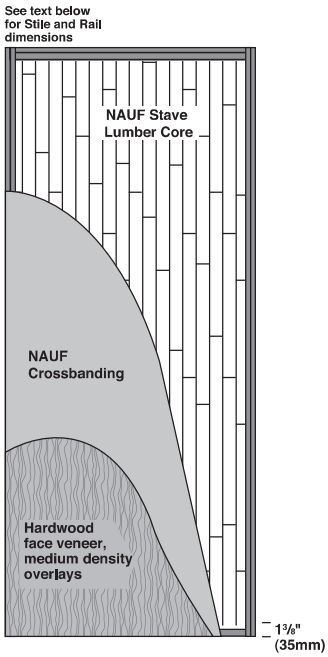
NAUF SLC-5 Stave Lumber Core

FD ⅓ Hour Door (Neutral or Positive Pressure)



Algoma's architectural NAUF Stave Lumber Core door features a kiln dried, low density wood block core which is bonded together under side pressure using the high frequency cure method.

Solid lumber stiles and rails are securely bonded to this core. To ensure strength, rigidity and freedom from telegraphing of core parts, this unitized core is then sanded before hot pressing a crossband and face on each side of the core assembly. This makes a high quality base for fine hardwood veneers and composite overlays for solid color finishes.

Algoma uses only face veneers at least .020" (0.5mm) thick at 12% moisture content.

Positive Pressure Note: Algoma recommends using Category B 1/3 hour single swing doors. Please refer to Positive Pressure in Product Features Detail Section below. The selection of Category B 1/3 hour doors will offer cost savings and no aesthetic compromise.

Product Features

Thickness	1¾" (44mm) or 2¼" (57mm) available FD ⅓ hour labeled. 1⅜" (35mm) available non-labeled. 2¼" (57mm) available.
Maximum size	Available prefit up to 4'0" x 10'0" (1219 x 3048mm). In FD ⅓ hour, 4'0" x 9'0" (1219 x 2743mm) is maximum for singles and 8'0" x 9'0" (2438 x 2743mm) for pairs. Also available in double egress pairs up to 8'0" x 9'0" (2438 x 2743mm). Paired construction will be SCLC core only.
Stiles (Edge bands)	1⅜" (35mm) prior to factory trimming, glued to core. ME-same species available, CE-compatible species standard.
Special edge treatments	To reduce edge damage, polymer edges with ⅓ hour label available.
Top rail	1⅜" (35mm) prior to factory trimming, glued to core.
Bottom rail	1⅜" (35mm) Structural Composite Lumber (SCL).
Core	NAUF low density wood blocks, kiln dried, not more than 2½" wide; random lengths, joints well staggered.
Crossbands	NAUF, 1/16" (1.6mm) minimum wood-based composite.
Faces	All foreign and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S.1-A face grades unless otherwise specified.
Adhesives	Doors constructed using water-resistant NAUF adhesives (Type 1).
Veneer matching	Available in pairs and sets (SCLC core only) or matching transoms.
Details	Standard lites and louvers available not to exceed 40% of door area or 54" (1372mm) in length. Maximum glass opening on FD ⅓ hour doors is 1,296 sq. in. (0.836m²) with wood beads and clips or metal vision panels. Applied mouldings, quirks, and divided lites also available. Specify flashing on exterior doors. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.
Machining	Available with hinge and lock machining as well as rabbets, holders, drop seals, pivots, etc.
Finishing	Available in finishes with performance characteristics equivalent to AWI System TR-6, standard or custom colors. Also available primed four sides, painted, or sealed top and bottom. Opaque finish (OP-6) on medium density overlay only.
Warranty	For interior, full warranty for life of original installation.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9, Architectural Flush Doors and Section 5, Factory Finish.
Special Services	Provides detention security rating of Grade #40 with ASTM Impact Test F 476.
Positive Pressure	**Category A:** Singles and pairs have intumescent built into the door, and no additional fire seals are required. If smoke and draft control doors are also required, then a category H seal must be applied to the frame. **Category B:** Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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NAUF SLC-5 Stave Lumber Core

FD ⅓ Hour Door (Neutral or Positive Pressure)

COLUMN	1	2	3
LABEL / FEATURE	ITS/WHI	UL	UL or ITS/WHI AHI FD 1/3 Hour Door/Transom
MAXIMUM OPENING SIZE	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress. Pairs over 8'0" (2438mm) in height need metal edge guards. Positive pressure 4'0" x 8'0" and 8'0" x 8'0" double egress.	**Singles:** 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), neutral and positive pressure, including double egress. **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm).	**UL Opening:** 4'0" x 11'0" (1219 x 3353mm). **ITS/WHI Opening:** 4'0" x 10'0" (1219 x 3048mm). **Door:** 4'0" x 8'0" (1219 x 2438mm). **Transom:** 4'0" x 4'0" (1219 x 1219mm).
FACES	Various foriegn and domestic species, medium density overlay (MDO) and most low sheen .050 thickness High Pressure Decorative Laminates. Faces are a minimum of 1/50" (0.5mm) at 12% moisture content. All faces to be per WDMA I.S. 1-A face grades unless otherwise specified.		
STILES (VERTICAL EDGES) AND RAILS	All doors have either same species or compatible outers. Plastic laminate edges after faces.		Door/transom rabbeted 1/2" x 7/8" (13 x 22mm). Matching or compatible edges will be provided when frame is equipped with fixed transom bar.
MAXIMUM WOOD BEADED LITE	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM METAL VISION PANEL (Visible glass)	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	Not allowed.	24" x 24" (610 x 610mm). Minimum 5" (127mm) from edge and 10" (203mm) from bottom. Neutral pressure only.	Not allowed.
HINGES Note: Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134". Anchor hinges allowed.	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".
LOCKSETS	All listed cylindrical, mortise, unit, card, electric lock, and hospital push/pull to 5" (127mm) backset.		
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved. Pocket pivots not allowed. Intermediate pivots required for label and warranty.		Half or full mortised; top pivots not allowed unless frame is equipped with a fixed transom bar.
CLOSERS	Listed surface type or LCN using #420 Fireshield or Norton with Fire Block Liner #790, or Yale with Fire Block Liner #450.	UL listed surface type. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 3/4" deep x 25" long.	UL listed surface type.
FIRE EXIT HARDWARE (Allowed with vision panel if non-interfering)	**Singles:** Mortised, rim or surface vertical rods. **Pairs:** Rim (with mullion) or surface and concealed vertical rods. Double egress allowed.	**Singles:** Mortised, rim, or surface vertical rods. **Pairs:** Rim (with mullion) or surface and concealed vertical rods. Double egress allowed.	**Singles:** Mortised, rim or surface vertical rods. **Pairs:** Not available.
OTHER PAIR HARDWARE	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Not allowed
Maximum trim: 3/4" (19mm) at bottom with standard rail. **Undercut:** Maximum undercut, 3/4" (19mm).	**Door Bottoms:** Max size 1" x 1 15/16" listed surface or concealed. **Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm).	**Edges:** Polymer edges allowed where edge damage is likely. **Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Wood Frames:** FD 1/3 Hour doors can be installed with 1/3 hour wood frames. **Electric Raceway:** Available with label on all doors.

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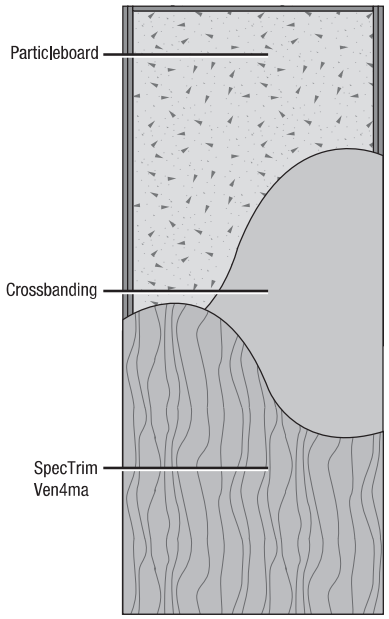
RhinoDoor® 1/3 Hour Door - (Particleboard Core)



Algoma's RhinoDoor® is an architectural door made with particleboard core.

PVC edged outer stiles, along with Structural Composite Lumber (SCLC) rails and inner stiles, are securely bonded to the core under side pressure. To ensure strength, rigidity and freedom from telegraphing of core parts, this bonded core is then sanded before cold pressing a crossband and face on each side of the core assembly. This makes the highest quality assembly for fine PVC faces.

Algoma uses SpecTrim Ven4ma PVC faces .050" thick.

Algoma uses only the better of two grades of particleboard conforming to ANSI Standard A208.1-1993, Type 1, Grade LD-2 with face screw holding power of 124 pounds, modulus of rupture of 725 psi, modulus of elasticity of 148,700 psi and density of 30-32 pounds per cubic foot.

Positive Pressure Note: Algoma recommends using Category B 1/3 hour single swing doors. Please refer to Positive Pressure in Product Features Detail Section below. The selection of Category B 1/3 hour doors will offer cost savings and no aesthetic compromise.

Product Features

Thickness	1 3/4" (44mm) available FD 1/3 hour labeled.
Maximum size	Available prefit up to 4'0" x 10'0" (1219 x 3048mm); Category B: 4'0" x 9'0" (1219 x 2743mm). In FD 1/3 hour, 4'0" x 10'0" is maximum for singles and 8'0" x 10'0" (2438 x 3048mm) pairs. Also available in double egress pairs up to 8'0" x 9'0".
Stiles (Edge bands)	1 3/8" (35mm) prior to factory trimming, glued to core. Outer stile compatible PVC edge, 3mm.
Top & Bottom rail	7/8" (22mm) prior to factory trimming, glued to core; Structural Composite Lumber (SCL).
Core	Conforms to ANSI A208.1-1993, GRADE LD-2 covering mat-formed particleboard with face screw holding power of 124 pounds, modulus of rupture of 725 psi, modulus of elasticity of 148,700 psi and density of 30–32 pounds per cubic foot.
Reinforcemenet	Reinforced top and/or bottom rails are available to eliminate the need for through-bolting when installing closers or holders. Note: Screws must penetrate doors a minimum of 1 1/2". Please see Hardware 5 and 13 for PC-5 reinforcement options.
Crossbands	1/16" (1.6mm) minimum wood-based composite.
Faces	15 standard colors, others by request. SpecTrim Ven4ma PVC face.
Adhesives	Doors constructed using water-resistant adhesives (Type 2).
Details	Standard lites and louvers available not to exceed 40% of door area and 54" (1372mm) in length. Maximum glass opening on FD 1/3 hour doors is 1,296 sq. in. (0.836m²) with wood beads and clips or metal vision panels. Divided lites are also available. Larger lites available with special glazing. (Contact Algoma for positive pressure approvals.) See Details 11 and 12.
Machining	Available with hinge and lock machining as well as rabbets, holders, drop seals, pivots, etc.
Warranty	For interior, full warranty for life of original installation.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9.
Special Services	Provides STC rating of 28 when supplied with gasketing. Provides detention security rating of Grade #40 with ASTM Impact Test F 476.
Positive Pressure	**Category A:** Singles and pairs have intumescent built into the door, and no additional fire seals are required. If smoke and draft control doors are also required, then a category H seal must be applied to the frame. **Category B:** Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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RhinoDoor® 1/3 Hour Door - (Particleboard Core)

COLUMN	1	2	3
LABEL / FEATURE	ITS/WHI	UL	UL or ITS/WHI AHI FD 1/3 Hour Door/Transom
MAXIMUM OPENING SIZE	**Singles:** 4,0" x 10'0" (1219 x 3048mm). **Pairs:** 8'0" x 10'0" (2438 x 3048mm). Double egress 8'0" x 9'0' (2438 x 743mm). Pairs over 8' need metal edge guards. (Positive pressure not available.)	**Singles:** 4'0" x 10'0" (1219 x 3048mm); Category B: 4'0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), neutral and positive pressure, including double egress. **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm).	**UL Opening:** 4'0" x 11'0" (1219 x 3353mm). **ITS/WHI Opening:** 4'0" x 10'0" (1219 x 3048mm). **Door:** 4'0" x 8'0" (1219 x 2438mm). **Transom:** 4'0" x 4'0" (1219 x 1219mm).
FACES	SpecTrim Ven4ma PVC Faces, .050" thick.		
STILES (VERTICAL EDGES) AND RAILS	Up to 13 1/2" (343mm) bottom rails allowed. Outer stile compatible, PVC edge.		Door/transom rabbeted 1/2" x 7/8" (13 x 22mm).
MAXIMUM WOOD BEADED LITE	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM METAL VISION PANEL (Visible glass)	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glass and approval of AHJ (authority having jurisdiction). Contact Algoma for positive pressure approvals.		
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	Not allowed.	24" x 24" (610 x 610mm). Minimum 5" (127mm) from edge and 10" (203mm) from bottom. Neutral pressure only.	Not allowed.
HINGES Note: Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm).	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".
LOCKSETS	All listed cylindrical, mortised, unit, card, and hospital push/pull to 5" (127mm) backset.		
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved including pocket pivots.		Half or full mortised; top pivots not allowed unless frame is equipped with a fixed transom bar.
CLOSERS	Listed surface type or LCN using #420 Fireshield or Norton with Fire Block Liner #790, or Yale with Fire Block Liner #450.	UL Listed surface type. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 13/16" deep x 25" long.	
FIRE EXIT HARDWARE (Allowed with vision panel if non-interfering)	**Singles:** Mortise, rim or surface vertical rods. **Pairs:** Rim (with mullion) or surface and concealed vertical rods. Double egress allowed.	**Singles:** Mortise, rim, or surface vertical rods. **Pairs:** Mortised lock and strike, rim, surface or concealed vertical rods. Double egress allowed.	**Singles:** Mortise, rim or surface vertical rods. **Pairs:** Not available.
OTHER PAIR HARDWARE	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Listed for use with wood doors. Surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Not allowed
Maximum trim: 3/4" with standard rail. **Door Bottoms:** Max size 1"x115/16" listed surface or concealed. **Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm).	**Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Wood Frames:** FD 1/3 Hour doors can be installed with 1/3 hour wood frames. **Electric Raceway:** Available with label on all doors.	

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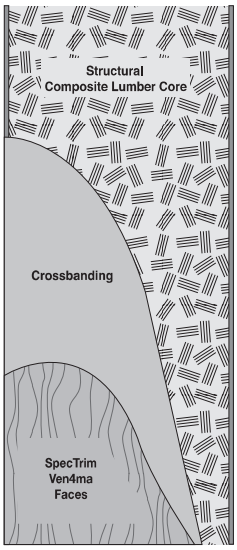
RhinoDoor® 1/3 Hour Door - (Structural Composite Lumber Core)



Algoma's Architectural Structural Composite Lumber Core RhinoDoor utilizes an engineered hardwood strand board that is oriented and resin bonded to provide physical properties that equal or exceed solid lumber.

Stiles are securely bonded to the core. This construction provides strength, rigidity, and screw-holding power for surface mounted hardware to satisfy the most demanding applications.

Algoma uses SpecTrim Ven4ma PVC faces .050" thick.

Positive Pressure Note: Algoma recommends using Category B 1/3 hour single swing doors. Please refer to Positive Pressure in Product Features Detail Section below. The selection of Category B 1/3 hour doors will offer cost savings and no aesthetic compromise.

Product Features

Thickness	1 3/4" (44mm) available FD 1/3 hour labeled.
Maximum size	Available prefit up to 4'0" x 10'0" (1219 x 3048mm). In FD 1/3 hour, 4'0" x 9'0" (1219 x 2743mm) is maximum for singles and 8'0" x 9'0" (2438 x 2743mm) for pairs. Also available in double egress pairs up to 8'0" x 9'0" (2438 x 2743mm).
Stiles (Edge bands)	7/8" (22mm) prior to factory trimming, glued to core. Outer stile compatible PVC edge, 3mm.
Top & Bottom rail	Structural composite lumber (industry standard does not require separate rails on this construction).
Core	Structural composite lumber core.
Crossbands	1/16" (1.6mm) minimum wood-based composite.
Faces	15 standard colors, others by request. SpecTrim Ven4ma PVC face.
Adhesives	Doors constructed using water-resistant adhesives (Type 2).
Details	Standard lites and louvers available not to exceed 40% of door area or 54" (1372mm) in length. Maximum glass opening on FD 1/3 hour doors is 1,296 sq. in. (0.836m^2) with wood beads or metal vision panels. Contact Algoma for positive pressure approvals. See Details 11 and 12.
Machining	Available with hinge and lock machining as well as rabbets, holders, drop seals, pivots, etc.
Warranty	For interior, full warranty for life of original installation.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9.
Special Services	Provides detention security rating of Grade #40 with ASTM Impact Test F 476. Provides STC rating of 31 when supported with drop seal and gasketing.
Positive Pressure	**Category A:** Singles and pairs have intumescent built into the door, and no additional fire seals are required. If smoke and draft control doors are also required, then a category H seal must be applied to the frame. **Category B:** Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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RhinoDoor® 1/3 Hour Door - (Structural Composite Lumber Core)

FEATURE	LABEL		
	ITS/WHI	UL	UL or ITS/WHI AHI FD 1/3 Hour Door/Transom
MAXIMUM OPENING SIZE	**Singles:** 4,0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress. Pairs over 8'0" (2438mm) in height need metal edge guards. Positive pressure 4'0" x 8'0" and 8'0" x 8'0" double egress.	**Singles:** 4,0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), neutral and positive pressure, including double egress. **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm).	**UL Opening:** 4'0" x 11'0" (1219 x 3353mm). **ITS/WHI Opening:** 4'0" x 10'0" (1219 x 3048mm). **Door:** 4'0" x 8'0" (1219 x 2438mm). **Transom:** 4'0" x 4'0" (1219 x 1219mm).
FACES	SpecTrim Ven4ma PVC Faces, .050" thick.		
STILES (VERTICAL EDGES) AND RAILS	Up to 13 1/2" (343mm) bottom rails allowed. Outer stile compatible, PVC edge.		Door/transom rabbeted 1/2" x 7/8" (13 x 22mm).
MAXIMUM WOOD BEADED LITE	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM METAL VISION PANEL (Visible glass)	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	Not allowed.	24" x 24" (610 x 610mm). Minimum 5" (127mm) from edge and 10" (203mm) from bottom. Neutral pressure only.	Not allowed.
HINGES Note: Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134". Anchor hinges allowed.	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".
LOCKSETS	All listed cylindrical, mortise, unit, card, electric lock, and hospital push/pull to 5" (127mm) backset.		
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved, including Pocket pivots.		Half or full mortised; top pivots not allowed unless frame is equipped with a fixed transom bar.
CLOSERS	Listed surface type or LCN using #420 Fireshield or Norton with Fire Block Liner #790, or Yale with Fire Block Liner #450.	Listed surface type. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 13/16" deep x 25" long.	Listed surface type.
FIRE EXIT HARDWARE (Allowed with vision panel if non-interfering)	**Singles:** Listed mortise, rim or surface vertical rods. **Pairs:** Listed rim (with mullion), surface vertical rods, or concealed vertical rods (5" metal channel/8'0" x 8'0"). Double egress allowed.	**Singles:** Listed mortise, rim, or surface vertical rods. **Pairs:** Listed rim (with mullion), surface vertical rods, or concealed vertical rods (5" metal channel/8'0" x 8'0"). Double egress allowed.	**Singles:** Listed mortise, rim or surface vertical rods. **Pairs:** Not available.
OTHER PAIR HARDWARE	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Not allowed
Maximum trim: 3/4" (19mm) at bottom. **Undercut:** Maximum undercut, 3/4" (19mm) per NFPA 80.	**Door Bottoms:** Max size 1" x 1 15/16" listed surface or concealed. **Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm).	**Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Wood Frames:** FD 1/3 Hour doors can be installed with 1/3 hour wood frames. **Electric Raceway:** Available with label on all doors.

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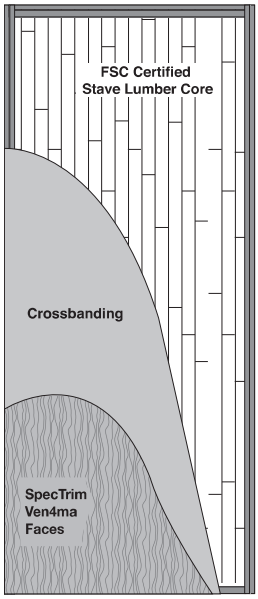
RhinoDoor® 1/3 Hour Door - (Stave Lumber Core)



Algoma's architectural Stave Lumber Core RhinoDoor® features a kiln dried, low density wood block core which is bonded together under side pressure using the high frequency cure method.

PVC edged outer stiles and hardwood rails are securely bonded to this core. To ensure strength, rigidity and freedom from telegraphing of core parts, this unitized core is then sanded before cold pressing a crossband and SpecTrim Ven4ma PVC faces on each side of the core assembly.

Algoma uses SpecTrim Ven4ma PVC faces, .050" thick.

Positive Pressure Note: Algoma recommends using Category B 1/3 hour single swing doors. Please refer to Positive Pressure in Product Features Detail Section below. The selection of Category B 1/3 hour doors will offer cost savings and no aesthetic compromise.

Product Features

Thickness	1 3/4" (44mm) or 2 1/4" (57mm) available FD 1/3 hour labeled.
Maximum size	Available prefit up to 4'0" x 10'0" (1219 x 3048mm). In FD 1/3 hour, 4'0" x 9'0" (1219 x 2743mm) is maximum for singles and 8'0" x 9'0". (2438 x 2743mm) for pairs. Also available in double egress pairs up to 8'0" x 9'0" (2438 x 2743mm). Paired construction will be SCL only.
Stiles (Edge bands)	1 3/8" (35mm) prior to factory trimming, glued to core. Outer stile compatible PVC edge.
Top rail	1 3/8" (35mm) prior to factory trimming, glued to core.
Bottom rail	1 3/8" (35mm) Structural Composite Lumber (SCL).
Core	Low density wood blocks, kiln dried, not more than 2 1/2" wide; random lengths, joints well staggered.
Crossbands	1/16" (1.6mm) minimum wood-based composite.
Faces	15 standard colors, others by request. SpecTrim Ven4ma PVC face, thickness.
Adhesives	Doors constructed using water-resistant adhesives (Type 1).
Details	Standard lites and louvers available not to exceed 40% of door area or 54" (1372mm) in length. Maximum glass opening on FD 1/3 hour doors is 1,296 sq. in. (0.836m²) with wood beads and clips or metal vision panels. Divided lites are also available. Larger lites available with special glazing. Contact Algoma for positive pressure approvals. See Details 11 and 12.
Machining	Available with hinge and lock machining as well as rabbets, holders, drop seals, pivots, etc.
Warranty	For interior, full warranty for life of original installation.
Standards met or exceeded	WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9.
Special Services	Provides detention security rating of Grade #40 with ASTM Impact Test F 476.
Positive Pressure	**Category A:** Singles and pairs have intumescent built into the door, and no additional fire seals are required. If smoke and draft control doors are also required, then a category H seal must be applied to the frame. **Category B:** Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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RhinoDoor® 1/3 Hour Door - (Stave Lumber Core)

COLUMN	1	2	3
LABEL / FEATURE	ITS/WHI	UL	UL or ITS/WHI AHI FD 1/3 Hour Door/Transom
MAXIMUM OPENING SIZE	**Singles:** 4,0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress. Pairs over 8'0" (2438mm) in height need metal edge guards. Positive pressure 4'0" x 8'0" and 8'0" x 8'0" double egress. Paired construction will be SCL core.	**Singles:** 4,0" x 9'0" (1219 x 2743mm). **Pairs:** 8'0" x 9'0" (2438 x 2743mm), neutral and positive pressure, including double egress. **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm). Paired construction will be SCL core.	**UL Opening:** 4'0" x 11'0" (1219 x 3353mm). **ITS/WHI Opening:** 4'0" x 10'0" (1219 x 3048mm). **Door:** 4'0" x 8'0" (1219 x 2438mm). **Transom:** 4'0" x 4'0" (1219 x 1219mm).
FACES	SpecTrim Ven4ma PVC Faces, .050" thick.		
STILES (VERTICAL EDGES) AND RAILS	Up to 13 1/2" (343mm) bottom rails allowed. Outer stile compatible, PVC edge.		Door/transom rabbeted 1/2" x 7/8" (13 x 22mm). Matching or compatible edges will be provided when frame is equipped with fixed transom bar.
MAXIMUM WOOD BEADED LITE	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM METAL VISION PANEL (Visible glass)	1296 sq. inches (0.836m^2). Maximums: 30" (762mm) width, 54" (1372mm) length. Larger lites available with special glazing. Contact Algoma for positive pressure approvals.		
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	Not allowed.	24" x 24" (610 x 610mm). Minimum 5" (127mm) from edge and 10" (203mm) from bottom. Neutral pressure only.	Not allowed.
HINGES Note: Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134". Anchor hinges allowed.	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134".
LOCKSETS	All listed cylindrical, mortise, unit, card, electric lock, and hospital push/pull to 5" (127mm) backset.		
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved. Pocket pivots not allowed. Intermediate pivots required for label and warranty.		Half or full mortised; top pivots not allowed unless frame is equipped with a fixed transom bar.
CLOSERS	Listed surface type or LCN using #420 Fireshield or Norton with Fire Block Liner #790, or Yale with Fire Block Liner #450.	UL Listed surface type. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 13/16" deep x 25" long.	
FIRE EXIT HARDWARE (Allowed with vision panel if non-interfering)	**Singles:** Mortise, rim or surface vertical rods. **Pairs:** Rim (with mullion) or surface and concealed vertical rods. Double egress allowed. Paired construction will be SCL core.	**Singles:** Mortise, rim, or surface vertical rods. **Pairs:** Rim (with mullion) or surface and concealed vertical rods. Double egress allowed. Paired construction will be SCL core.	**Singles:** Mortise, rim or surface vertical rods. **Pairs:** Not available.
OTHER PAIR HARDWARE	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Listed surface or mortised door bolts. Manual, self-latching or automatic as codes allow.	Not allowed
Maximum trim: 3/4" (19mm) at bottom. **Undercut:** Maximum undercut, 3/4" (19mm) per NFPA 80.	**Door Bottoms:** Max size 1" x 1 15/16" listed surface or concealed. **Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm).	**Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Wood Frames:** FD 1/3 Hour doors can be installed with 1/3 hour wood frames. **Electric Raceway:** Available with label on all doors.

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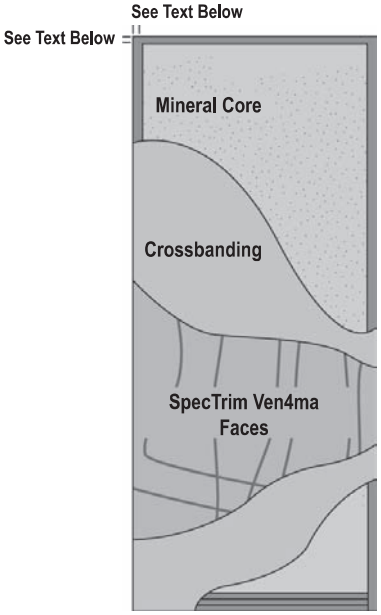
RhinoDoor® 1½ Hour Door

(Neutral or Category B Positive Pressure)*



Algoma Hardwoods, Inc. has been making mineral core fire doors for more than 50 years. The mineral core door listed here has stood the test of time. The Algoma Mineral Core is unusually light and remarkably stable.

The 1½ hour mineral core fire door, available in UL or ITS/WHI ratings, is suitable for room and corridor partition openings where rated doors are required.

The FD 1½ Hour is manufactured with the Superstile for superior screw holding strength and split resistance. Also, reinforcements can be specified which allow surface mounted hardware to be installed with screws.

Surface Vertical Rod/Less Bottom Rod (SVR/LBR) and Concealed Vertical Rod (CVR) exit devices can both provide compliance with the Americans with Disabilities Act (ADA). CVR exit devices require the addition of metal edge channels which are not required with SVR/LBR exit devices. In addition, SVR/LBR exit devices are less expensive to install and require less maintenance.

*Some constructions may only be available as Category A.

Product Features

Thickness		1¾" (44mm) or 2¼" (57mm)
Maximum size		Available prefit up to: Singles: 4'0" x 9'0" (1219 x 2743mm). Pairs: 8'0" x 9'0" (2438 x 2743mm), including double egress pairs. Listed concealed vertical rods: 8'0" x 9'3" (2438 x 2819mm)
Stiles (Edge bands)		⅝" (16mm) Superstile. PVC compatible outer edge.
Top rail	**regular**	¼" (6.4mm) hardwood lumber.
	reinforced	See **Door** section table of contents.
Lockblocks		For exit device reinforcement, see **Door** section table of contents.
Bottom rail	**regular**	1⅛" (27mm) hardwood lumber
	reinforced	See **Door** section table of contents.
Faces		15 standard colors, others by request. SpecTrim Ven4ma PVC face.
Crossbands		1/16" (1.6mm) minimum wood-based composite.
Adhesives		Doors constructed using water-resistant adhesives (Type 1).
Wood beaded lite openings		Maximum 136 in^2 (0.088m^2) cutout or 100 in^2 (0.065m^2) visible glass. Larger lites available with special glazing. No temperature rise over 100 in^2. See **Detail** 11 for glass options.
Metal vision panels		Maximum 100 in^2 (0.065m^2) visible glass. Maximums: 12" (305mm) width, 33" (838mm) length. Larger lites available with special glass. No temperature rise over 100 in2. See **Detail** 11 for glass options.
Louvers		Up to 24" x 24" (610 x 610mm). Louver(s) not allowed in doors with lite openings, exit devices or smoke control doors.
Machining		See reverse side.
Warranty		For interior only, full warranty for life of original installation.
Standards met or exceeded		WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9.
Positive Pressure		**Category B:** Singles and pairs require a category G edge seal plus a Category H smoke seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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RhinoDoor® 1½ Hour Door

(Neutral or Category B Positive Pressure)*

COLUMN	1	2
LABEL / FEATURE	UL or ITS/WHI (Note: All items may not be available with both agencies.)	
MAXIMUM OPENING SIZE	**Singles:** 4,0" x 9'0" (1219 x 2743mm). **Transom:** 4'0" x 4'0" in separate frame only. **Side Panels:** 4'0" x 9'0" (1219 x 2743mm).	**Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm),
FACES	SpecTrim Ven4ma PVC Faces, .050" thick.	
STILES (VERTICAL EDGES) AND RAILS	5⁄8" (16mm) Superstile with maple outer. Optional same species or plastic outer available. Top rail 1/4" (6.4mm). Bottom rail 1 1/16" (27mm). For rail and lock block reinforcement, see **Door** section table of contents. PVC compatible outer edge.	
MAXIMUM WOOD VENEERED BEADED LITE	To 136 sq. in. (0.088m^2) of cutout (100 sq. in. (0.065m^2) of visible glass). Maximums: 13" (330mm) width, 34" (864mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. V-9 and V9C bead compatible with face veneer. To 1,296 sq. in. with special glass and approval of AHJ (authority having jurisdiction). No temperature rise over 100 in^2. See **Detail** 11 for glass options.	
MAXIMUM METAL VISION PANEL (Visible glass)	To 100 sq. in. (0.065m^2) visible glass. 10" x 10", 8" x 12", 3" x 33", 5" x 20", 4" x 25", 6" x 16" sizes available. (254 x 254mm, 203 x 305mm, 76 x 838mm, 127 x 508mm, 102 x 635mm, 152 x 406mm sizes available.) Maximums: 12" (305mm) width, 33" (838mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. Combined multiple openings up to 100 sq. in. (0.065m^2). Circular openings up to 11" (279mm) diameter. To 1,296 sq. in. with special glass and approval of AHJ (authority having jurisdiction). No temperature rise over 100 in^2. See **Detail** 11 for glass options.	
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	24" x 24" (610 x 610mm) with 6" (152mm) perimeter at sides,10" (254mm) at bottom. Fusible link louvers only.	
HINGES	Per NFPA 80. Some specialty hinges allowed. Contact Algoma for information.	
LOCKSETS	All listed cylindrical, mortised, unit, card, electronic locks, and hospital push/pull to 5" (127mm) backset.	
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved. Pocket pivots not allowed. Intermediate pivots required for label and warranty.	
CLOSERS	Listed surface type. Throughbolt fastening required unless optional reinforcement is specified. Listed floor closers as approved. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 3/4" deep x 25" long.	
FIRE EXIT HARDWARE	**Singles**: Listed rim or mortise type with 5/8" (16mm) throw or surface vertical rods to 4'0" x 9'0" (1219 x 2743mm). **Pairs**: Mortise type on active and surface vertical rods on inactive. Listed rim devices with removable mullion. Surface vertical rods both doors get metal channels. Surface vertical rods without metal channels require special construction. (Matching veneer wrap optional.) Listed concealed vertical rod exit devices to 8'0" x 9'3" (2438 x 2819mm) with special channels on meeting edges with no overlapping astragal. Hardware must be listed for use on wood doors. SVR-LBR on both doors requires metal channels prepped for heat activated bolt between the leaves, no floor bolts required. Sargent PP and PR8700 SVR-LBR require special construction; metal edges are not required.	
OTHER PAIR HARDWARE	Pairs of doors with removable or fixed mullion **between** are considered as single swing.	Listed for use with wood doors. Surface or mortised door bolts. Manual, self-latching or automatic as codes allow.
Maximum trim: 3/4" (19mm) at bottom with standard rail. **Door Bottoms:** Max size 1" x 1 15/16" listed surface or concealed.	**Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm). **Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Electric Raceway:** Available with label on all doors.

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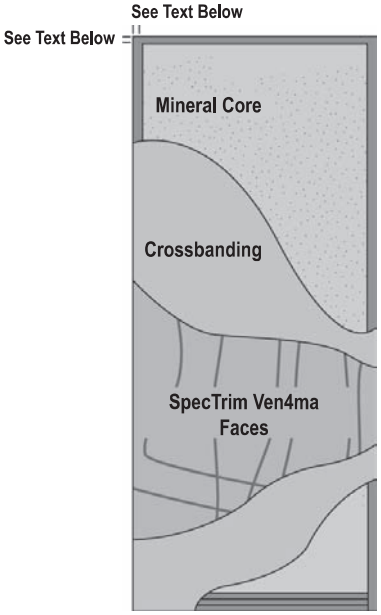
RhinoDoor® 1½ Hour Door

Positive Pressure Category A

Note: Category A doors feature a concealed intumescent engineered into the construction of the door.



Algoma Hardwoods, Inc. has been making mineral core fire doors for more than 50 years. The mineral core door listed here has stood the test of time. The Algoma Mineral Core is unusually light and remarkably stable.

The 1½ hour mineral core fire door, available in UL rating, is suitable for room and corridor partition openings where rated doors are required.

The FD 1½ Hour is manufactured with the Superstile for superior screw holding strength and split resistance. Also, reinforcements can be specified which allow surface mounted hardware to be installed with screws.

Surface Vertical Rod/Less Bottom Rod (SVR/LBR) device provides compliance with the Americans with Disabilities Act (ADA) and does not require floor receivers on paired applications.

Product Features

Thickness		1¾" (44mm) or 2¼" (57mm)
Maximum size		Available prefit up to: Singles: 4'0" x 9'0" (1219 x 2743mm). Pairs: 8'0" x 9'0" (2438 x 2743mm), including double egress pairs.
Stiles (Edge bands)		⅝" (16mm) Superstile. PVC compatible outer edge.
Top rail	**regular**	¼" (6.4mm) hardwood lumber.
	reinforced	See **Door** section table of contents.
Lockblocks		For exit device reinforcement, see **Door** section table of contents.
Bottom rail	**regular**	1⅛" (27mm) hardwood lumber
	reinforced	See **Door** section table of contents.
Faces		15 standard colors, others by request. SpecTrim Ven4ma PVC face.
Crossbands		1/16" (1.6mm) minimum wood-based composite.
Adhesives		Doors constructed using water-resistant adhesives (Type 1).
Wood beaded lite openings		Maximum 136 in^2 (0.088m^2) cutout or 100 in^2 (0.065m^2) visible glass. See **Detail** 12 for glass options.
Metal vision panels		Maximum 100 in^2 (0.065m^2) visible glass. Maximums: 12" (305mm) width, 33" (838mm) length. Larger lites available with special glass. No temperature rise over 100 in2. See **Detail** 12 for glass options.
Louvers		Up to 24" x 24" (610 x 610mm). Louver(s) not allowed in doors with lite openings, exit devices or smoke control doors.
Machining		See reverse side.
Warranty		For interior only, full warranty for life of original installation.
Standards met or exceeded		WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9.
Smoke Doors		S-label doors require Category H - Smoke & Draft Control Gasketing surface applied gasketing on the frame and on the meeting edge of pairs.

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RhinoDoor® 1½ Hour Door

Positive Pressure Category A

COLUMN	1	2
LABEL / FEATURE	UL or ITS/WHI (Note: All items may not be available with both agencies.)	
MAXIMUM OPENING SIZE	**Singles:** 4,0" x 9'0" (1219 x 2743mm). **Transom:** 4'0" x 4'0" in separate frame only. **Side Panels:** 4'0" x 9'0" (1219 x 2743mm).	**Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress
FACES	SpecTrim Ven4ma PVC Faces, .050" thick.	
STILES (VERTICAL EDGES) AND RAILS	5⁄8" (16mm) Superstile with maple outer. Optional same species or plastic outer available. Top rail 1/4" (6.4mm). Bottom rail 1 1/16" (27mm). For rail and lock block reinforcement, see **Door** section table of contents. PVC compatible outer edge.	
MAXIMUM WOOD VENEERED BEADED LITE	To 136 sq. in. (0.088m^2) of cutout (100 sq. in. (0.065m^2) of visible glass). Maximums: 13" (330mm) width, 34" (864mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. V-9 and V9C bead compatible with face veneer. See **Detail** 12 for glass options.	
MAXIMUM METAL VISION PANEL (Visible glass)	To 100 sq. in. (0.065m^2) visible glass. 10" x 10", 8" x 12", 3" x 33", 5" x 20", 4" x 25", 6" x 16" sizes available. (254 x 254mm, 203 x 305mm, 76 x 838mm, 127 x 508mm, 102 x 635mm, 152 x 406mm sizes available.) Maximums: 12" (305mm) width, 33" (838mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. Combined multiple openings up to 100 sq. in. (0.065m^2). Circular openings up to 11" (279mm) diameter. Larger lites available with special glass. No temperature rise over 100 in^2. See **Detail** 12 for glass options.	
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	24" x 24" (610 x 610mm) with 6" (152mm) perimeter at sides,10" (254mm) at bottom. Fusible link louvers only.	
HINGES	Per NFPA 80. Some specialty hinges allowed. Contact Algoma for information.	
LOCKSETS	All listed cylindrical, mortised, unit, card, electronic locks, and hospital push/pull to 5" (127mm) backset.	
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved. Pocket pivots not allowed. Intermediate pivots required for label and warranty.	
CLOSERS	Listed surface type. Throughbolt fastening required unless optional reinforcement is specified. Listed floor closers as approved. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 3/4" deep x 25" long.	
FIRE EXIT HARDWARE	**Singles**: Listed rim or mortise type with 5/8" (16mm) throw or surface vertical rods to 4'0" x 9'0" (1219 x 2743mm). **Pairs**: Mortise type on active and surface vertical rods on inactive. Listed rim devices with removable mullion. Surface vertical rods both doors. Hardware must be listed for use on wood doors. SVRLBR on both doors, Sargent PP and PR 8700 SVR-LBR. No floor holes required for SVR-LBR devices.	
OTHER PAIR HARDWARE	Pairs of doors with removable or fixed mullion **between** are considered as single swing.	Listed for use with wood doors. Surface or mortised door bolts. Manual, self-latching or automatic as codes allow.
Maximum trim: 3/4" (19mm) at bottom with standard rail. **Door Bottoms:** Max size 1" x 1 15/16" listed surface or concealed.	**Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm). **Astragals and edge guards:** Are allowed on this construction.	**Electric Raceway:** Available with label on all doors.

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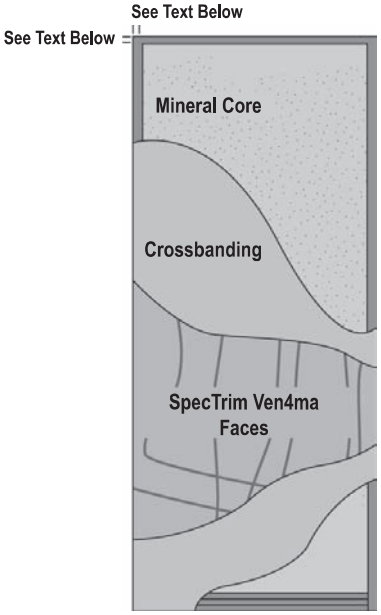
RhinoDoor® 1 Hour Door

(Neutral or Category B Positive Pressure)*



Algoma Hardwoods, Inc. has been making mineral core fire doors for more than 50 years. The mineral core door listed here has stood the test of time. The Algoma Mineral Core is unusually light and remarkably stable.

The 1 hour mineral core fire door, available in UL ratings, is suitable for room and corridor partition openings where rated doors are required.

The FD 1 Hour is manufactured with the Superstile for superior screw holding strength and split resistance. Also, reinforcements can be specified which allow surface mounted hardware to be installed with screws.

Surface Vertical Rod/Less Bottom Rod (SVR/LBR) and Concealed Vertical Rod (CVR) exit devices can both provide compliance with the Americans with Disabilities Act (ADA). CVR exit devices require the addition of metal edge channels which are not required with SVR/LBR exit devices. In addition, SVR/LBR exit devices are less expensive to install and require less maintenance.

*Some constructions may only be available as Category A.

Product Features

Thickness		1¾" (44mm) or 2¼" (57mm)
Maximum size		Available prefit up to: Singles: 4'0" x 10'0" (1219 x 3048mm); Category B: 4'0" x 9'0" (1219 x 2743mm). Pairs: 8'0" x 9'0" (2438 x 2743mm), including double egress pairs. Listed concealed vertical rods: 8'0" x 9'3" (2438 x 2819mm)
Stiles (Edge bands)		⅝" (16mm) Superstile. PVC compatible outer edge.
Top rail	**regular**	¼" (6.4mm) hardwood lumber.
	reinforced	See **Door** section table of contents.
Lockblocks		For exit device reinforcement, see **Door** section table of contents.
Bottom rail	**regular**	1⅛" (27mm) hardwood lumber
	reinforced	See **Door** section table of contents.
Faces		15 standard colors, others by request. SpecTrim Ven4ma PVC face.
Crossbands		1/16" (1.6mm) minimum wood-based composite.
Adhesives		Doors constructed using water-resistant adhesives (Type 1).
Wood beaded lite openings		Maximum 136 in^2 (0.088m^2) cutout or 100 in^2 (0.065m^2) visible glass. Larger lites available with special glazing. No temperature rise over 100 in^2. See **Detail** 11 for glass options.
Metal vision panels		Maximum 100 in^2 (0.065m^2) visible glass. Maximums: 12" (305mm) width, 33" (838mm) length. Larger lites available with special glass. No temperature rise over 100 in^2. See **Detail** 11 for glass options.
Louvers		Up to 24" x 24" (610 x 610mm). Louver(s) not allowed in doors with lite openings, exit devices or smoke control doors.
Machining		See reverse side.
Warranty		For interior only, full warranty for life of original installation.
Standards met or exceeded		WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9.
Smoke Doors		**Category B:** Singles and pairs require a category G edge seal plus a Category H smoke seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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RhinoDoor® 1 Hour Door

(Neutral or Category B Positive Pressure)*

COLUMN	1	2
LABEL / FEATURE	UL or ITS/WHI (Note: All items may not be available with both agencies.)	
MAXIMUM OPENING SIZE	**Singles:** 4,0" x 10'0" (1219 x 3048mm). Category B: 4'0" x 9'0" (1219 x 2743mm). **Transom:** 4'0" x 4'0" in separate frame only. **Side Panels:** 4'0" x 10'0" (1219 x 3048mm).	**Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm),
FACES	SpecTrim Ven4ma PVC Faces, .050" thick.	
STILES (VERTICAL EDGES) AND RAILS	5⁄8" (16mm) Superstile with maple outer. Optional same species or plastic outer available. Top rail 1/4" (6.4mm). Bottom rail 1 1/16" (27mm). For rail and lock block reinforcement, see **Door** section table of contents. PVC compatible outer edge.	
MAXIMUM WOOD VENEERED BEADED LITE	To 136 sq. in. (0.088m^2) of cutout (100 sq. in. (0.065m^2) of visible glass). Maximums: 13" (330mm) width, 34" (864mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. V-9 and V9C bead compatible with face veneer. To 1,296 sq. in. with special glass and approval of AHJ (authority having jurisdiction). No temperature rise over 100 in^2. See **Detail** 11 for glass options.	
MAXIMUM METAL VISION PANEL (Visible glass)	To 100 sq. in. (0.065m^2) visible glass. 10" x 10", 8" x 12", 3" x 33", 5" x 20", 4" x 25", 6" x 16" sizes available. (254 x 254mm, 203 x 305mm, 76 x 838mm, 127 x 508mm, 102 x 635mm, 152 x 406mm sizes available.) Maximums: 12" (305mm) width, 33" (838mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. Combined multiple openings up to 100 sq. in. (0.065m^2). Circular openings up to 11" (279mm) diameter. To 1,296 sq. in. with special glass and approval of AHJ (authority having jurisdiction). No temperature rise over 100 in^2. See **Detail** 11 for glass options.	
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	24" x 24" (610 x 610mm) with 6" (152mm) perimeter at sides,10" (254mm) at bottom. Fusible link louvers only.	
HINGES	Per NFPA 80. Some specialty hinges allowed. Contact Algoma for information.	
LOCKSETS	All listed cylindrical, mortised, unit, card, electronic locks, and hospital push/pull to 5" (127mm) backset.	
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved. Pocket pivots not allowed. Intermediate pivots required for label and warranty.	
CLOSERS	Listed surface type. Throughbolt fastening required unless optional reinforcement is specified. Listed floor closers as approved. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 3/4" deep x 25" long.	
FIRE EXIT HARDWARE	**Singles:** Listed rim or mortise type with 5/8" (16mm) throw or surface vertical rods to 4'0" x 9'0" (1219 x 2743mm). **Pairs**: Mortise type on active and surface vertical rods on inactive. Listed rim devices with removable mullion. Surface vertical rods both doors get metal channels. Surface vertical rods without metal channels require special construction. (Matching veneer wrap optional.) Listed concealed vertical rod exit devices to 8'0" x 9'3" (2438 x 2819mm) with special channels on meeting edges with no overlapping astragal. Hardware must be listed for use on wood doors. SVR-LBR on both doors requires metal channels prepped for heat activated bolt between the leaves, no floor bolts required. Sargent PP and PR8700 SVR-LBR require special construction; metal edges are not required.	
OTHER PAIR HARDWARE	Pairs of doors with removable or fixed mullion **between** are considered as single swing.	Listed for use with wood doors. Surface or mortised door bolts. Manual, self-latching or automatic as codes allow.
Maximum trim: 3/4" (19mm) at bottom with standard rail. **Door Bottoms:** Max size 1" x 1 15/16" listed surface or concealed.	**Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm). **Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Electric Raceway:** Available with label on all doors.

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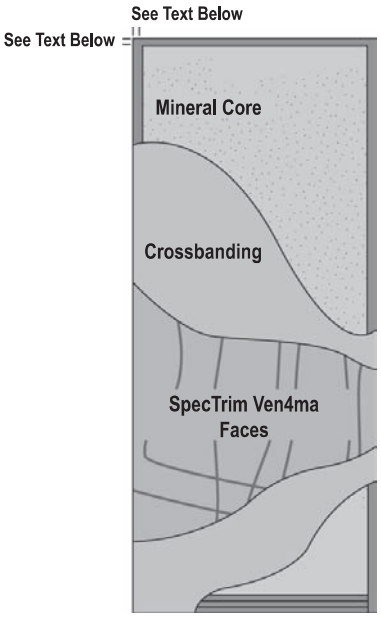
RhinoDoor® 1 Hour Door

Positive Pressure Category A



Note: Category A doors feature a concealed intumescent engineered into the construction of the door.

Algoma Hardwoods, Inc. has been making mineral core fire doors for more than 50 years. The mineral core door listed here has stood the test of time. The Algoma Mineral Core is unusually light and remarkably stable.

The 1 hour mineral core fire door, available in UL rating, is suitable for room and corridor partition openings where rated doors are required.

The FD 1 Hour is manufactured with the Superstile for superior screw holding strength and split resistance. Also, reinforcements can be specified which allow surface mounted hardware to be installed with screws.

Surface Vertical Rod/Less Bottom Rod (SVR/LBR) device provides compliance with the Americans with Disabilities Act (ADA) and do not require floor receivers on paired applications.

Product Features

Thickness		1¾" (44mm) or 2¼" (57mm)
Maximum size		Available prefit up to: Singles: 4'0" x 9'0" (1219 x 2743mm). Category B: 4'0" x 9'0" (1219 x 2743mm). Pairs: 8'0" x 9'0" (2438 x 2743mm), including double egress pairs.
Stiles (Edge bands)		⅝" (16mm) Superstile. PVC compatible outer edge.
Top rail	**regular**	¼" (6.4mm) hardwood lumber.
	reinforced	See **Door** section table of contents.
Lockblocks		For exit device reinforcement, see **Door** section table of contents.
Bottom rail	**regular**	1⅛" (27mm) hardwood lumber
	reinforced	See **Door** section table of contents.
Faces		15 standard colors, others by request. SpecTrim Ven4ma PVC face.
Crossbands		1/16" (1.6mm) minimum wood-based composite.
Adhesives		Doors constructed using water-resistant adhesives (Type 1).
Wood beaded lite openings		Maximum 136 in^2 (0.088m^2) cutout or 100 in^2 (0.065m^2) visible glass. See **Detail** 12 for glass options. Larger lites available with special glass.
Metal vision panels		Maximum 100 in^2 (0.065m^2) visible glass. Maximums: 12" (305mm) width, 33" (838mm) length. No temperature rise over 100 in^2. See **Detail** 12 for glass options.
Louvers		Up to 24" x 24" (610 x 610mm). Louver(s) not allowed in doors with lite openings, exit devices or smoke control doors.
Machining		See reverse side.
Warranty		For interior only, full warranty for life of original installation.
Standards met or exceeded		WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9,
Smoke Doors		S-label doors require Category H - Smoke & Draft Control Gasketing surface applied gasketing on the frame and on the meeting edge of pairs.

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RhinoDoor® 1 Hour Door

Positive Pressure Category A

COLUMN	1	2
LABEL / FEATURE	UL or ITS/WHI (Note: All items may not be available with both agencies.)	
MAXIMUM OPENING SIZE	**Singles:** 4,0" x 9'0" (1219 x 2743mm). **Transom:** 4'0" x 4'0" in separate frame only. **Side Panels:** 4'0" x 9'0" (1219 x 2743mm).	**Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress
FACES	SpecTrim Ven4ma PVC Faces, .050" thick.	
STILES (VERTICAL EDGES) AND RAILS	5/8" (16mm) Superstile with maple outer. Optional same species or plastic outer available. Top rail 1/4" (6.4mm). Bottom rail 1 1/16" (27mm). For rail and lock block reinforcement, see **Door** section table of contents. PVC compatible outer edge.	
MAXIMUM WOOD VENEERED BEADED LITE	To 136 sq. in. (0.088m^2) of cutout (100 sq. in. (0.065m^2) of visible glass). Maximums: 13" (330mm) width, 34" (864mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. V-9 and V9C bead compatible with face veneer. See **Detail** 12 for glass options.	
MAXIMUM METAL VISION PANEL (Visible glass)	To 100 sq. in. (0.065m^2) visible glass. 10" x 10", 8" x 12", 3" x 33", 5" x 20", 4" x 25", 6" x 16" sizes available. (254 x 254mm, 203 x 305mm, 76 x 838mm, 127 x 508mm, 102 x 635mm, 152 x 406mm sizes available.) Maximums: 12" (305mm) width, 33" (838mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. Combined multiple openings up to 100 sq. in. (0.065m^2). Circular openings up to 11" (279mm) diameter. Larger lites available with special glass. No temperature rise over 100 in^2. See **Detail** 12 for glass options.	
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	24" x 24" (610 x 610mm) with 6" (152mm) perimeter at sides,10" (254mm) at bottom. Fusible link louvers only.	
HINGES	Per NFPA 80. Some specialty hinges allowed. Contact Algoma for information.	
LOCKSETS	All listed cylindrical, mortised, unit, card, electronic locks, and hospital push/pull to 5" (127mm) backset.	
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved. Pocket pivots not allowed. Intermediate pivots required for label and warranty.	
CLOSERS	Listed surface type. Throughbolt fastening required unless optional reinforcement is specified. Listed floor closers as approved. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 3/4" deep x 25" long.	
FIRE EXIT HARDWARE	**Singles**: Listed rim or mortise type with 5/8" (16mm) throw or surface vertical rods to 4'0" x 9'0" (1219 x 2743mm). **Pairs**: Mortise type on active and surface vertical rods on inactive. Listed rim devices with removable mullion. Hardware must be listed for use on wood doors. SVR-LBR on both doors, Sargent PP and PR 8700 SVR-LBR. No floor holes required for SVR-LBR devices.	
OTHER PAIR HARDWARE	Pairs of doors with removable or fixed mullion **between** are considered as single swing.	Listed for use with wood doors. Surface or mortised door bolts. Manual, self-latching or automatic as codes allow.
Maximum trim: 3/4" (19mm) at bottom with standard rail. **Door Bottoms:** Max size 1" x 1 15/16" listed surface or concealed.	**Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm). **Astragals and edge guards:** Are allowed on this construction.	**Electric Raceway:** Available with label on all doors.

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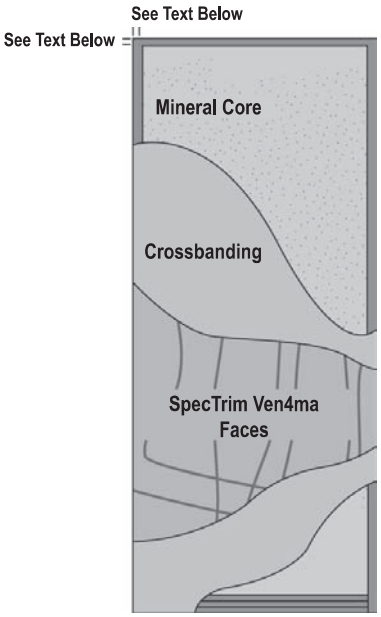
RhinoDoor® 3/4 Hour Door

(Neutral or Category B Positive Pressure)*



Algoma Hardwoods, Inc. has been making mineral core fire doors for more than 50 years. The mineral core door listed here has stood the test of time. The Algoma Mineral Core is unusually light and remarkably stable.

The 3/4-hour mineral core fire door, available in UL or ITS/WHI ratings, is suitable for room and corridor partition openings where rated doors are required.

The FD 3/4 Hour is manufactured with the Superstile for superior screw holding strength and split resistance. Also, reinforcements can be specified which allow surface mounted hardware to be installed with screws.

Surface Vertical Rod/Less Bottom Rod (SVR/LBR) and Concealed Vertical Rod (CVR) exit devices can both provide compliance with the Americans with Disabilities Act (ADA). CVR exit devices require the addition of metal edge channels which are not required with SVR/LBR exit devices. In addition, SVR/LBR exit devices are less expensive to install and require less maintenance.

*Some constructions may only be available as Category A

Product Features

Thickness		1 3/4" (44mm) or 2 1/4" (57mm)
Maximum size		Available prefit up to: Singles: 4'0" x 10'0" (1219 x 3048mm); Category B: 4'0" x 9'0" (1219 x 2743mm). Pairs: 8'0" x 9'0" (2438 x 2743mm), including double egress pairs. Listed concealed vertical rods: 8'0" x 9'3" (2438 x 2819mm)
Stiles (Edge bands)		Singles 5/8" (16mm) Superstile. PVC compatible outer edge.
Top rail	**regular**	1/4" (6.4mm) hardwood lumber.
	reinforced	See **Door** section table of contents.
Lockblocks		For exit device reinforcement, see **Door** section table of contents.
Bottom rail	**regular**	1 1/16" (27mm) hardwood lumber
	reinforced	See **Door** section table of contents.
Faces		15 standard colors, others by request. SpecTrim Ven4ma PVC face.
Crossbands		1/16" (1.6mm) minimum wood-based composite.
Adhesives		Doors constructed using water-resistant adhesives (Type 1).
Wood beaded lite openings		Maximum 1415 in^2 (0.913m^2) cutout or 1296 in^2 (0.836m^2) visible glass. See **Detail** 11 for glass options.
Metal vision panels		Maximum 1296 in^2 (0.836m^2) visible glass. Maximums: 30" (762mm) width, 54" (1372mm) length. See **Detail** 11 for glass options.
Louvers		Up to 24" x 24" (610 x 610mm). Louver(s) not allowed in doors with lite openings, exit devices or smoke control doors.
Machining		See reverse side.
Warranty		For interior only, full warranty for life of original installation.
Standards met or exceeded		WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9.
Positive Pressure		**Category B:** Singles and pairs require a category G edge seal plus a Category H smoke seal applied to the frame. Pairs also require a category G edge seal applied to one of the meeting edges.

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RhinoDoor® 3/4 Hour Door

(Neutral or Category B Positive Pressure)*

COLUMN	1	2
LABEL / FEATURE	UL or ITS/WHI (Note: All items may not be available with both agencies.)	
MAXIMUM OPENING SIZE	**Singles:** 4,0" x 10'0" (1219 x 3048mm). **Transom:** 4'0" x 4'0" in separate frame only. **Side Panels:** 4'0" x 10'0" (1219 x 3048mm).	**Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress **With listed concealed rods:** 8'0" x 9'3" (2438 x 2819mm), UL only.
FACES	SpecTrim Ven4ma PVC Faces, .050" thick.	
STILES (VERTICAL EDGES) AND RAILS	5⁄8" (16mm) Superstile with maple outer. Optional same species or plastic outer available. Top rail 1/4" (6.4mm). Bottom rail 1 1/16" (27mm). For rail and lock block reinforcement, see **Door** section table of contents. PVC compatible outer edge.	
MAXIMUM WOOD VENEERED BEADED LITE	To 1415 sq. in. (0.913m^2) of cutout (1296 sq. in. (0.836m^2) of visible glass). Maximums: 30" (762mm) width, 54" (1372mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides or lock. V-9 and V9C bead compatible with face veneer. See **Detail** 11 for glass options.	
MAXIMUM METAL VISION PANEL (Visible glass)	To 1296 sq. in. (0.836m^2) visible glass. Combined multiple openings up to 1296 sq. in. (0.836m^2). Minimum 5" (127mm) perimeter from cutout to top and sides or lock. Circular openings with 11" (279mm), 17" (432mm) or 23" (584mm) diameter visible glass. See **Detail** 11 for glass options.	
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	24" x 24" (610 x 610mm) with 6" (152mm) perimeter at sides,10" (254mm) at bottom.	
HINGES	Ball bearing steel mortised, half or full surfaced 4 1/2" x 4 1/2" x .134" (114.3 x 114.3 x 3.4mm) to 10'0" (3048mm). UL listed spring hinges 4 1/2" x 4 1/2" x .134". Per NFPA 80 some specialty hinges allowed. Contact Algoma for information.	
LOCKSETS	All listed cylindrical, mortised, unit, and hospital push/pull to 5" (127mm) backset.	
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved. Pocket pivots not allowed. Pivots require blocking on top and bottom of door.	
CLOSERS	Listed surface type. Throughbolt fastening required unless optional reinforcement is specified. Listed floor closers as approved. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 3/4" deep x 25" long.	
FIRE EXIT HARDWARE	**Singles:** Listed rim or mortise type with 5/8" (16mm) throw or surface vertical rods to 4'0" x 9'0" (1219 x 2743mm). **Pairs**: Mortise type on active and surface vertical rods on inactive. Listed rim devices with removable mullion. Surface vertical rods both doors get metal channels. Surface vertical rods without metal channels require special construction. (Matching veneer wrap optional.) Listed concealed vertical rod exit devices to 8'0" x 9'3" (2438 x 2819mm) with special channels on meeting edges with no overlapping astragal. Hardware must be listed for use on wood doors. SVR-LBR on both doors requires metal channels prepped for heat activated bolt between the leaves, no floor bolts required. Sargent PP and PR8700 SVR-LBR require special construction; metal edges are not required.	
OTHER PAIR HARDWARE	Pairs of doors with removable or fixed mullion **between** are considered as single swing.	Listed for use with wood doors. Surface or mortised door bolts. Manual, self-latching or automatic as codes allow.
Maximum trim: 3/4" (19mm) at bottom with standard rail. **Door Bottoms:** Max size 1" x 1 15/16" listed surface or concealed.	**Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm). **Astragals and edge guards:** Must be supplied and cut for hardware under label service.	**Electric Raceway:** Available with label on all doors.

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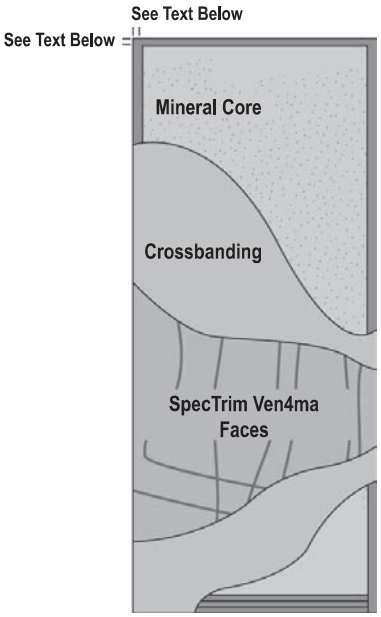
RhinoDoor® 3/4 Hour Door

Positive Pressure Category A



Note: Category A doors feature a concealed intumescent engineered into the construction of the door.

Algoma Hardwoods, Inc. has been making mineral core fire doors for more than 50 years. The mineral core door listed here has stood the test of time. The Algoma Mineral Core is unusually light and remarkably stable.

The 3/4-hour mineral core fire door, available in UL rating, is suitable for room and corridor partition openings where rated doors are required.

The FD 3/4 Hour is manufactured with the Superstile for superior screw holding strength and split resistance. Also, reinforcements can be specified which allow surface mounted hardware to be installed with screws.

Surface Vertical Rod/Less Bottom Rod (SVR/LBR) device provides compliance with the Americans with Disabilities Act (ADA) and do not require floor receivers in pair applications.

Product Features

Thickness		1 3/4" (44mm) or 2 1/4" (57mm)
Maximum size		Available prefit up to: Singles: 4'0" x 9'0" (1219 x 2743mm); Pairs: 8'0" x 9'0" (2438 x 2743mm), including double egress pairs.
Stiles (Edge bands)		5/8" (16mm) Superstile. PVC compatible outer edge.
Top rail	**regular**	1/4" (6.4mm) hardwood lumber.
	reinforced	See **Door** section table of contents.
Lockblocks		For exit device reinforcement, see **Door** section table of contents.
Bottom rail	**regular**	1 1/16" (27mm) hardwood lumber
	reinforced	See **Door** section table of contents.
Faces		15 standard colors, others by request. SpecTrim Ven4ma PVC face.
Crossbands		1/16" (1.6mm) minimum wood-based composite.
Adhesives		Doors constructed using water-resistant adhesives (Type 1).
Wood beaded lite openings		Maximum 1415 in^2 (0.913m^2) cutout or 1296 in^2 (0.836m^2) visible glass. See **Detail** 12 for glass options.
Metal vision panels		Maximum 1296 in^2 (0.836m^2) visible glass. Maximums: 30" (762mm) width, 54" (1372mm) length. See **Detail** 12 for glass options.
Louvers		Up to 24" x 24" (610 x 610mm). Louver(s) not allowed in doors with lite openings, exit devices or smoke control doors.
Machining		See reverse side.
Warranty		For interior only, full warranty for life of original installation.
Standards met or exceeded		WDMA I.S.1-A Series, ARCHITECTURAL WOOD FLUSH DOORS. Architectural Woodwork Quality Standards Section 9.
Smoke Doors		S-label doors require Category H - Smoke & Draft Control Gasketing surface applied gasketing on the frame and on the meeting edge of pairs.

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RhinoDoor® 3/4 Hour Door

Positive Pressure Category A

COLUMN	1	2
LABEL / FEATURE	UL or ITS/WHI (Note: All items may not be available with both agencies.)	
MAXIMUM OPENING SIZE	**Singles:** 4,0" x 9'0" (1219 x 2743mm). **Transom:** 4'0" x 4'0" in a separate frame only. **Side Panels:** 4'0" x 9'0" (1219 x 2743mm).	**Pairs:** 8'0" x 9'0" (2438 x 2743mm), including double egress
FACES	SpecTrim Ven4ma PVC Faces, .050" thick.	
STILES (VERTICAL EDGES) AND RAILS	5/8" (16mm) Superstile with maple outer. Optional same species or plastic outer available. Top rail 1/4" (6.4mm). Bottom rail 1 1/16" (27mm). For rail and lock block reinforcement, see **Door** section table of contents. PVC compatible outer edge.	
MAXIMUM WOOD VENEERED BEADED LITE	To 1415 sq. in. (0.904m^2) of cutout (1296 sq. in. (0.836m^2) of visible glass). Maximums: 30" (762mm) width, 54" (1372mm) length. Minimum 5" (127mm) perimeter from cutout to top and sides. V-9C and V9C bead compatible with face veneer. See **Detail** 12 for glass options.	
MAXIMUM METAL VISION PANEL (Visible glass)	To 1296 sq. in. (0.836m^2) visible glass. Combined multiple openings up to 1296 sq. in. (0.836m^2). Minimum 5" (127mm) perimeter from cutout to top and sides. Circular openings with 11" (279mm), 17" (432mm) or 23" (584mm) diameter visible glass. See **Detail** 12 for glass options.	
MAXIMUM LOUVER SIZE (Not allowed with vision panel, exit devices, or smoke control doors)	24" x 24" (610 x 610mm) with 6" (152mm) perimeter at sides,10" (254mm) at bottom.	
HINGES	Per NFPA 80. Some specialty hinges allowed. Contact Algoma for information.	
LOCKSETS	All listed cylindrical, mortised, unit, and hospital push/pull to 5" (127mm) backset.	
PIVOTS	Top, intermediate & bottom must be listed offset. Rixon's #180, 280, 380, 480, FM19, 219, T117, T117 1/4, Unichecks 65 thru 68, or equal. Others as approved. Pocket pivots not allowed. Intermediate pivots required for label and warranty.	
CLOSERS	Listed surface type. Throughbolt fastening required unless optional reinforcement is specified. Listed floor closers as approved. Concealed closer arms and stops can be mortised in the top rail as long as the dimensions do not exceed 1 3/8" wide x 1 3/4" deep x 25" long.	
FIRE EXIT HARDWARE	**Singles:** Listed rim or mortise type with 5/8" (16mm) throw or surface vertical rods to 4'0" x 9'0" (1219 x 2743mm). **Pairs**: Mortise type on active and surface vertical rods on inactive. Listed rim devices with removable mullion. Hardware must be listed for use on wood doors. SVR-LBR on both doors, Sargent PP and PR 8700 SVR-LBR. No floor holes required for SVR-LBR devices.	
OTHER PAIR HARDWARE	Pairs of doors with removable or fixed mullion **between** are considered as single swing.	Listed for use with wood doors. Surface or mortised door bolts. Manual, self-latching or automatic as codes allow.
Maximum trim: 3/4" (19mm) at bottom with standard rail. **Door Bottoms:** Max size 1" x 1 15/16" listed surface or concealed.	**Viewers:** ITS/WHI up to 1" (25mm); UL up to 1" (25mm). **Astragals and edge guards:** Are allowed on this construction.	**Electric Raceway:** Available with label on all doors.

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Factory Finishing

Topic	Page

Finish System Identification Numbers....3
Univar® Factory Finishes....4
Rotary Natural Birch....6
Plain Sliced Red Oak....7
Sliced White Birch....8
Plain Sliced White Oak....9
Sliced White Maple....10
Plain Sliced Mahogany....11
Sliced Cherry....12
Color Variation....13
Unicol® Opaque Factory Finishes....14
Policy on Field Finishing....15
Field Finishing Procedures....16

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Finish System Identification Numbers

The Architectural Woodwork Institute (AWI) has developed a numbering system for identifying different finishes that are available in the wood finishing industry. The system has been adopted by the Window and Door Manufacturers Association (WDMA) with the permission of AWI to create consistency within architectural and commercial door manufacturing.

Algoma's Univar® finish is comparable to AWI/WDMA TR-6/OP-6.

FINISH SYSTEM		AWI Section 1500 and WDMA I.S. 1-A
TRANSPARENT	Synthetic Penetrating Oil and Simulated Oil Finish	TR-0
	Standard Lacquer	TR-1
	Catalyzed Lacquer	TR-2
	Cellulose Acetate Butyrate (CAB) and Water Reducible Acrylic Lacquer	TR-3
	Conversion Varnish	TR-4
	Catalyzed Vinyl	TR-5
	Catalyzed Polyurethane	TR-6
	Two Component Clear Polyester	TR-7
OPAQUE	Standard Lacquer	OP-1
	Catalyzed Lacquer	OP-2
	Cellulose Acetate Butyrate (CAB) and Water Reducible Acrylic Lacquer	OP-3
	Conversion Varnish	OP-4
	Catalyzed Vinyl	OP-5
	Catalyzed Polyurethane	OP-6
	Pigmented Polyester	OP-7
	Pigmented Polyester/Polyurethane	OP-8

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Univar® Factory Finishes

Algoma® Made hardwood doors are available in a variety of wood faces and standard or custom color factory finishes. Algoma's Univar® clear finish protects and enhances the natural beauty of hardwood doors. Plus stain finishes are available to vary the natural wood color. Algoma's finish colors are catalyzed systems applied by skilled craftsmen on specialized equipment in controlled plant conditions.

These finishes are of a type and quality difficult to achieve with field finishing methods. Univar finishes are comparable to the AWI Finishing System TR-6 Premium Grade. The material provides depth and clarity and is available in a gloss range of 10 to 80 as measured by a Gardener Glossmeter with a 60 degree head. Univar is not an exterior finish.

Algoma's Univar® finishes are environmentally friendly. The system uses materials that are so high in solids content that volatile organic compounds (VOCs) emissions from solvents are eliminated. The materials are cured to a protective, beautiful finish using ultraviolet (UV) light instead of solvent emission. This state-of-the-art application and material use is consistent with Algoma's dedication to protecting the environment, employees and end-users.

Performance rating of Algoma's Univar® finish and AWI systems
Algoma's catalyzed liquid finish matches or exceeds the performance rating of all AWI transparent finish systems.

FINISH TYPE	AWI RATING*
Algoma Univar finish	98%
AWI System TR-6 Catalyzed Polyurethane	98%
AWI System TR-7 Clear Polyester	94%
AWI System TR-5 Catalyzed Vinyl	85%
AWI System TR-2 Catalyzed Lacquer	73%
AWI System TR-4 Conversion Varnish	65%
AWI System TR-1 Standard Lacquer	49%
AWI System TR-3 Water Reducible Acrylic Lacquer	45%
AWI System TR-0 Synthetic Penetrating Oil	27%

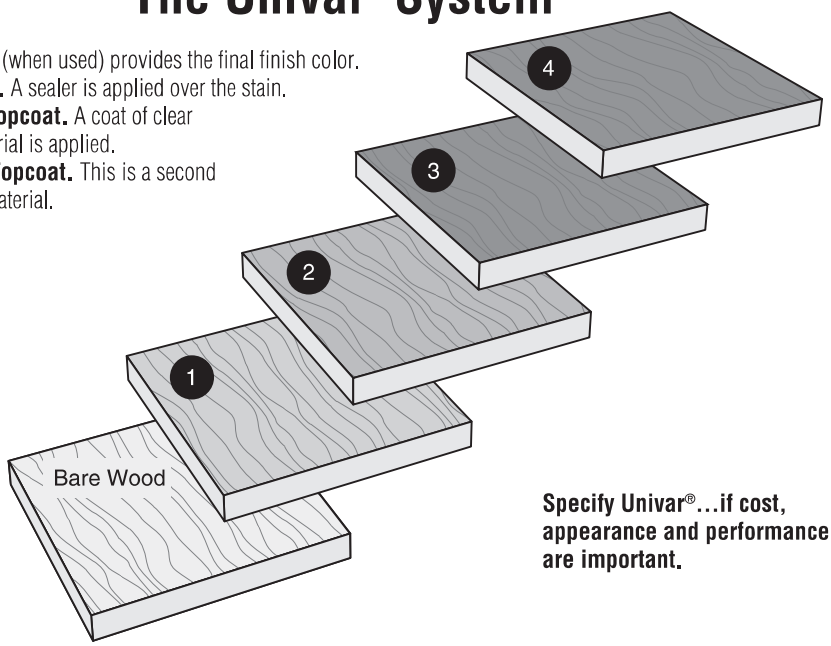
*** System with all excellent ratings = 100%**

Protection
Factory finished doors will be individually wrapped in poly bags or slip-sheeted with cardboard between each door. Cardboard cartons are available at extra cost. Either form of protection can be left on the door until completely installed and operable.

Samples
Samples are available as described in the General Section of this binder.

The Univar® System

1. **Stain.** A stain (when used) provides the final finish color.
2. **Clear Sealer.** A sealer is applied over the stain.
3. **First Clear Topcoat.** A coat of clear catalyzed material is applied.
4. **Final Clear Topcoat.** This is a second coat of clear material.



Specify Univar®...if cost, appearance and performance are important.

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Univar® Factory Finishes

Product Specifications

1. **Product Name.** Univar® Catalyzed Liquid Finish; meets or exceeds the performance characteristics of AWI Section 5.
2. **Product description.**

   Basic Use–Univar provides a durable finish for interior use on architectural hardwood doors.

   Limitations–Univar is not recommended for use in wet or highly humid areas. It is not an exterior finish.

   Composition and Materials–Univar is a clear, liquid finish consisting of 100% solids UV curable system catalyzed material that is factory applied to properly prepared hardwood surfaces.

   Color–Univar is a clear finish that retains, protects and enhances the natural beauty of wood surfaces. It is also available factory stained to vary the natural wood color.

   Finish–Univar is available in a gloss range of 10 to 80 as measured by a Gardner Glossmeter with a 60 degree head.
3. **Technical Data.** Univar has been tested in comparison with AWI Section 5 performance specifications.
4. **Protection.** Univar is applied at the factory to wood surfaces under controlled conditions. At the job site, Univar surfaced doors should be protected from physical damage and stored on-site in a dry location. Products factory finished with Univar are shipped from the manufacturer suitably protected.
5. **Guarantee.** Algoma Hardwoods, Inc. warrants that Univar will perform in accordance with AWI section 1500, system TR-6 specifications.
6. **Maintenance.** In normal use, Univar finishes require little maintenance. If the Univar surface becomes soiled, it can be cleaned by use of a damp cloth.

   If the Univar surface should become damaged, it can be repaired by use of conventional furniture repair techniques.

   In time, as with any high quality commercial product, it may be desirable to refinish the Univar surface. If this is done, care should be taken to select a quality compatible finish and apply it in strict accordance to manufacturer's recommendations.
7. **Technical Services.** For specific technical assistance, please write, call **800-678-8910** or email us at **sales@algomahardwoods.com**. Representatives are available to consult regarding proper factory finishes for specific applications, as well as other product information.

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Rotary Natural Birch

To assist you with your preliminary color selection(s), various stain finish colors on typical veneer samples are shown below. When making your selection(s), bear in mind that veneers will vary in color and texture. As a result, the final finish color may vary from what is represented in these photographs. After species and color(s) have been selected, contact the factory for actual wood samples. **This page is not intended to be used for final color selection.**

RA-1050

RA-4370

RA-100

RA-4751

RA-4368

RA-1053

RA-1051

RA-4367

RA-4366

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Plain Sliced White Birch

To assist you with your preliminary color selection(s), various stain finish colors on typical veneer samples are shown below. When making your selection(s), bear in mind that veneers will vary in color and texture. As a result, the final finish color may vary from what is represented in these photographs. After species and color(s) have been selected, contact the factory for actual wood samples. **This page is not intended to be used for final color selection.**

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Plain Sliced Red Oak

To assist you with your preliminary color selection(s), various stain finish colors on typical veneer samples are shown below. When making your selection(s), bear in mind that veneers will vary in color and texture. As a result, the final finish color may vary from what is represented in these photographs. After species and color(s) have been selected, contact the factory for actual wood samples. **This page is not intended to be used for final color selection.**

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Plain Sliced White Oak

To assist you with your preliminary color selection(s), various stain finish colors on typical veneer samples are shown below. When making your selection(s), bear in mind that veneers will vary in color and texture. As a result, the final finish color may vary from what is represented in these photographs. After species and color(s) have been selected, contact the factory for actual wood samples. **This page is not intended to be used for final color selection.**

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Plain Sliced White Maple

To assist you with your preliminary color selection(s), various stain finish colors on typical veneer samples are shown below. When making your selection(s), bear in mind that veneers will vary in color and texture. As a result, the final finish color may vary from what is represented in these photographs. After species and color(s) have been selected, contact the factory for actual wood samples. **This page is not intended to be used for final color selection.**

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Plain Sliced Mahogany

To assist you with your preliminary color selection(s), various stain finish colors on typical veneer samples are shown below. When making your selection(s), bear in mind that veneers will vary in color and texture. As a result, the final finish color may vary from what is represented in these photographs. After species and color(s) have been selected, contact the factory for actual wood samples. **This page is not intended to be used for final color selection.**

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Plain Sliced Cherry

To assist you with your preliminary color selection(s), various stain finish colors on typical veneer samples are shown below. When making your selection(s), bear in mind that veneers will vary in color and texture. As a result, the final finish color may vary from what is represented in these photographs. After species and color(s) have been selected, contact the factory for actual wood samples. **This page is not intended to be used for final color selection.**

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Color Variation

Plain Sliced White Oak from different logs with RA 4751 finish

Color and grain of natural hardwoods are neither uniform nor predictable. Because of soil content, weather, and other environmental factors, trees of the same species will invariably produce veneers of unique appearance and color. The photo above illustrates a typical range of variation which can be found by finishing different logs of the same species with identical stain and finish. Variation beyond the range illustrated here is not uncommon. This example is of plain sliced white oak, but each veneer species will exhibit a similar range of variation.

The veneer slicing method used will also impact color variation. Most of the species shown throughout this brochure are flat sliced veneers. Rotary cut veneers, e.g. natural birch, or red oak, may have both sap and heartwood in the same face, in which case the color variation can be quite noticeable.

Each individual "A" Grade door face made by Algoma uses the veneers from only one log. However, variations of the type shown above are likely from door to door, unless special veneer color selection is requested.

Given that most doors are not likely to be adjacent to one another, color variation from one door to another is not generally a problem. Whenever required or requested, Algoma will take appropriate steps to ensure optimal color and grain matching.

Call us for more details.

Custom Stain Colors

While standard stain colors will satisfy most door color requirements, custom colors are often called for to meet specific aesthetic and architectural needs. Algoma has a long history of working closely with clients to meet their special color needs. Over time, we've produced a broad range of different colors and hues, and our experience allows us to offer a nearly unlimited palette of colors from which to choose. All we need is a color chip and we'll begin to make the match. Call us for more details.

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Unicol® Opaque Factory Finishes

Product Specifications

1. **Product Name.** Unicol® Catalyzed Opaque Liquid Finishes.
2. **Manufacturer.** Algoma Hardwoods, Inc.
3. **Product Description.**

   Basic Use–Unicol provides a decorative, durable finish for interior use on architectural hardwood doors.

   Limitations–Unicol is not recommended for use in wet or highly humid areas. It is not an exterior finish.

   Composition and Materials–Unicol is an opaque liquid finish consisting of a high quality resin-oil combination catalyzed material pigmented to achieve desired solid color effect and factory applied to properly prepared hardwood surfaces.

   Colors–Unicol is available to match most solid colors.

   Finish–Unicol is available in gloss levels from 20 to 40 as measured by a Gardner Glossmeter with a 60 degree head.
4. **Technical Data.** Unicol has been tested in comparison with AWI Section 5. specifications.
5. **Protection.** Unicol is applied at the factory to wood surfaces under controlled conditions. At the job site, Unicol surfaced doors and panels should be protected from physical damage and stored on site in a dry location. Products factory finished with Unicol are shipped from the manufacturer suitably protected. Cardboard cartons are available at extra cost.
6. **Availability and Costs.**

   Availability–Unicol is generally ordered for specified jobs. Accordingly, sufficient time allowances should be made when preparing schedules, shop drawings, orders, etc.

   Costs–The availability of a wide range of products which may feature the finish makes it impractical to quote prices in this data sheet. For specific cost information, please contact Algoma Hardwoods.
7. **Guarantee.** Algoma Hardwoods, Inc. warrants that Unicol will perform in accordance with AWI Section 5.
8. **Maintenance.** In normal use, Unicol finish requires little maintenance. If surface becomes soiled, it can be cleaned using a damp cloth and normal household detergents.

   In time, as with any high quality commercial product, it may be desirable to refinish the Unicol surface. If this is done, care should be taken to select a quality compatible finish and apply it in strict accordance to manufacturer's recommendations.
9. **Technical Services.** For specific technical assistance, please write, call **800-678-8910** or email us at **sales@algomahardwoods.com**. Representatives are available to consult regarding proper factory finishes for specific applications, as well as other product information.

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Policy on Field Finishing

Finishing at the jobsite or in our customer's shop shifts the responsibility away from the Algoma factory. (See Algoma Hardwoods' Door Warranty, Tolerances, Exclusions and Instructions.) To assist all parties in recognizing their responsibilities, the notice shown here is included with every packing slip on every shipment leaving the factory.

NOTICE: JOB CAPTAIN AND FINISHER

Storing Doors
Pile doors on leveled supports covered with a sheet of plywood or heavy cardboard to protect the face of the bottom door. Cover the top door in a similar manner. Protect all doors from exposure to light with dark colored polyethylene or similar material. Do not store doors in damp areas or freshly plastered buildings. Storage area should be dry and well ventilated. Relative humidity should range from 25% to 55%. Do not subject material to extremely high or low humidity. When moving doors, handle them with clean hands or wear clean gloves. Bare hands leave finger marks and stains. Do not drag them across each other or against other surfaces. If unfinished material is to be stored at jobsite for more than one week, all edges should be sealed.

Finishing Doors
All doors must be inspected for matching, face grade or other visual defects prior to installation and finishing. These doors **should not be considered as ready for finishing** as received. The factory cannot be responsible for the manner in which they are handled once they are loaded for shipment.

Before applying **any** finish, the finisher **must thoroughly block-sand or belt-sand both faces** with 120 to 180 grit sandpaper in order to remove all scuffs, scratches, burnishes, raised grain, handling marks and effects of exposure to moisture. Thorough sanding cannot be done without using a sanding block and the door must be in a horizontal position.

To help ensure uniform color when applying any stains, it is highly recommended that a wash coat such as Minwax Wood Conditioner be applied, followed by a light sanding. It is also essential to apply stains with the door in a **horizontal position.** This permits easier handling of materials and prevents the solvents from evaporating too quickly, which is a common cause of streaks caused by the stains "setting up" before clean up can be completed. If problems develop in finishing **do not continue** with the finishing. Notify your finish supplier or door supplier immediately. Avoid extremely dark stains on light colored woods. **The darker the stain the better the preparatory sanding must be.**

Doors to be painted in the field will require additional field preparation before application of final coats. Additional preparation may include spackling and/or sanding because of hidden surface blemishes or differential absorption of finish coats.

FAILURE TO FOLLOW THESE FINISHING INSTRUCTIONS PUTS TOTAL RESPONSIBILITY FOR THE APPEARANCE OF THE FINISHED PRODUCT IN THE HANDS OF JOBSITE PERSONNEL.

If these instructions are contrary to instructions supplied by the finish manufacturer, all work should stop until an understanding between finish supplier and door supplier is reached.

All doors must be inspected for color match, face grade or other visual defects prior to installation and finishing.

If the customer cannot prove that the material supplied by Algoma Hardwoods was handled as outlined above, we cannot be held liable for problems that may be encountered.

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Field Finishing Procedures

Note: Algoma Hardwoods is not responsible for the appearance of field finished doors. The following information is given to help the field finisher with his responsibilities.

A. Storage and Handling

1. Pile doors on leveled supports covered with a sheet of plywood or heavy cardboard to protect the face of the bottom door. Cover the top door in a similar manner. Protect all doors from exposure to light with dark colored polyethylene or similar material. Storage area should be dry and well-ventilated.
2. Do not store in building that has wet plaster, cement, or excessive moisture of any kind.
3. Doors should not be subjected to abnormal heat, dryness or humidity, or sudden changes therein. Relative humidity should not be less than 25% or greater than 55%.
4. Handle with clean hands or gloves; do not drag doors across one another or across other surfaces.

B. Preparation

1. Surface must be clean and dry.
2. Before applying **any** finish, **thoroughly block-sand or belt-sand both faces** with 120 to 180 grit sandpaper in order to remove all scuffs, scratches, burnishes, raised grain, handling marks and effects of exposure to moisture. Thorough sanding cannot be done without using a sanding block, and the door must be in a horizontal position. Always sand with the grain of the wood. Do not use steel wool.
3. Clean surface with tack rag or other suitable means.
4. To help assure uniform color when applying any stains, it is highly recommended that a wash coat such as Minwax Wood Conditioner be applied, followed by a light sanding.
5. If possible, test surface for compatibility with finish. In some veneers, there will be a reaction with certain finishes.
6. Apply finish as soon as possible after the doors have been properly prepared.

C. Finishing (Interior)

1. Use only high-grade finishing material, and follow the manufacturer's instructions carefully. Do not intermix materials from different suppliers.
2. Apply seal coat to both faces and four edges; allow for thorough drying. Sand lightly with 120 to 180 grit sandpaper. This seal coat will allow uniform staining of the veneers when stained or when filler stain is required. **If veneers are not sealed prior to staining, the surface may appear more streaked or blotchy.**
3. Apply one or more coats of stain or filler stain as required. Allow to dry thoroughly. It is essential to apply stains with the door in a **horizontal position**. This permits easier handling of materials and prevents the solvents from evaporating too quickly, which is a common cause of streaks caused by the stains "setting up" before clean-up can be completed. If problems develop in finishing **do not continue** with the finishing. Notify your finish supplier or door supplier immediately. Avoid extremely dark stains on light colored woods. **The darker the stain the better the preparatory sanding must be.**
4. Clean surface of all dust or dirt.
5. Apply two coats of top coat for best results. Allow to dry and sand between coats.
6. Apply finish to both faces and edges of doors.
7. The above procedure, if followed carefully, should give a satisfactory finish to the doors.

D. Finishing (Exterior)

1. Prepare doors as above in Steps A and B.
2. Use high-grade exterior finishing material and follow the finishing manufacturer's instructions carefully.
3. Follow Step C as above, but be sure to apply at least two finish coats for good exterior durability. Annual recoating is necessary to protect the door and maintain warranty.
4. If pigmented finishes are used, follow the manufacturer's instructions carefully and finish according to his specifications.

E. Important Notes

1. Doors to be painted in the field will require additional field preparation before application of the final coats. Additional preparation may include spackling and/or sanding because of hidden surface blemishes or differential absorption of finish coats.
2. **FAILURE TO FOLLOW THESE FINISHING INSTRUCTIONS PUTS TOTAL RESPONSIBILITY FOR THE APPEARANCE OF THE FINISHED PRODUCT IN THE HANDS OF JOBSITE PERSONNEL.**
3. If these instructions are contrary to instructions supplied by the finish manufacturer, all work should stop until an understanding between finish supplier and door supplier is reached.
4. All doors must be inspected for color match, face grade or other visual defects prior to installation and finishing.
5. If the customer cannot prove that the material supplied by Algoma Hardwoods was handled as outlined above, we cannot be held liable for problems that may be encountered.

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Door Details

Topic	Page
Introduction	2
Metal vs. Wood Vision Panels	3
Labeled Wood Veneered Lite Beading* V-9	4
Labeled Wood Veneered Lite Beading* V-9-C	5
Labeled FD ⅓ Hour Wood Lite Beading	6
Wood Details	7
Style #110 Labeled Metal Vision Panels	9
Special Lites	10
Fusible Link Louver	11
Astragals and Edge Guards	12
Rabbets	13
Radius Edges	14
Labeled FD ⅓ Hour Dutch Doors	15
Dutch Doors and Wood Astragals	16
Impact Resistant Door Edges	17
Applied Mouldings	18
Quirks	19
Flashing	20
Standard Wicket Door	21

*U.S. Patent No. 4,637,182

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Introduction

All details are for interior applications unless otherwise noted.

When both lites and louvers are required in a non-labeled door, the same bead details should be used to achieve a uniform appearance.

Bead widths will vary depending on the glass thickness or louver thickness used. The standard allowance for glass is ¼". Glass can vary $^{1}/_{16}$".

Flush doors with the following hardware, lite and/or louver conditions are NOT warranted. (Exception: Special construction full glass doors are warranted.)

1. Cutouts for lites and/or louvers, any edge of which is less than 5" from any edge of the door.
2. Less than 5" between adjacent cutouts for hardware, lites, or louvers.
3. Cutout areas exceeding 40% of the door's surface or individual cutouts exceeding 54" in height.

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Metal Vision Panels vs. Veneer Wrapped Beads

Which Would You Prefer In Your Labeled Wood Fire Doors?

You do have a choice. You don't need to specify metal vision panels in wood fire doors. You can specify veneered beads that will be compatible with the veneer on the face of the door. Wood beads can also be field or factory finished using the same materials as those used on door faces.

A better value. In addition to the aesthetic appeal of wood, veneered beads will generally cost less than a metal vision panel after normal finishing of the primed vision panel to match the metal door frame.

Available in:
- Natural Birch
- Cherry
- Mahogany
- Red Oak
- White Oak
- Walnut

Other species by special order.

UL and ITS/WHI listings shown on Detail pages 4, 5, 6.

	Algoma Hardwoods Labeled Wood Lites (Based on standard 1/4" wired glass)							
	FD 1/3 Hour Stave or Particleboard		FD 3/4 Hour V-9-C*		FD 1 Hour V-9*		FD 1 1/2 Hour V-9*	
	UL	ITS/WHI	UL	ITS/WHI	UL	ITS/WHI	UL	ITS/WHI
Max. cutout size (order size) see note 5	1296 in^2	1296 in^2	1415"	1415"	136 in^2		136 in^2	
Max. width or length of cutout (order size)	30"W 54"L	30"W 54"L	30"W 54"L	30"W 54"L	13"W 34"L	13"W 34"L	13"W 34"L	13"W 34"L
Min. dimension from top or edge of door to edge of cutout	5"	5"	5"	5"	5"	5"	5"	5"
Ordering size for 1/4" wire glass	Deduct 1/8" from width and length of order size.							

Notes

1) All cutouts for wood beaded lites are located from top and lock edge of door.
2) In labeled doors, louvers and lites (vision panels) are not allowed in same door.
3) Multiple cutouts are allowed as long as total combined area does not exceed maximum cutout area shown above.
4) To maintain the label, the minimum dimension between adjacent lite cutouts and/or hardware cutouts must be 5" unless full glass full warranty door is specified.
5) Listed sizes apply to standard 1/4" wire glass. See Detail 11 and 12 for specific sizes or specific lite bead, glass and rating types.

*U.S. Patent No. 4,637,182

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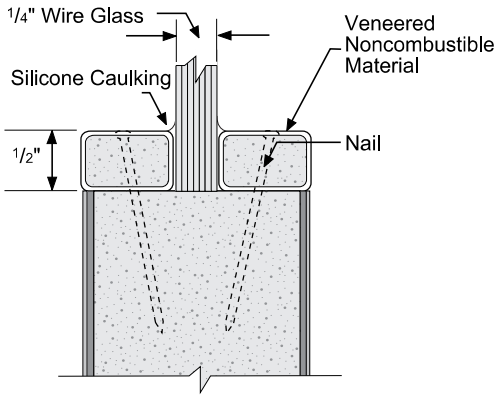
V-9 Labeled Wood Veneered Lite Beading*



Order by lite opening (cutout) size, the same as other wood beaded lites—not by exposed glass size as when ordering metal vision panels.

Product Features

Use	For use in FD ¾, 1 and 1½ Hour Fire Doors. For larger sizes in FD ¾ Hour, see next page.
Species Available	Cherry, Mahogany, Natural Birch, Red Oak, Walnut and White Oak. Other species available by special order.
Sizes	Various sizes available in full-inch increments up to maximum area/size listed below.
Listed	UL and ITS-WH listed.
Glass Size	Check with factory.
Maximum Cutout	136 sq. inches. Maximums: 13" width, 34" height.
Maximum Visible Glass Size	100 sq. inches
Parts List **Neutral Pressure Doors**	1 Instruction Sheet 8 Prefit wood beads with nails pre-fitted into the lite opening. 1 Tube of Silicone caulk or glazing tape. (EPDM or Norton V990) **Supplied with glass by glazers**. 1 Piece of ¼" fire rated glass per NFPA 80 labeled for Fire Protection Rating. **Supplied by glazers**. Note: Glass should be cut ⅛" less in length and width than the lite opening size.
Parts List UL 10C **Positive Pressure Doors** **Category A & B**	1 Instruction Sheet. 8 Prefit wood beads with nails pre-fitted into the lite opening. 1+ Pemko FG300S45 or FG3000S90 intumescent glazing tape which must be but between the bead and the glass. Because of variations in the glass, door and beads you might have to use a combination of the S45 & S90 to insure the beads are flush with the face of the door. Supplied by glazers. 1 Piece of ¼" fire rated glass per NFPA 80 labeled for Fire Protection Rating. Supplied by glazers. Note: Glass should be cut ⅛" less in length and width than the lite opening size.
Installation Instructions	1. Verify that all parts needed for installation are available. 2. Remove one set of wood beads from the door. Position the remaining set of beads flush to the surface of the door and nail in place. 3. Apply a good bead of silicone caulk or glazing tape to the fixed wood bead on the surface where the glass will be placed. Note: It is the responsibility of the glazer to determine how much caulk or glazing tape is required (based on glass thickness) to position the wood beads flush to both sides of the door . 4. Now place the glass against the fixed wood bead that has the silicone caulk or glazing tape applied. 5. Next apply a good bead of silicone caulk or glazing tape to the glass around the perimeter. 6. Nail the loose wood beads in place. 7. Use caution in nailing beads so as to avoid striking bead. 8. Countersink nails and fill holes with matching putty. 9. Finish same as door faces. .
Note	Must specify glass type if other than ¼" wire glass.

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V-9-C Labeled Wood Veneered Lite Beading*

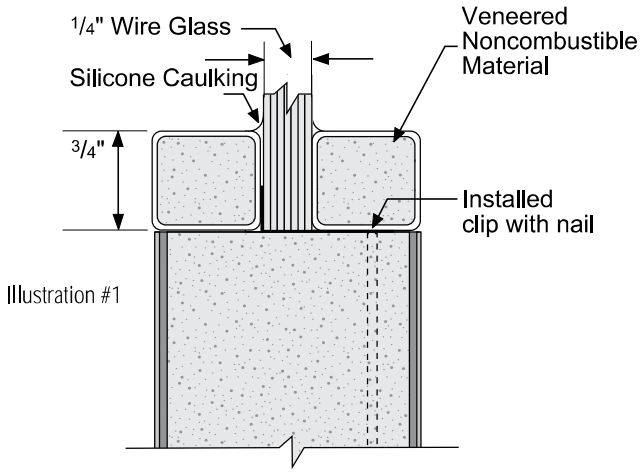

Illustration #1

Order by lite opening (cutout) size, the same as other wood beaded lites—not by exposed glass size as when ordering metal vision panels.

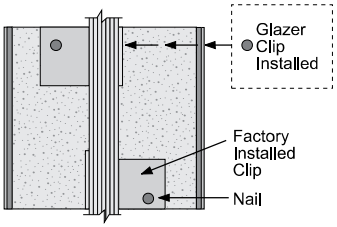

Illustration #2

Product Features

Use	For use in FD ¾ , 1 and 1½ Hour Fire Doors.
Species Available	Cherry, Mahogany, Natural Birch, Red Oak, Walnut and White Oak. Other species available by special order.
Sizes	Various sizes available in full-inch increments up to maximum area/size listed below.
Listed	UL and ITS-WH listed.
Glass Size	Check with factory.
Maximum Cutout	1415 sq. inches. Maximums: 30" width, 54" height. If larger lite required, see **Detail** 11 and 12.
Maximum Visible Glass Size	1296 sq. inches
Parts List **Neutral Pressure Doors**	1 Instruction Sheet 8 Prefit wood beads with nails pre-fitted into the lite opening. 1 Tube of Silicone caulk or glazing tape. (EPDM or Norton V990) **Supplied with glass by glazers**. 1 Piece of ¼" fire rated glass per NFPA 80 labeled for Fire Protection Rating. **Supplied by glazers**. Note: Glass should be cut ⅛" less in length and width than the lite opening size.
Parts List UL 10C **Positive Pressure Doors** **Category A & B**	1 Instruction Sheet. 8 Prefit wood beads with nails pre-fitted into the lite opening. 1+ Pemko FG300S45 or FG3000S90 intumescent glazing tape which must be but between the bead and the glass. Because of variations in the glass, door and beads you might have to use a combination of the S45 & S90 to insure the beads are flush with the face of the door. Supplied by glazers. 1 Piece of ¼" fire rated glass per NFPA 80 labeled for Fire Protection Rating. Supplied by glazers. Note: Glass should be cut ⅛" less in length and width than the lite opening size.
Installation Instructions	1. Verify that all parts needed for installation are included with wood lite kit. 2. Remove the fitted wood beads from both sides of the lite cutout. 3. Slide the ¼" wire glass in over the rails and against the ¼" flange on the factory installed metal clips. 4. Next position the additional loose clips on the black marks between the factory installed clips. Slip the ¾" leg of each clip between the edge of the cutout and the glass so the nail hole will be on the side opposite the factory installed nail. See illustration #2. Nail these clips in place. 5. Apply the silicone caulk or glazing tape to the glass edge and re-insert and nail the four pre-fit beads on this side of the door. See illustration #1. Note: It is the responsibility of the glazer to determine how much caulk or glazing tape is required (based on glass thickness) to position the wood beads flush to both sides of the door. 6. On the opposite side, apply silicone caulk and complete the installation by re-installing and nailing the pre-fit beads on this side of the door. See illustration #1. Note: It is the responsibility of the glazer to determine how much caulk or glazing tape is required (based on glass thickness) to position the wood beads flush to both sides of the door. 7. Use caution in nailing beads so as to avoid striking bead. 8. Countersink nails and fill holes with matching putty. 9. Finish same as door faces.
Note	Must specify glass type if other than ¼" wire glass.

*U.S. Patent No. 4,637,182

7/20/10

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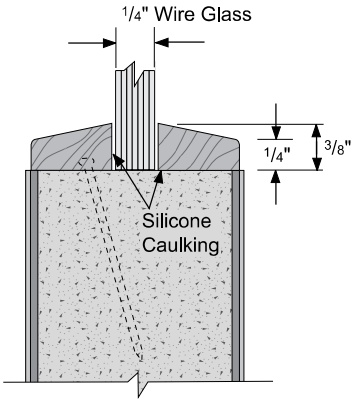
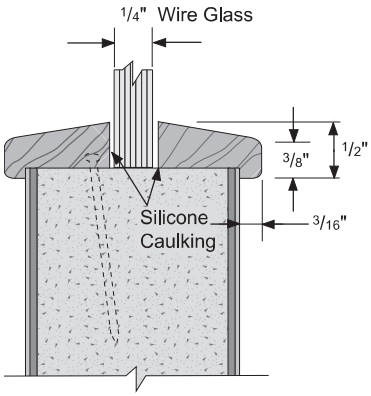
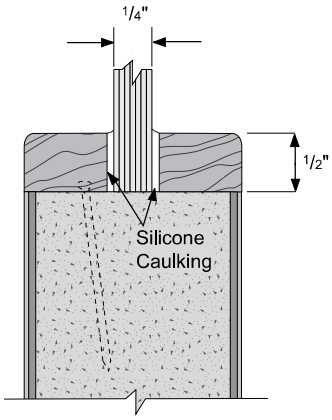
Labeled FD ⅓ Hour Wood Lite Beading



W-4
Recessed Bead



W-7
Full-Lip Both Sides of Door



W-9
Flush Bead

Order by lite opening (cutout) size, the same as other wood beaded lites—not by exposed glass size as when ordering metal vision panels.

Product Features

Use	For use in FD ⅓ Hour Fire Doors.
Species Available	Ash, Birch, Cherry, Mahogany, Maple, Red Oak, Teak (Afromosia), Walnut and White Oak.
Sizes	Various sizes available in full-inch increments up to maximum area/size listed below.
Listed	UL and ITS-WH listed.
Glass Size	Check with factory.
Maximum Cutout	1296 sq. inches. Maximums: 30" width, 54" height. If larger lite required, see **Detail** 11 and 12.
Maximum Visible Glass Size	1296 sq. inches
Parts List	1 Instruction Sheet 8 Prefit wood beads with nails pre-fitted into the lite opening. 1 Tube of Silicone caulk or glazing tape. (EPDM or Norton V990) **Supplied with glass by glazers**. 1 Piece of ¼" fire rated glass per NFPA 80 labeled for Fire Protection Rating. **Supplied by glazers**. Note: Glass should be cut ⅛" less in length and width than the lite opening size.
Installation Instructions (W-4 recessed bead)	1. Verify that all parts needed for installation are available. 2. Remove one set of wood beads from the door. Position the remaining set of W-4 beads recessed 1/32" from the surface of the door and nail in place. For W-9, set beads flush with face. 3. Apply a good bead of silicone caulk or glazing tape to the fixed wood bead on the surface where the glass will be placed. Note: It is the responsibility of the glazer to determine how much caulk or glazing tape is required (based on glass thickness) to recess the W-4 wood beads 1/32" on both sides of the door. For W-9, set beads flush with face. 4. Now place the glass against the fixed wood bead that has the silicone caulk or glazing tape applied. 5. Next apply a good bead of silicone caulk or glazing tape to the glass around the perimeter. 6. Nail the loose wood beads in place. 7. Use caution in nailing beads so as to avoid striking bead. 8. Countersink nails and fill holes with matching putty. 9. Finish same as door faces.
Note	Other types of labeled glass can be used.

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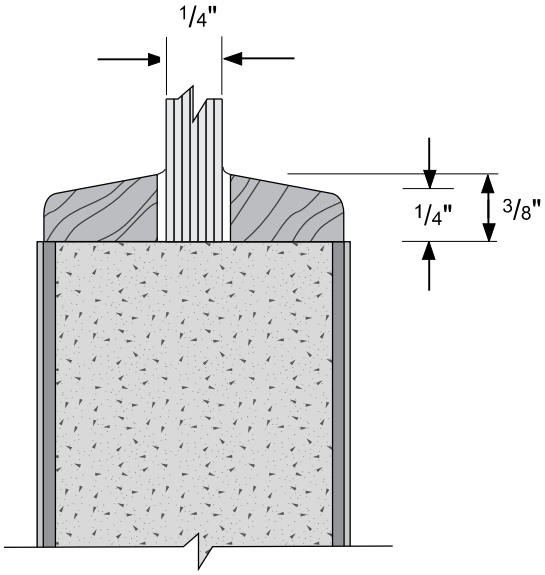
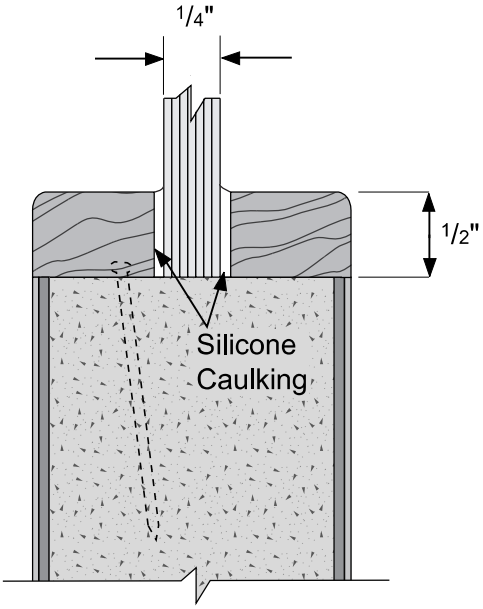
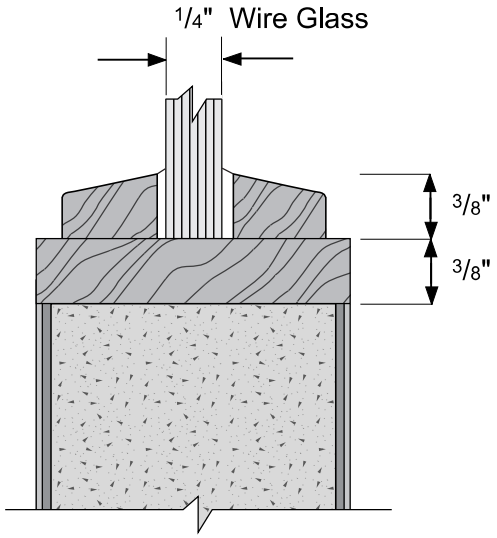
Wood Details



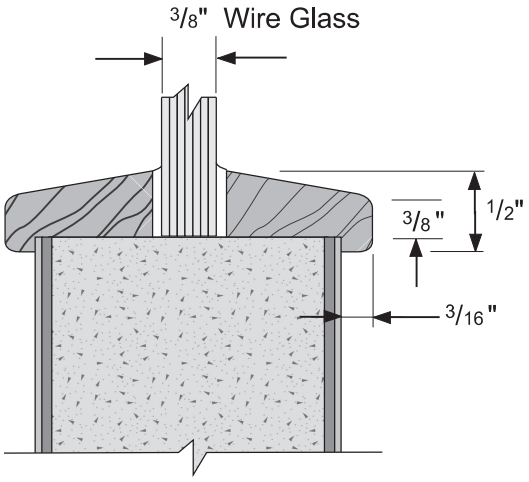
Recessed Bead
W-4



Flush Bead
W-9



Recessed Bead with Exposed Banding
W-3



Full Lip Beads
W-7

Note: When ordering glass for W-3, you need to deduct 13/16" from width and height of cutout size on acknowledgement.

Note: Silicone caulk or glazing tape required between all beads and glass.

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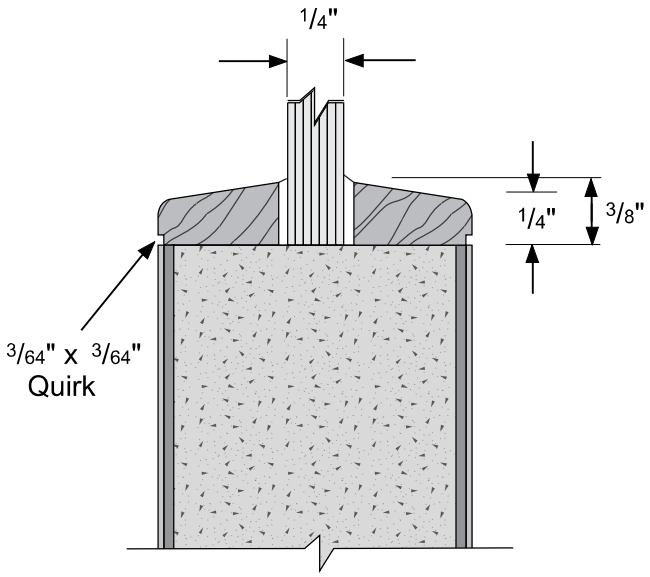
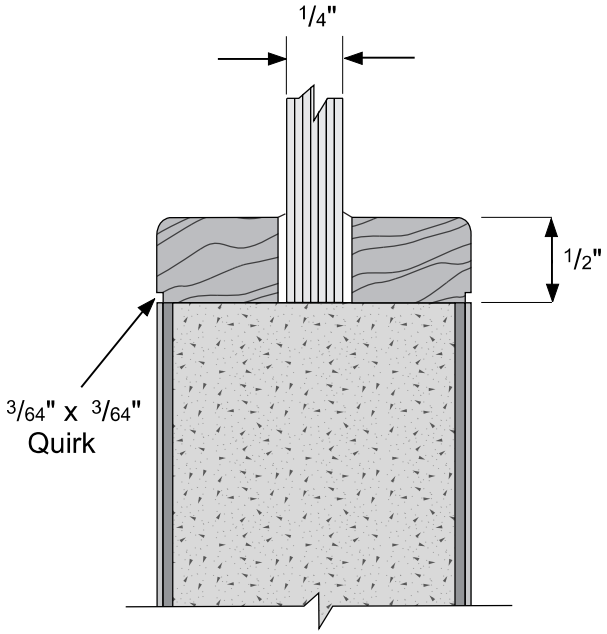
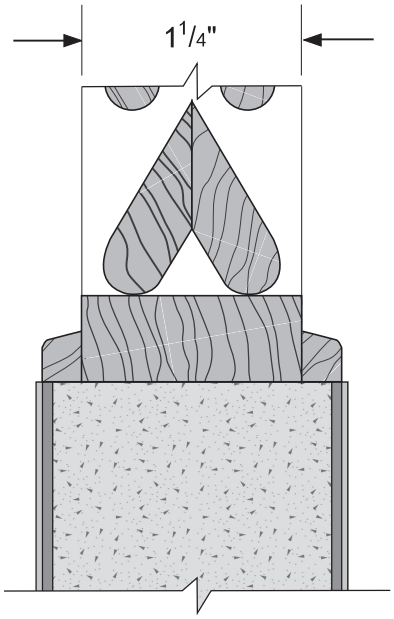
Wood Details



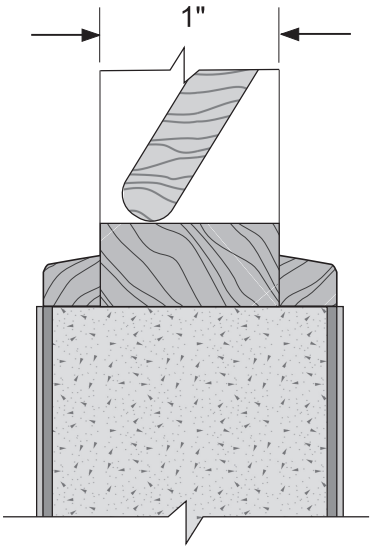
W-4 with Quirks
W-4Q



W-9 with Quirks
W-9Q



Sightproof-Chevron Slats
Wood Louver-Recessed Bead
WL-4 CH-RE Sightproof



Wood Louver-Recessed Bead
WL-4 RE

Note: Silicone caulk or glazing tape required between all beads and glass.

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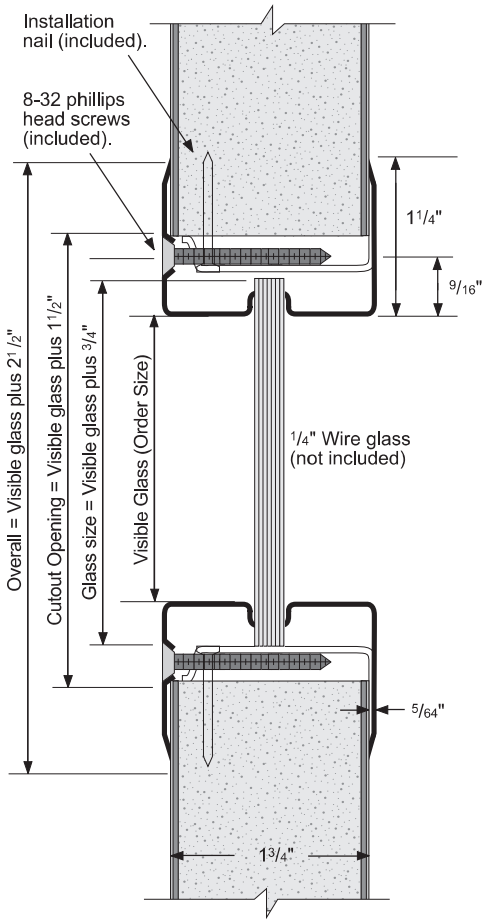
Style #110 Labeled Metal Vision Panels



Do not use Glazing Compound.
When using the #110 style frame for retrofit applications, either door cutout or existing glass may need to be modified to allow room for the weld nut and screws .

Metal vision panels are located from top of door or lock edge to visible glass. For example, a 6" top rail is 6" from the top of the door to visible glass.

Actual wood left to apply a surface closer is 4¾".

The 110 low profile offers less interference for exit hardware; only one person is needed to install; a significant reduction in installation time; and corridor side is fastener free, secure and attractive.

Product Features

Use	For use in FD ⅓, ¾, 1 and 1½ Hour Fire Doors.
Material	18-gauge cold rolled steel, prime coated with beige enamel. ¼" wire glass not furnished
Listed	UL and ITS/WH listed, UL10B and UL10C
Sizes	Various sizes available in full-inch increments up to maximum area/size listed below.
Vision Panel Size	The measurement in inches of the **visible glass** when installed.
Door Cutout	1½" larger than visible glass.
Actual Glass Size	¾" larger than visible glass.
Maximum Visible Glass Size	**FD ⅓ and ¾ hour doors:** 1296 sq. inches. Maximums: 30" width, 54" height. If larger lite required, see **Detail** 11 and 12.
	FD 1 and 1½ hour doors: 100 sq. inches. Maximums: 12" width, 33" height. If larger lite required, see **Detail** 11 and 12.

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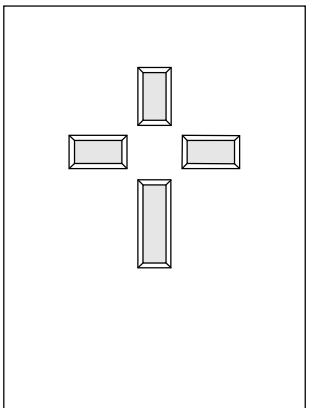
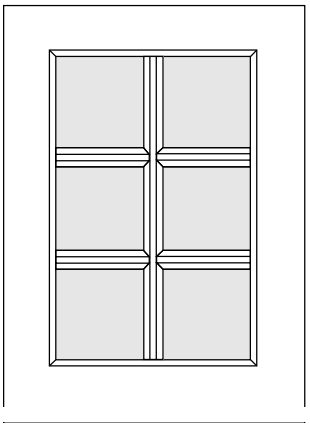
Special Lite Details

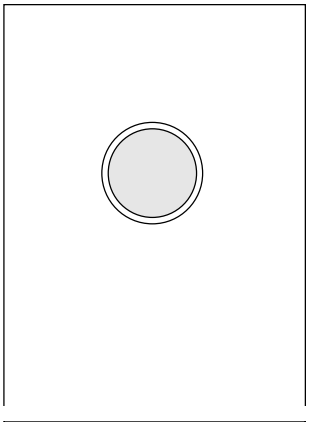


Cross

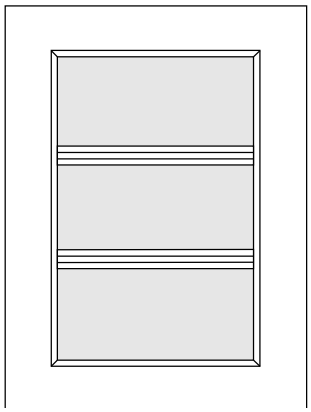


Divided 6 LT-2 Wide

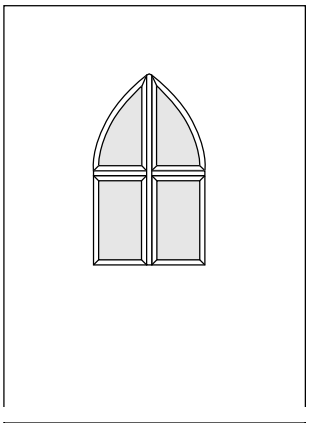
Special details such as cross, round or divided lites are available.



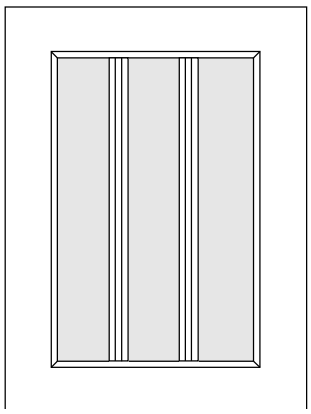
Circle



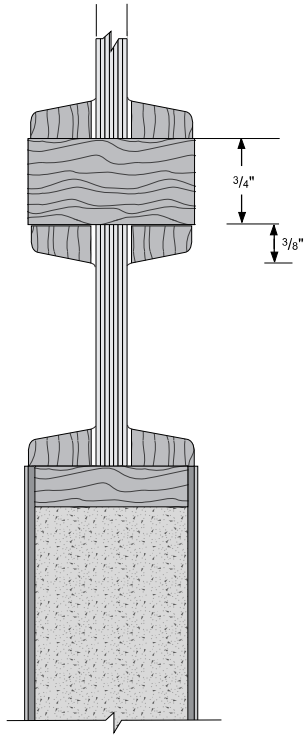
Divided 3 LT High



Gothic



Divided 3 LT Wide



Flush and Stile & Rail Divided Lite Detail
Divided lites can be manufactured with W4, W9, or W7 wood beads.

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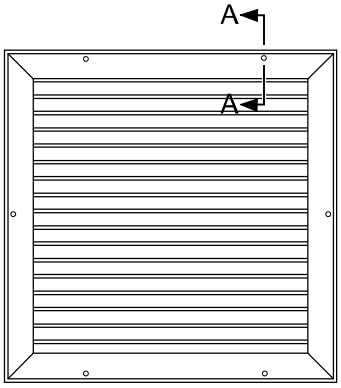
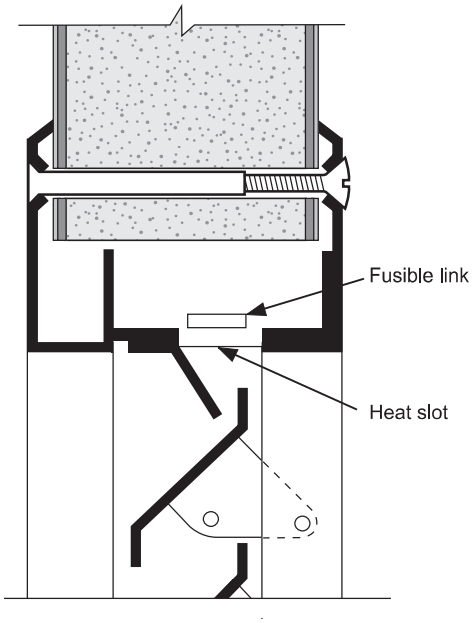
Air Louver Fusible Link Louver



Louver must be located a minimum of 6" from door edge and 10" from bottom. Not allowed in labeled doors having lites, fire exit devices or vision panels.



Section A-A

Product Features

Use	For use in FD ⅓, ¾, 1 and 1½ Hour Fire Doors.
Material	Prime coated in beige enamel.
Listing Classification	For use in Algoma Hardwood FD ⅓ through 1½ Hour Doors (No ITS/WHI on FD ⅓ Hour)
Sizes	Available from 10" x 6" up to 24" x 24" in 2-inch increments. 576 in.^{2} maximum total.
Number	Two allowed per door. 576 in.^{2} maximum total.

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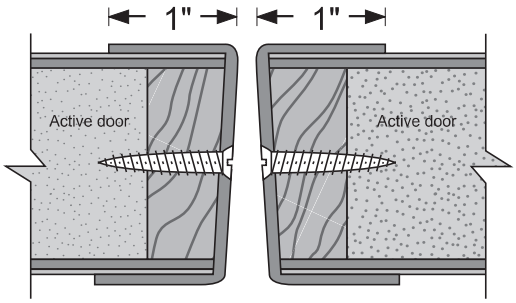
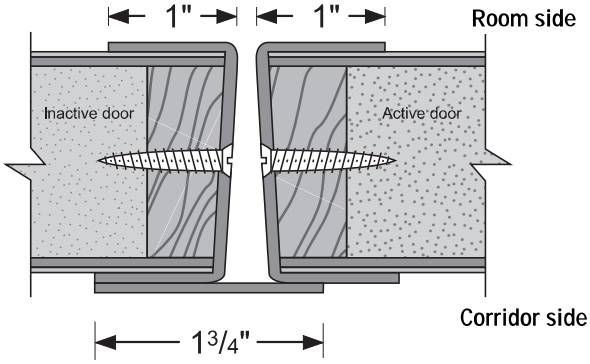
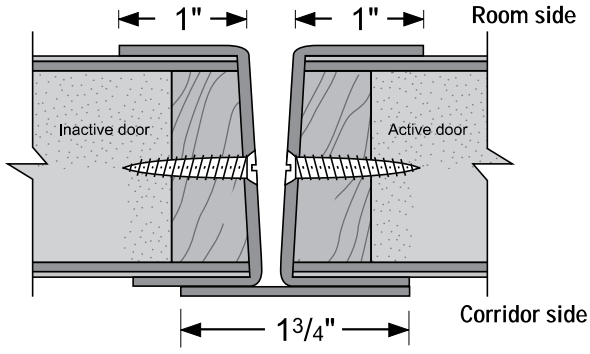
Astragals and Channels



Algoma's Standard Channel Set #208
Horizontal Section
Fire Doors in Pairs — Both Doors Active



Algoma's Standard Astragal Set #207
Horizontal Section
For LH or RH Active Pairs (RH Active Shown)



Algoma's Standard Astragal Set #211
Horizontal Section
For LHR or RHR Active Pairs (RHR Active Shown)
Note: Must have 7/8" lip strike for #211 astragal set

Details shown are for neutral pressure doors and Category B positive pressure doors.

Pairs are available without metal edges. See Door 16, MetalFree Stiles for Pairs.

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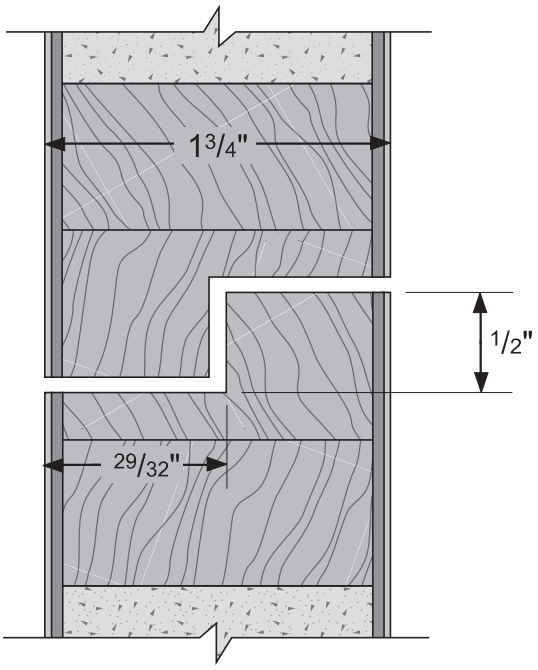
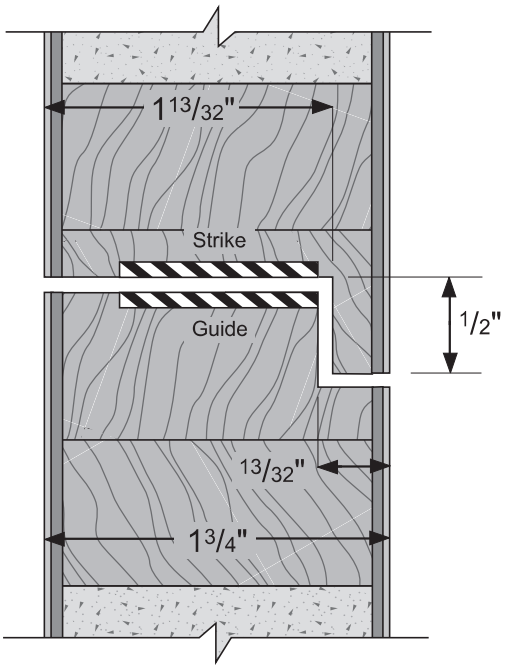
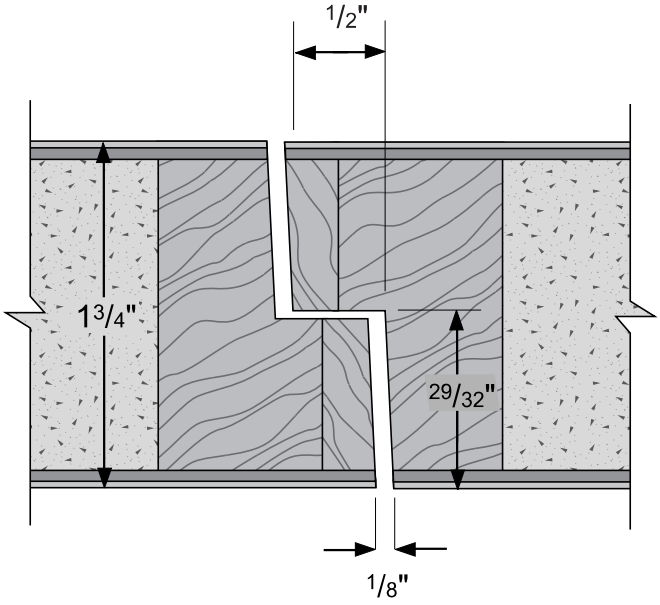
Rabbets



Standard Rabbet
Between Flush Door & Transom



Standard Rabbet
With Flushbolt



Rabbeted Meeting Edges

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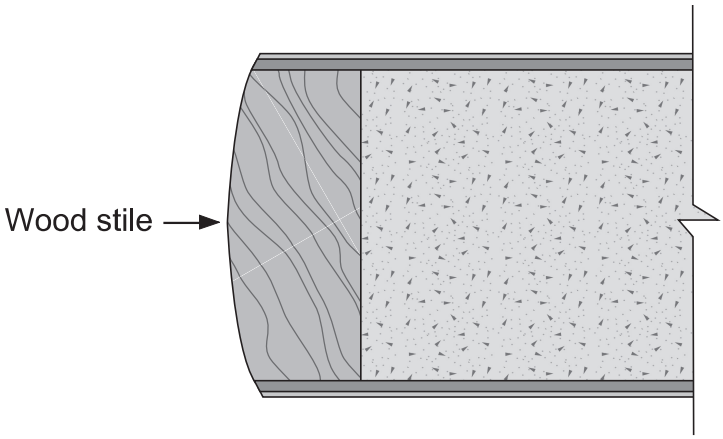
Radius Edges



Standard 2 5/8" Radius Edge
Other radii as required by pivot hardware

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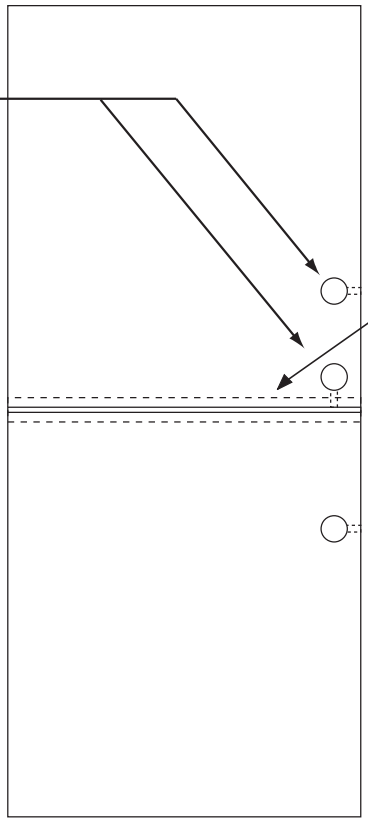
FD 1/3 Hour Dutch Doors

Note: Alternate Latching Methods:

1. Top leaf latches into bottom leaf and bottom leaf latches into frame.
2. Both top and bottom leaves latch into the frame.

Preferred method is #1.

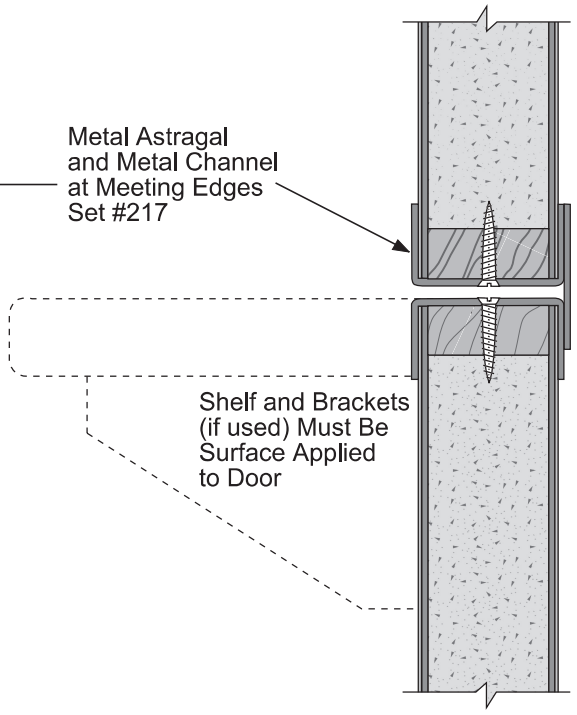


Elevation

Both top and bottom leaf must have self-latching device (lock or latchset) and latch into the frame.

Metal Astragal and Metal Channel at Meeting Edges Set #217

Shelf and Brackets (if used) Must Be Surface Applied to Door



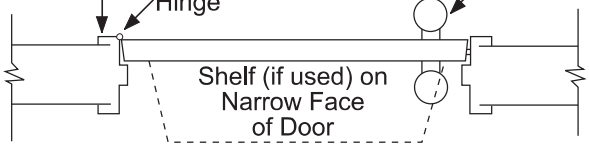
Section

FD 1/3 Hour Rated Frame

Hinge

Latchsets

Shelf (if used) on Narrow Face of Door



Plan
Left-hand Swing

Requirements for UL approved FD 1/3 Hour Dutch Door

Hinges	4 (or 5) UL listed hinges. Each leaf must have at least 2 hinges.
Latch	UL listed positive-latching device for each leaf.
Closing	Listed surface mounted closer on top leaf.
Maximum Opening/Core Type	4'0" x 10'0" SCLC.
Positive Pressure	**Category B**: Singles and pairs require a category G edge seal applied to the frame. Pairs also require a category G EdgeSeal applied to one of the meeting edges.

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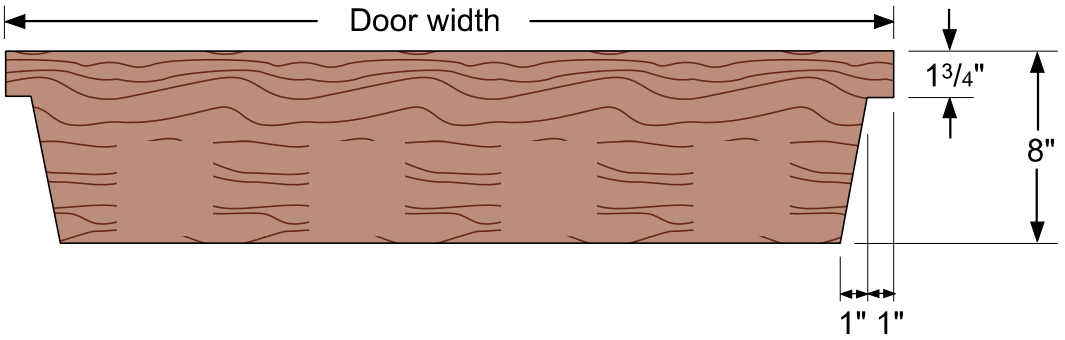
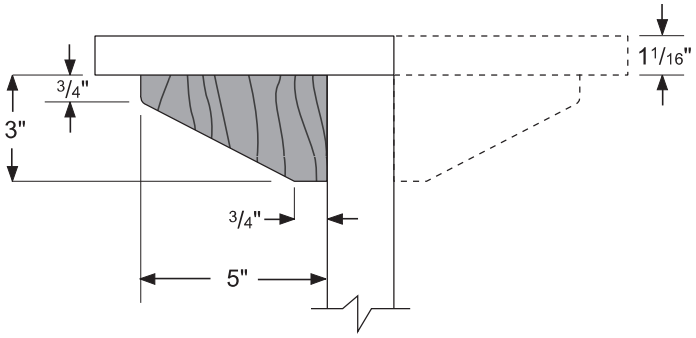
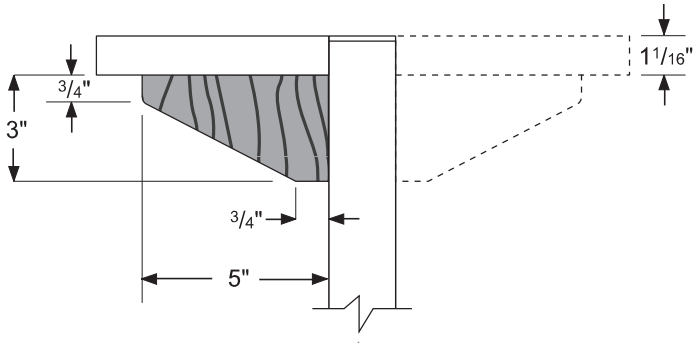
Dutch Doors and Wood Astragals

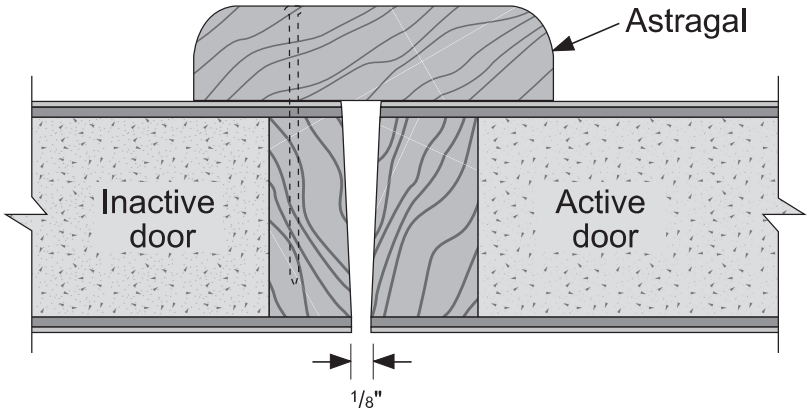




Dutch Door Shelves and Brackets
Shelf brackets furnished as shown with vertical grain.
Two per single shelf, 4 per double shelf. Packed together with shelf, unmounted.



Surface Mounted Shelf



Matching Wood Astragal

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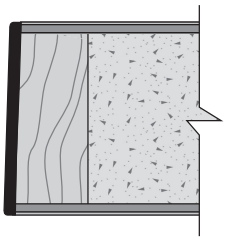
Impact Resistant Door Edges

Polymer Edges



Polymer Edging No.IF

Polymer Edging
Polymer edging is a tough and durable, yet highly decorative edging for architectural doors. It is available in three colors.

Polymer edging offers exceptional protection from damage to the edge of face veneers. Particularly suited to doors installed in areas such as hospital patients' rooms and institutional kitchens, where doors are subjected to sharp impact from stretchers or food carts.

Polymer Edge Physical Properties

	Value	ASTM No.
Hardness (Durometer D)	78±3	D 676
Tensile Strength at 78°F (psi)	6000	D 638
Compressive Strength (psi)	8600	D 695
Flexural Strength (psi)	11500	D 790
Izod Impact on 78°F (ft. lbs./in. notch)	15.0	D 256
Colors	Warm Brown V02 (Beige), Espresso (Dark Brown) and Black, others available upon request	
Specifications	A full-length door edging shall be applied to (both) (hinge) (lock) vertical edges. Polymer color shall be _____ Edging shall be attached with adhesive	

Advantages of Polymer Edges Applied after Face Veneers

1. Outstanding protection of the edges of face veneers from splintering or breakage from impact.
2. Available in FD ⅓ Hour doors, positive or neutral pressure.
3. Available on 1 or 2 edges.
4. Color permeates thickness of the polymer edge.
5. Will withstand many strong acids and alkalies, metallic and ammonium salts, alcohol, aliphatic hydrocarbons, industrial fumes and salt water.
6. Self-extinguishing. Carries a 15-25 Flame Rating based on ASTM E-84 tunnel test.

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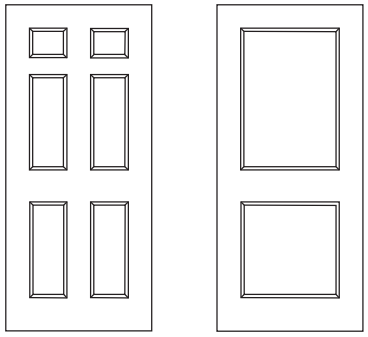
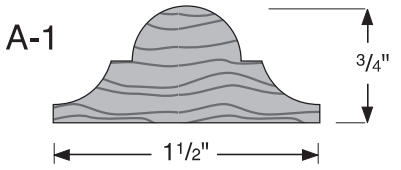
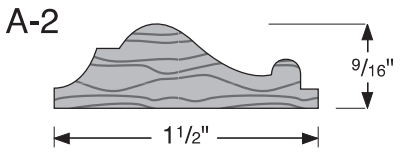
Applied Mouldings

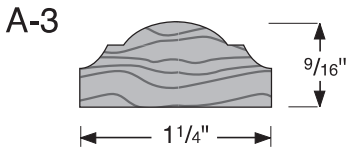
Typical Elevations

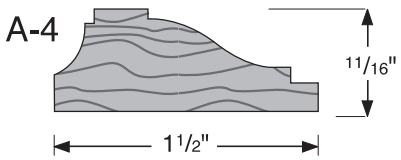
Other designs available

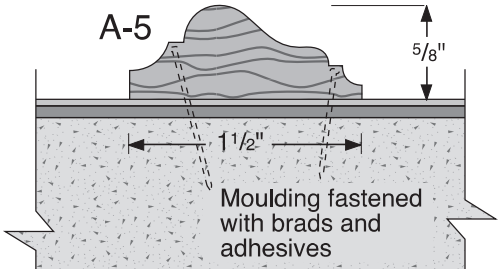


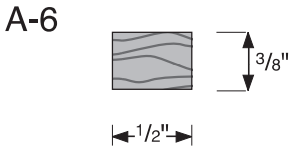


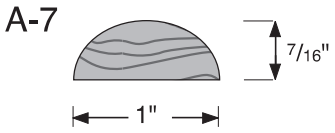


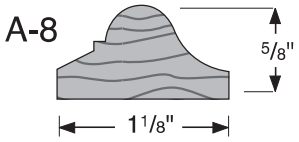












Product Features

Use	For use with FD ⅓, ¾ , 1 and 1½ Hour Fire Doors and non-labeled doors.
Listed	UL listed.
Maximum Moulding Size	1" by 1¾" wide.
Maximum Face Area	Contact Algoma for restrictions.
Application	Mouldings may be applied to one or both sides of door and must be of solid lumber.

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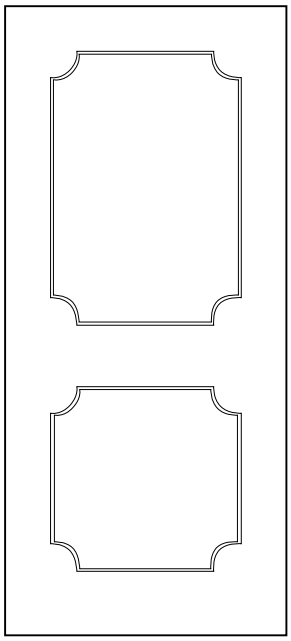
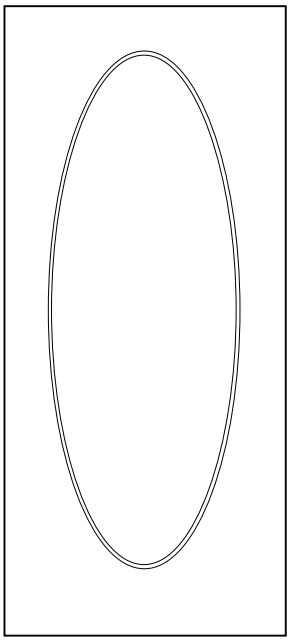
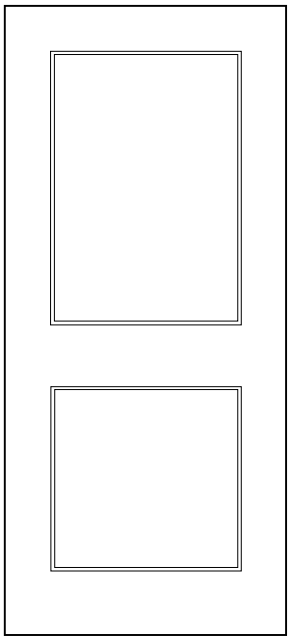
Quirks

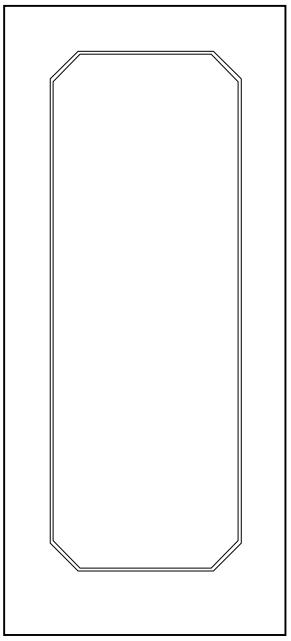
1/8, 1/4- inch wide x 3/64-inch deep U groove;
1/8 inch wide x 3/64-inch deep V groove





- Configurations subject to factory approval.
- Available in non-rated, call for fire-rated availability.
- Special finishing procedures may be required depending on desired finish and appearance.





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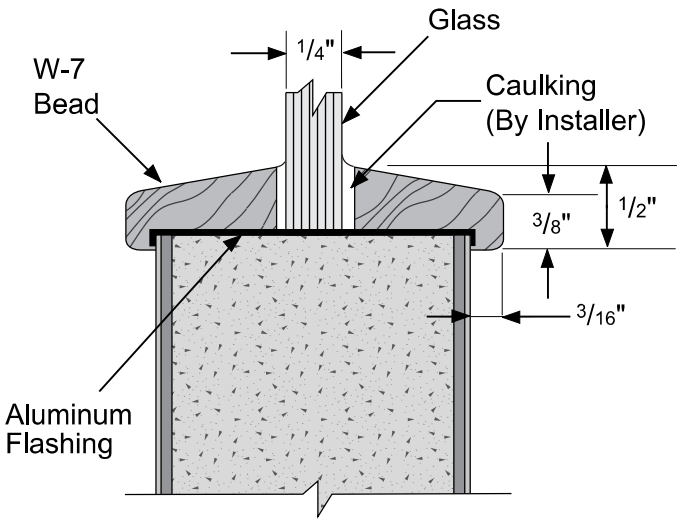
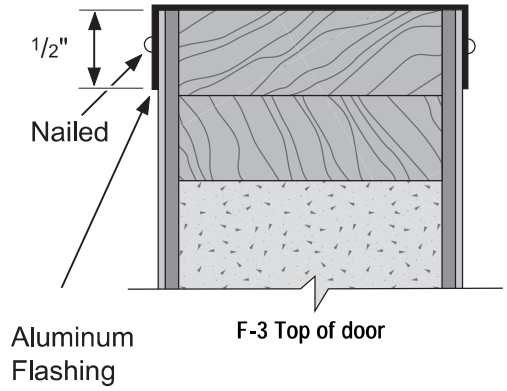
Flashing



Flashing
F-2
Full Lip Beads at Bottom of Lite
Recessed Beads Sides and Top
Recommended for protected exterior doors



F-3 Top of door

Non-corrosive metal flashing should be used at the bottom of lite openings on exterior doors.

F-2 flashing (left) completely covers the bottom of lite openings and offers the best protection. This is the recommended flashing for all outward-swinging exterior doors.

Glass for exterior doors should be bedded in the best quality closed-cell sealing tape or non-hardening, elastic glazing compounds or sealants.

Metal flashing at the top of door is required, as illustrated.

Note: Flashing must be specified.

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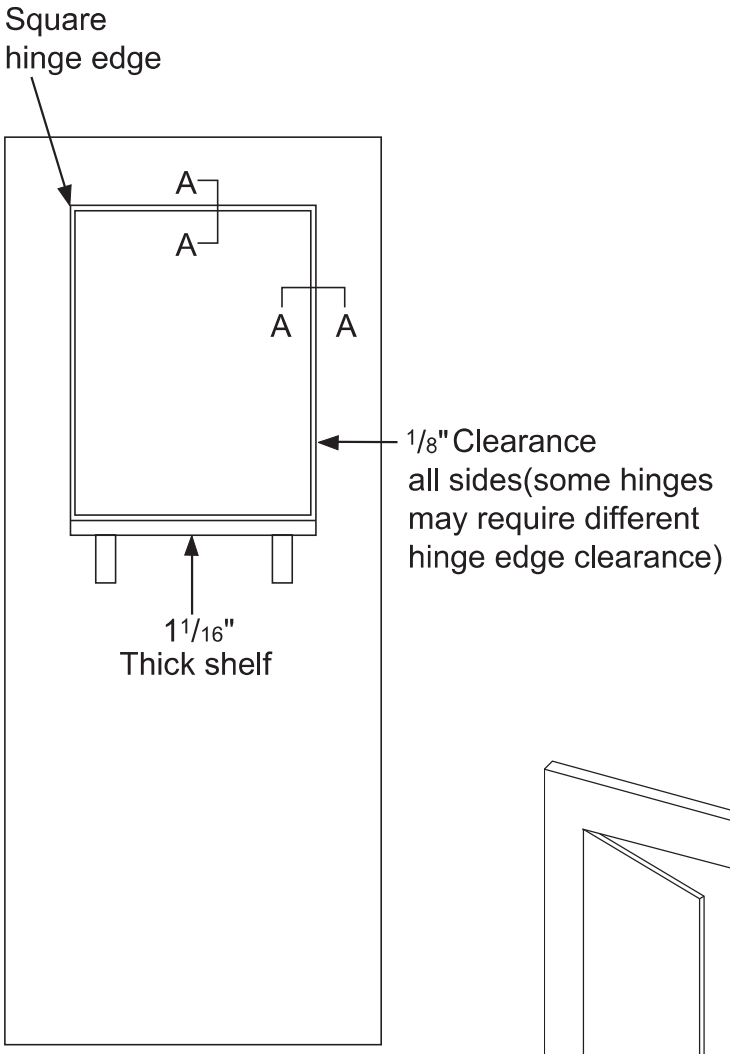
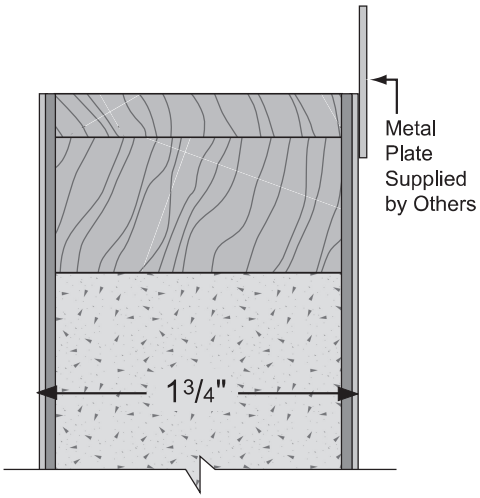
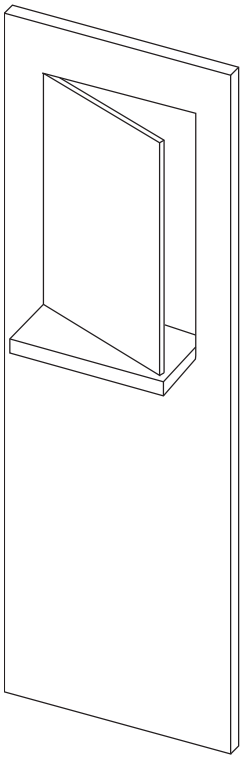
Standard Wicket Door

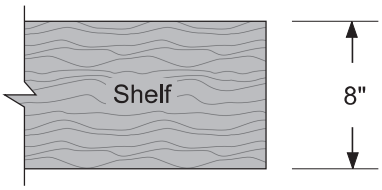


Egress and wicket door veneers are matched for species only. Grain continuity is not provided.



SECTION A-A





Shelf

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