

Tech Reports

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Tech Reports

Quick Ship



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		<u>Must be submitted on Algoma's QuickOrder software/machining sheets (no handwritten orders).</u> 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	Orders meeting this Template in all ways – no QuickShip premium. Orders not meeting this Template in any way – QuickShip premium TBD.	Orders meeting this Template in all ways – no QuickShip premium. Orders not meeting this Template in any way – QuickShip premium TBD.
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 Jambes; Veneer-banded Edges, plastic.

Quick Ship

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 (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	Contact Algoma Hardwoods for pricing on its Quick Ship program	Contact Algoma Hardwoods for pricing on its Quick Ship program

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

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

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.



The mark of responsible forestry © 1996 Forest Stewardship Council A.C.
FSC-C008037

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.

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



More than a name...it's a standard.

Hot Press vs. Cold Press; 5-Ply vs. 7-Ply

Architectural or Commercial Flush Doors are constructed using one of two processes, i.e. **Hot Press or Cold Press**. Identification of a door as either 5-Ply or 7-Ply will generally indicate the type of press used, with 5-Ply usually denoting **Hot Press** and 7-Ply usually denoting **Cold Press**. Algoma Hardwoods produces Hot Press, 5-Ply doors exclusively, having made the marketing decision to position its product as the best and most consistent available.

Some manufacturers' information about 5-Ply doors is not entirely accurate. **Cold Pressing** 2-Ply skins into doors does not meet the generally accepted definition of a 5-Ply door. The key to consistency of the product is not the number of plies, but the technology of **Hot Press** versus **Cold Press**.

Glues used in the manufacture of wood products work, as do most glues, through the evaporation of water from the glue. Total evaporation of water completes and strengthens the bond. Any retention of water weakens the bond. There are four critical factors affecting this process. Hot Press technology controls all four. Cold Press technology controls only one, leaving the other three dependent on ambient or random conditions. The following chart illustrates:

	<u>Hot Press</u>	<u>Cold Press</u>
Pressure	Controlled (80-120 psi)	Controlled (30-50 psi)
Temperature	Controlled (225°-260° F)	Uncontrolled (Ambient Conditions)
Time	Controlled (5 to 8 minutes)	Uncontrolled (30 minutes plus 4-8 hours to allow glue curing time)
Platten	Controlled (3" steel on each door side)	Uncontrolled (Stacked door to door to door)

Manufacturing consistency and quality result from process control. **Hot Press** controls all critical factors of the process, with a totally complete door being ejected from the press. In **Cold Press** most factors are uncontrolled and the door cannot be processed on removal from the press, with another 4-8 hours being required to cure the glue.

Summarizing, **Hot Press** 5-Ply doors offer the following:

- 1) **Control of the gluing operation** - All processes are controlled inside the Hot Press at the door manufacturer. This results in manufacturing consistency and quality.
- 2) **Control of Components** - In Hot Pressing, all glue lines between components (core, crossband and face) are controlled by the door manufacturer, further diluting manufacturer control over the finished product.

The highest degree of control, consistency and quality is to be found in the **Hot Press** 5-Ply door. Always include **Hot Press**, along with the 5-Ply designation when specifying architectural grade wood doors.

SPECIFICATION

AWI or WDMA (formerly NWWDA) Premium or Custom Grade Hot Press 5-Ply construction.

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, gasketing, doors and door details. There are two types of positive pressure openings which use intumescent to withstand the extremes of a positive pressure test. Intumescent 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 gasketing 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 gasketing 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.

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 in²

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.**

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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
Latchesets					
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
Dbi 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)					
Continuous	Yes	Yes	Yes	Yes	Yes
Pivot (Offset)	Yes	Yes	Yes	Yes	Yes
Spring	Yes	Yes	Yes	Yes	Yes

Tech Report



More than a name... it's a standard.

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



More than a name... it's a standard.

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)					
Surface	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					

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/Ruswin		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.**

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 and 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.

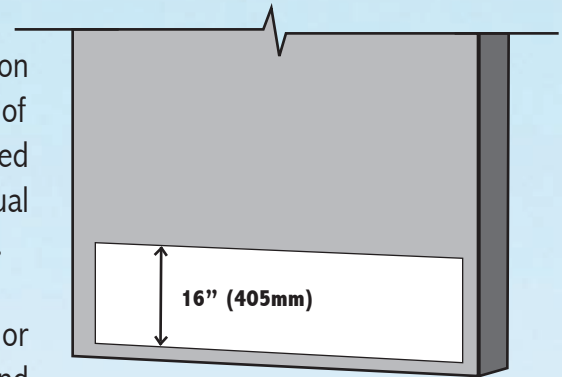
Please contact the factory if you have any questions or require more information.

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

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



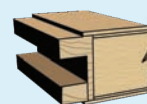
Standard
quarter round



Optional
square step bead



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



Optional
square bead



Optional
ovalo bead