

AF45 TECHNICAL SPECIFICATIONS | NEUTRAL/POSITIVE PRESSURE

45-MINUTE FIRE - RESISTANT AGRIFIBRE COREDOOR	
MACHINING INFORMATION MAXIMUM DOOR SIZES	
DOOR TYPE	MAXIMUM SIZE
Simple - swing	4' X 10' (1219 mm X 3048 mm)
Simple - swing Dutch door	4' X 8' (1219 mm X 2438 mm)
Pairs - conventional	8' X 8' (2438 mm X 2438 mm)
Pairs - double egress	8' X 8' (2438 mm X 2438 mm)
Door with transom, overall size of opening	4' X 10' (1219 mm X 3048 mm)

Temperature rise: Maximum 250°F at 30 minutes, per UBC SBCC, BOCA and IBC. Double egress requires 4 point latching.

Maximum thickness 2 1/4" (57 mm).

DOOR AND TRANSOM ASSEMBLY

The licensed machinist (or manufacturer) should machine the transom panel for spring bolts (refer to instructions below for spacing requirements). The appropriate number of spring bolts is provided with the panel.

The label on the door and transom panel assembly shall state, "The Transom Assembly".

Installation instructions will be provided with each door and transom panel assembly.

- | Holes must be drilled in frame to accept the spring bolts.
- | Maximum overall clearance between frame and panel is 1/8" (3 mm).
- | Transom panel must be installed using steel spring bolts placed 2" (51 mm) from each corner with the minimum number centered on each side as follows:
 - Panel up to 18" (457 mm) high, 2 spring bolts
 - Panel up to 36" (914 mm) high, 3 spring bolts
 - Panel up to 48" (1219 mm) high, 4 spring bolts

HARDWARE OPTIONS

Refer to Table 1 for construction requirements to accommodate specific hardware types.

STANDARD PAIRS WITHOUT ASTRAGAL:

- | Permitted with intumescent standard stiles for both positive and neutral pressure applications.
- | Flat wood astragals are optional.
- | Metal edges are permitted for meeting edges of pairs for neutral pressure applications.
- | Dust box on inactive leaf of pairs only.

LATCHES:

- | Cylindrical or mortise (includes listed card type).
- | Latches and deadbolts.
- | Through bolts 1/2", singles or pairs.

HINGES:

- | Minimum 3 hinges as per the requirements of NFPA 80.
- | Hinges must be 4 1/2" X 4" (112 mm X 100 mm) over 3' X 7'. Up to 3' X 7', minimum of 4" X 4" with 0.105" thickness as per NFPA 80.*
- | Steel ball bearing hinges having a minimum thickness of 1/8" (3 mm).
- | Listed spring hinges are permitted.

FLUSH BOLTS:

- | Surface mount flush bolts.
- | Mortise manual flush bolts.
- | Extension flush bolts, maximum 12" (305 mm).

FIRE EXIT HARDWARE:

- | Surface mount.

- | Install through-bolt hardware or internal blocking required.
- | Concealed vertical rod (required 5" (127 mm) metal edges). Max. 1" X 1 1/2" (25 mm X 38 mm) for mechanism of bolt to strike plate.
- | Rim-type exit hardware.
- | Mortise-type exit hardware.

CLOSER:

- | Surface mount.
- | Concealed closer.

DOOR DROP BOTTOMS:

- | Surface mount.
- | Mortise automatic door bottoms.
- | Require 5" (127 mm) bottom rail.

ELECTRIC RACEWAYS:

- | 2 raceways maximum in a door may be cut in core. 3/8" X 3/8" (9 mm X 9 mm) maximum and 4" (102 mm) apart.

LOUVERS:

- | Listed louvers installed below latch level only.

VIEWERS:

- | Maximum of two listed viewers.

LITES:

- | Multiple openings up to 1296 sq. in.
- | Listed lite kit.
- | A listed intumescent must be applied and glued around perimeter of core opening under metal lite kit.

- | No horizontal dimension to exceed 36" and no vertical dimension to exceed 54".
- | Minimum 4" (102 mm) from lite cut-out to edges of door or hardware cut out.

INTUMESCENT:

- | Listed graphite type intumescent gasket is required on door-to-transom and Dutch door rabbet meeting edges.
- | Self-adhesive intumescent strip at least 1/2" (13 mm) wide is required on each side of rabbet.
- | Listed graphite type intumescent gasket must be surface applied to a 5" (127 mm) edge metal cap when concealed vertical rod hardware is used.
- | Minimum gasket width of 1" (25 mm).

SURFACE PLATES:

- | 48" X 48" (1219 mm X 1219 mm) maximum.
- | Fastened using screws or double-sided tape.
- | Steel, stainless steel, P\&G , aluminum, polycarbonate, brass, bronze or ABS.

ELECTRIC STRIKES:

- | Listed electric strikes only. Maximum mortise 2" (51 mm) deep, 5" (127 mm) wide mineral stile is required.

PLANT-ON***:

- | Wood mouldings up to 2 1/2" (64 mm) wide, covering up to 20% of door surface area.
- | Fastened using nails and/or adhesive.
- | Individual mouldings must be a minimum of 3 1/2" (89 mm) apart.

Note: Important to install all hardware in accordance with manufacturer's instructions.

* See AF45 Technical specifications and NFPA 80.

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TABLE 1				
HARDWARE TYPE	RATING	STILES OR RAILS	INTERNAL BLOCKING*	OTHER REQUIREMENTS
Single point latch	45	Standard	Optional	
Mortise lock/latch**45		Standard	Not applicable	4 1/2" X 1 1/4" maximum
Manual flushbolts	45	5" stile	Not applicable	
Automatic flushbolts45		5" stile	Not applicable	
Concealed closer	45	5" top rail	Not applicable	
Surface mount closerAll		2" top rail	Optional	Blocking required if closer mount below 2"
Viewer		Standard	Not applicable	2 maximum. Listed.
Concealed vertical rod exit hardware		Special 5" stile with 3/4" hole	Not applicable	5" metal cap. maximum 1" X 1 1/2" for mechanism of bolt to strike plate
Rim-type exit	All	Standard	Required	4" X 12" blocking at both sides of door
Surface panic	All	Standard	Required	4" X 12" blocking at both sides of door
Mortise door bottomAll		5" bottom rail	Not applicable	SCL rail is permitted up to 3" wide
Dutch door	All	5" meeting rails (rabbeted)	Not applicable	Single-swing only, mortise flushbolt connection
Transom	All	5" rabbeted meeting top rail door 5" rabbeted meeting bottom rail transom 2" if transom within a separate frame	Not applicable	Two to four transom spring bolts required depending on height. Maximum 4' X 4'. Intumescent is required.

*Blocking for closer optional for all hardware options. Through bolt may be used in place of blocking.

**Includes card operated, mortise-type exit hardware.

*** Mouldings and applied mouldings:

