

Hardware Preparation

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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.

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, ⅜" 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.

Fire Door Hardware

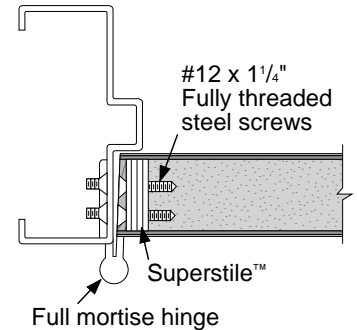
Locksets, Hinges, Closers and Frames

Lock Sets for Algoma® Made Fire Doors

Lock and latchsets with 1/2" 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 3/4, 1 and 1 1/2 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 1 1/4" 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 4 1/2" x 4 1/2". They must be of the ball-bearing type. Two (2) hinges for the first 5' and one (1) hinge for every 2 1/2' 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.

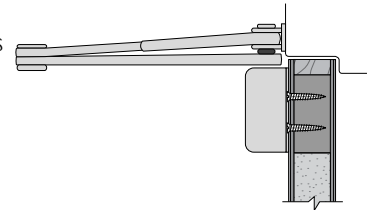


Superstile™ Edge Performance

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 3/4, 1 and 1 1/2 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

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.

Schedule B

Door Specification Sheet

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 slave lumber core	Bonded edges
SCLC-5	5 Ply structural lumber core	
FD 1 1/2	1 1/2 Hour labeled fire door (90 min.) (B)	
FD 1	1 Hour labeled fire door (60 min.) (B)	
FD 3/4	3/4 Hour labeled fire door (45 min.) (C)	
SR	Sound retardant (STC rated)	
LL	Lead lined	
IHC	Institutional hollow core	
SHC	Standard hollow core	

AWI Wood Door Identification

CORE TYPES Use AWI symbols at left _____

FACE VENEERS Specify grade, cut, and species required _____

STILES (Side Edges)
FD 1 1/2, 1 & 3/4 Hour Other Doors Compatible Same
 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, 1/2" bottom, singles 1/4" 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

DATE	REVISIONS	BY

JOB NAME _____

DRAWN BY _____

CONTRACT/JOB NO. _____

SCHEDULE B
SHEET _____ OF _____

NOTES

- Types PC-5 thru SCLC-5 and SR & LL are available with 20 minute label (FD 1/2).
- 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.

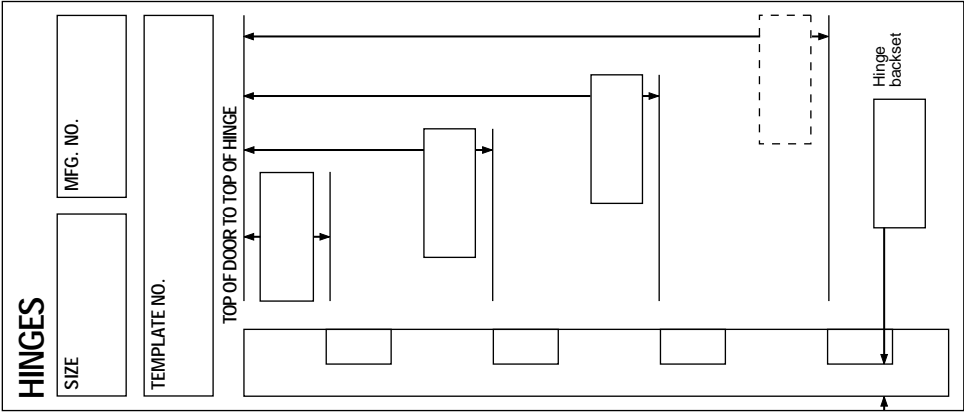
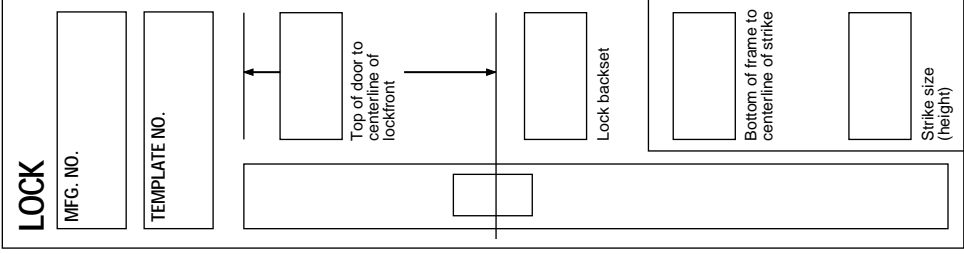

Hinge backset on door is 1/16" to 1/8" less than frame backset (1/16" less recommended if frame backset is 5/16" or greater)

ALGOMA
HARDWOODS, INC.

SPECIFICATION SHEET

Schedule C

Premachined Door Schedule

FRAME OPENING SIZE x PREFIT DOOR SIZE x	HARDWARE GROUP/SET THICKNESS	FIRE DOOR LABEL AWI SYMBOL (CORE TYPE)	FIRE DOOR CORE MODEL SPECIES	DESIGN OR DOOR ELEV.	ORDER NO. MILL USE ONLY ITEM NO. PAGE
HINGES SIZE _____ MFG. NO. _____ TEMPLATE NO. _____  TOP OF DOOR TO TOP OF HINGE Hinge backset	LOCK MFG. NO. _____ TEMPLATE NO. _____  Top of door to centerline of lockfront Lock backset Bottom of frame to centerline of strike Strike size (height)	LIGHT SIZE W _____ x L _____ LOCKSTILE _____ TOP RAIL _____ BOX STRIKE-TEMP. _____ FLUSH BOLTS-TEMP. _____ MORTISE HOLDER/STOP-DEGREE OF OPG.-TEMP. _____	LOUVER SIZE W _____ x L _____ LOCKSTILE _____ BTM. RAIL _____ TYPE _____ OTHER HARDWARE/REMARKS _____	TOTAL DOORS THIS PAGE _____	SWING
<input type="checkbox"/> SAME LOCATIONS AS PREVIOUS SHEET					
		1001 Perry Street • Algoma, Wisconsin 54201 920.487.5221 • 1.800.678.8910 • FAX 920.487.3636 www.algomahardwoods.com • sales@algomahardwoods.com		Hardware 9	

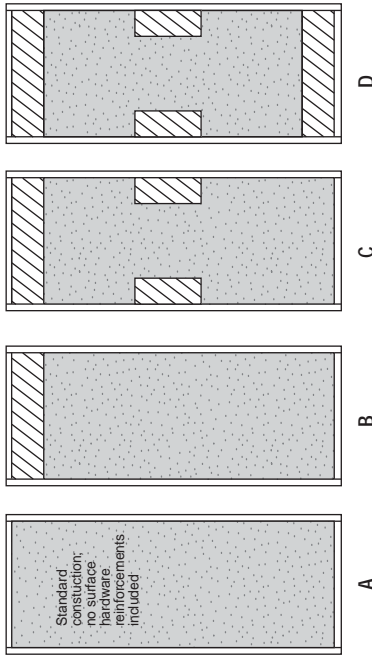
Schedule G

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

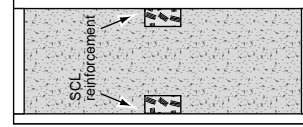
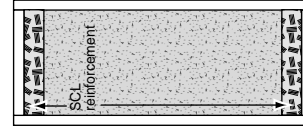
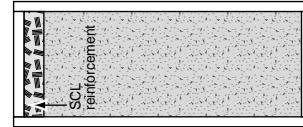
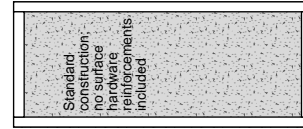
FD 1 1/2, 1 and 3/4 Hour Composite Type Fire Doors



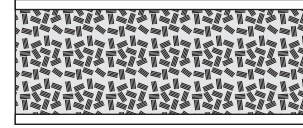
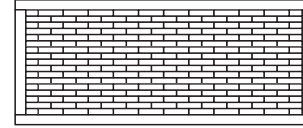
Model

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.

Particleboard Core PC-5



FD 1/3 Hour Wood Core Fire Doors



Structural Composite Lumber SCLC-5
No special reinforcement needed.

Stave Core SLC-5
No special reinforcement needed.

Model



DOOR CORE REINFORCEMENT OPTIONS

DATE

REVISIONS

BY

JOB NAME

DRAWN BY

CONTRACT/JOB NO.

DATE

SCHEDULE **G**
SHEET _____
OF _____

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, ⅔, 1 and 1½ hour installations
- Reduces impact damage by concealing hardware
- Operates more quietly than conventional devices

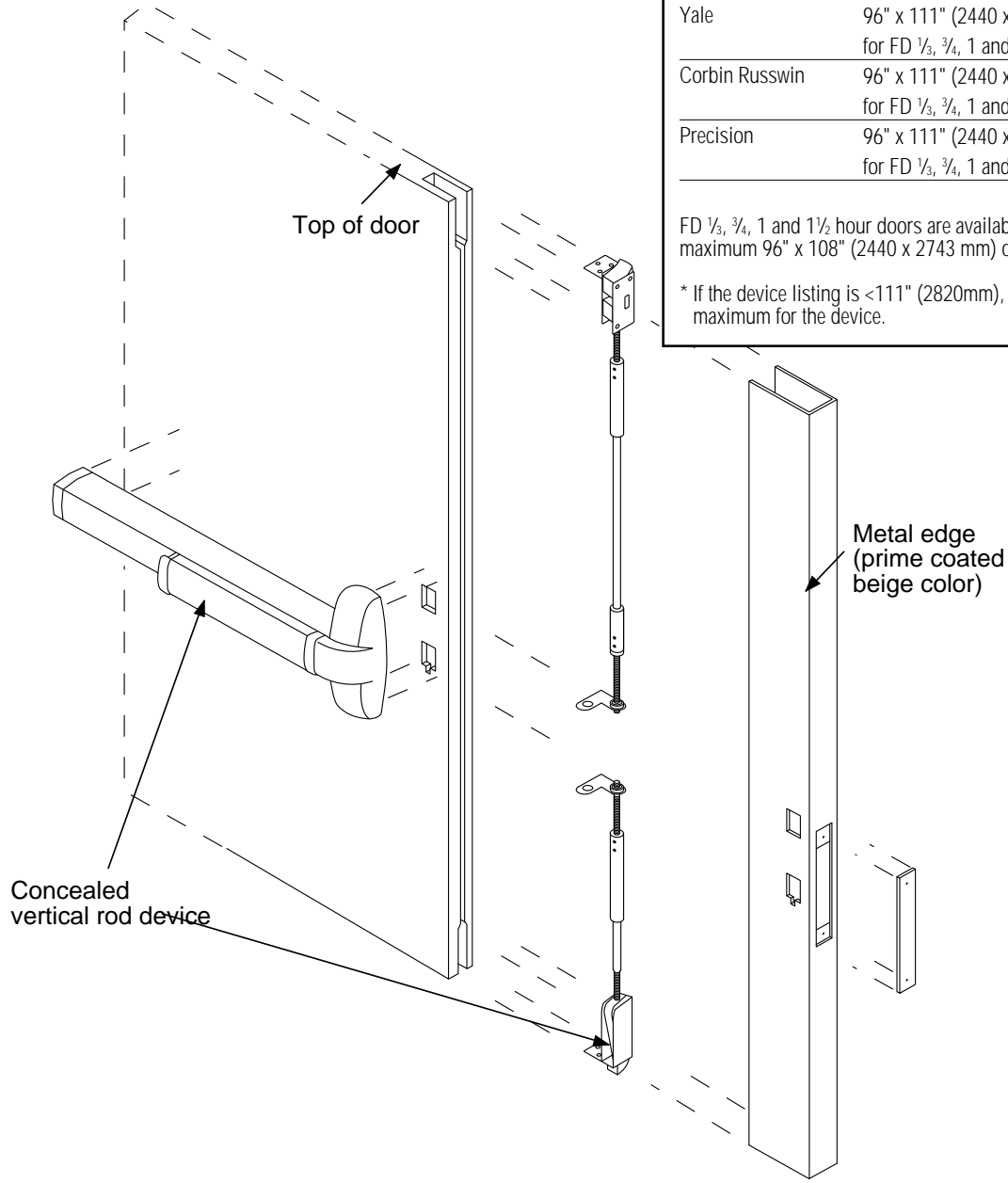
Concealed Vertical Rod Device Approvals

Concealed Vertical Rod Device
 FD 1/3, 3/4, 1 and 1 1/2 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 1/3, 3/4, 1 and 1 1/2 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 1/3, 3/4, 1 and 1 1/2 hour.	F17-C
		F18-C
		FCV-C
		FXX-C
DORMA	96" x 111" (2440 x 2820 mm) for FD 1/3, 3/4, 1 and 1 1/2 hour.	9100
		5100
Sargent	96" x 111" (2440 x 2820 mm) for FD 1/3, 3/4, 1 and 1 1/2 hour.	12-WD8600
Yale	96" x 111" (2440 x 2820 mm) for FD 1/3, 3/4, 1 and 1 1/2 hour.	7160W
Corbin Russwin	96" x 111" (2440 x 2820 mm) for FD 1/3, 3/4, 1 and 1 1/2 hour.	ED5860
Precision	96" x 111" (2440 x 2820 mm) for FD 1/3, 3/4, 1 and 1 1/2 hour.	FL-2700

FD 1/3, 3/4, 1 and 1 1/2 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.



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

*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.