

Feb. 27/98

**20-MINUTE NEUTRAL PRESSURE
FIRE DOOR SPECIFICATION GUIDE**

Door Types	P20, WC20, CD200, CD300, LD2000, & LD3000
Fire Rating	20 minute single swing, including: <ul style="list-style-type: none">- single door- door and transom- dutch door 20 minute pairs including: <ul style="list-style-type: none">- regular pair- double egress- dutch doors Label and Classification by Intertek/Inchcape Testing Services (Warnock Hersey)
Sizes	Single Swing: <ul style="list-style-type: none">- 4'0" x 10'0"- 4'0" x 10'0" Door & Transom- 4'0" x 8'0" Dutch Door
Sizes	Standard Pairs <ul style="list-style-type: none">- 8'0" x 10'0" combined - 4'0" x 10'0" each leaf. Standard Pairs with 3-point latching - 8'0" x 8'0" combined - 4'0" x 8'0" each leaf. Double Egress Pairs - 8'0" x 10'0" combined - 4'0" x 10'0" each leaf. Standard or Double Egress with concealed vertical rod prep - 8'0" x 9'0" combined - 4'0" x 9'0" each leaf. Concealed vertical rods require 5" GP Firestop meeting stiles. Metal edges are not required with GP meeting stiles.
Transoms	Single Swing: 4'0" x 10'0" maximum combination with 4'0" x 3'4" maximum transom size. Requires approved transom bar and either a 1" minimum GP Firestop meeting edges with rabbett cut joint or a 1" minimum GP Firestop meeting edge and metal astragal on the bottom edge of the transom with a straight cut. Transom panels must be installed with listed spring bolts. Paired Transoms: Maximum total size 8'0" x 10'0" with 4'0" x 3'4" maximum transom size. Transoms installed over a pair of doors must be separated with a mullion limiting each transom to the width of each leaf of the door pair. Transom panels must be installed with listed spring bolts.
Dutch Doors	Single Swing: 4'0" x 8'0" Dutch Door - meeting rail of each leaf must be a minimum of 1" GP Firestop meeting stiles. Straight cut - bottom edge of top leaf must be equipped with a steel astragal or with an intumescent strip in the bottom rail of the upper leaf. Rabbett cut - no metal edge required. The door may be equipped with a single shelf on one or both sides. (If flush, then wood is acceptable; if overlapping, GP material is required.) Paired Doors: 8'0" x 8'0" Dutch Door/Inactive Pair - meeting rail of each leaf must be a minimum of 1" GP Firestop. Straight cut - bottom edge of top leaf must be equipped with a steel astragal or with an intumescent strip in bottom rail of upper leaf. Rabbett cut - no metal edge required. The door may be equipped with a single shelf on one or both sides. (If flush, then wood is acceptable; if overlapping, GP material is required.)
Stiles	13/16" minimum lumber or wider to specification after trim. Residential - 1-1/4" width before trim. Commercial/Architectural - 1-3/4" width before trim. Mill option stiles unless specified, with hardwoods to match faces available.

Rails	1" lumber minimum or wider to specification. Residential, Commercial, and Architectural all standard 2-5/8" before trim.
Core	Particle board; minimum density 27 lbs. Per cubic foot. Lumber core: edge glued, one specie per core, kiln dried softwood, minimum density 24 lbs. per cubic foot. Structural Composite Lumber, minimum density 39 lbs. per cubic foot.
Adhesive	Residential - Type II water resistant. Commercial/Architectual - Type I water proof.
Faces	1/8" plywood, hardboard, medium density overlay, or decorative plastic laminate
Vision Panels	Maximum visible glass area of single or multiple lights not to exceed 1296 sq. in. per leaf. Maximum cutout width is 36", maximum cutout height is 54". Cutouts must be 6" from edge of door or any other cutout or hardware prep with a minimum bottom rail 10". Lights must be glazed with a minimum of 1/4" wire glass installed in a listed and labeled frame.
Louvres	Not approved for 20-minute doors
Hinges	Per NFPA 80, latest edition - listed butt, spring, anchor, pivot, pivot pocket, Soss invisible or continuous hinges, pilot holes must be pre-drilled for screws. - minimum size butt hinge: 4" x 4" x 0.097" Blocking recommended for pivot, pocket and anchor hinges.
Latch sets	Positive latching is required on all fire doors. Roller latches are not allowed. Listed cylindrical with 1/2" bolt throw, minimum backset 2-3/8", maximum backset 5" with a maximum 2-1/8" diameter bore. Listed mortise with 1/2" bolt throw with maximum 4-1/2" deep x 6-1/2" high pocket.
Exit devices	Listed exit device with rim, mortise, surface vertical rod or concealed vertical rod. Throughbolts are required if no special blocking is built into the door. Concealed Vertical Rods require special stile construction.
Dead bolts	Listed dead bolt - maximum 2-1/8" diameter with a minimum of 5" from edge of dead bolt cutout to edge of latch cutout. Interconnected deadbolts are allowed.
Viewers	Listed viewers to a maximum of 1" diameter.
Flush bolts	Listed mortise, automatic, manual, or surface bolts with a minimum latch throw of 3/4" Extension flushbolts up to 24" are allowed. Maximum hole diameter is 1/2".
Edge guards	For installation of pairs without GP II meeting stile, channels of 16 or 18 gauge metal with a minimum lap of 1" and attached with minimum #8 x 3/4" screws 2" from each end and 12" on center are required. Mortise edge guards are allowed when a minimum of 2" GP II stiles are used. Surface mounted edge guards are allowed.

Door bottoms	Mortised and semi-mortised type with a maximum cutout of 1" x 1-3/4", requires a minimum 3" GP bottom rail.
Closers	Required on all fire doors. Surface mounted - mounted with throughbolts or a minimum of #12 x 1-1/4" fully threaded to the head, wood screws with 5" wood top rail. Concealed closers - approved when used with fire shield and 5" GP Firestop rail ie, LCN models 2010, 2030, 2910, 2919, 2220, 2310ME, 330ME with #420 fire shield, Norton series 7900 or 2900 closers with Fire-Block liner #790 or Yale series 4500 or TJ60A closers with Fire-Block liner #450. Spring hinges are also allowed.
Wire Chase	3/8" x 3/8" square or 3/8" diameter through the door connecting the latch location to the hinge location on the opposite side of the door for low voltage wiring is allowed. A hole up to 5/8" diameter by 2" long may be provided on the hinge stile for wire splice.
Protection Plates	Plates up to 48" from the bottom edge of the door may be applied with WHI approval of materials and fastenings.
Plant ons	Maximum width 1-3/4", maximum thickness 3/4" wood with a density of 28.7 pcf or denser. Maximum area of moulding not to exceed 20% of door face. Mouldings may not be applied closer than 3-1/2" to the door edge or to any hardware or light cutout.