



DE LA
FONTAINE

STEEL DOORS AND FRAMES

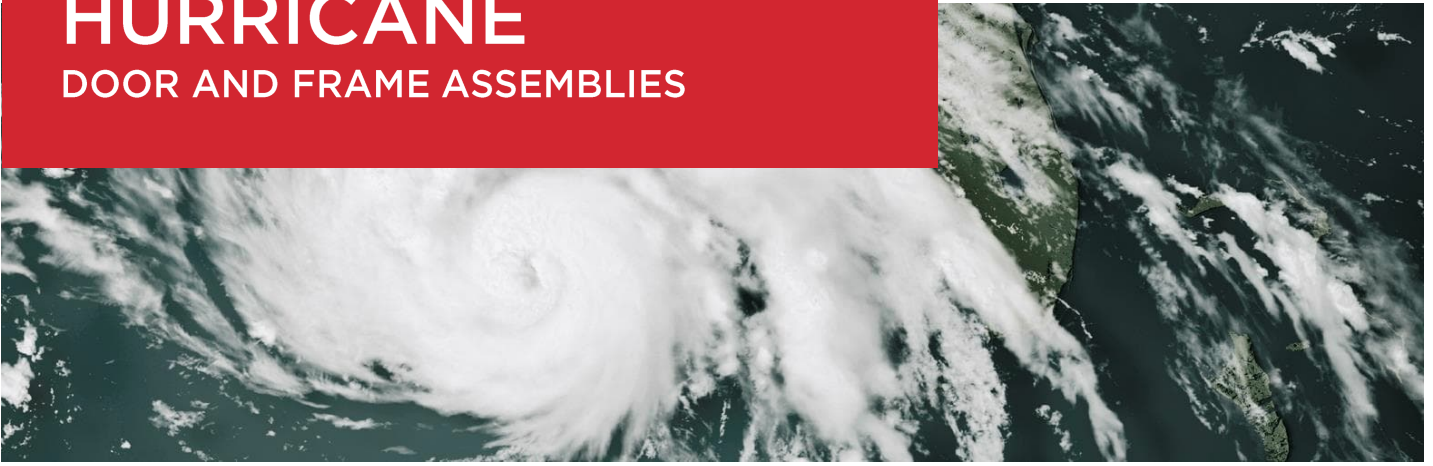
HURRICANE

DOOR AND FRAME ASSEMBLIES

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DOOR AND FRAME ASSEMBLIES



Windstorms and hurricanes are frequent in certain coastal areas, and construction standards demand high-performance products to ensure the safety of building occupants.

DE LA FONTAINE offers durable solutions that meets the industry's stringent standards while the distinction of pre-embossing and customized embossing allows you to combine performance and design.

Our windstorm-resistant products have been tested to wind load and impact requirements defined in the International Building Code (IBC) and the Florida Building Code (FBC) and have received approval by the Florida Building Commission and Texas Department of Insurance (TDI).

DE LA FONTAINE assemblies are tested for design pressures, impact resistance, glass and glazing materials, and specific commercial hardware applications.

Standards Compliance

- ASTM E1886, ASTM E1996, ASTM E330, ASTM E283
- TAS 201, TAS 202, TAS 203
- ANSI A250.13 *

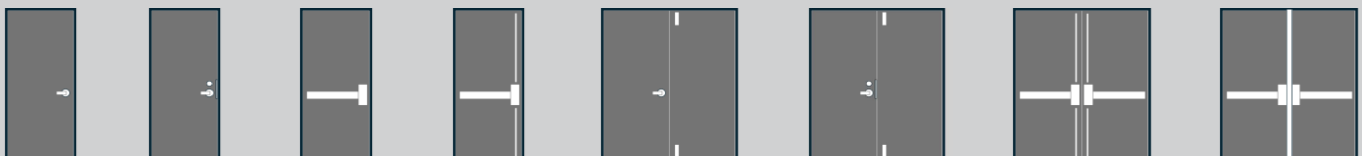
Certifications and Listing

- Approved by Florida Building Commission (FBC)
- Approved by Texas Department of Insurance (TDI)
- Quality Assurance by Intertek Testing Services (ITS)

Features and Options

- Design pressure from ± 50 to ± 70 PSF
- Approved for both Non-HVHZ and HVHZ applications
- Door: minimum 18ga with standard edge seam (PA) and standard end channels (ST)
- Door: pre-embossed (EMB) and custom embossed (CED) designs available
- Frame: minimum 16ga knocked-down construction (KD) with min. 5-3/4 JD
- Frame: approved for most masonry and stud wall installations
- 90min fire-rating available.
- Readily available from our Orlando (FL), Grand Prairie (TX), Concord (NC) and Sherbrooke (QC) manufacturing sites.

Approved Latching Hardware Types



* For ANSI A250.13 specification, refer to FL#21194 (not detailed in this document).

FL#46851.3 Outswing Double & Single Flush Steel Door

Design Pressure	High-Velocity Hurricane Zone (HVHZ)	Water Infiltration ¹	Swing	Maximum Opening Size	Door Series	Flush ² / Glazed	Hardware Type (brand/model) ⁴
±70	Yes	±50	Outswing	Single 3'0" x 8'0"	HC, PS, PU, ST (PS, PU)	Flush	Cylindrical lock (Sargent 10 Line, Schlage D/ND, Cal-Royal Genesis), Mortise lock w/ deadbolt (Sargent 8200, Schlage L9000)
±70	Yes	±50	Outswing	Single 3'0" x 8'0"	HC, PS, PU, ST (PS, PU)	Flush	Rim exit device (Corbin Russwin ED5200S x M107), Surface vertical rod (Von Duprin WS9827/WS9927)
±65	Yes	±50	Outswing	Single 4'0" x 8'0"	HC, PS, PU, ST (PS, PU)	Flush	Cylindrical lock w/ deadbolt (Hager 3500 with Hager 3200)
±50	Yes	±50	Outswing	Single 4'0" x 8'0"	HC, PS, PU, ST (PS, PU)	Flush	Cylindrical lockset (Hager 3400)
±50	Yes	±50	Outswing	Single 3'0" x 8'0"	HC, PS, PU, ST (PS, PU)	Flush	Rim exit device (Von Duprin 98/99). Surface vertical rod (Corbin Russwin ED5470 x M107)
±70	Yes	No	Outswing	Pair 6'0" x 8'0" (optional flat or Z astragal)	HC, PS, PU, ST (PS, PU)	Flush	Surface bolts x Surface bolts (Sargent 988, Ives 360)
±70	Yes	No	Outswing	Pair 6'0" x 8'0" (optional flat or Z astragal)	HC, PS, PU, ST (PS, PU)	Flush	Cylindrical lock (sargent 10 Line, Schlage D/ND, Cal-Royal Genesis), Mortise lock w/ deadbolt (Sargent 8200, Schlage L9000) x Surface bolts (Sargent 988, Ives 360)
±70	Yes	No	Outswing	Pair 6'0" x 8'0" (optional flat or Z astragal)	HC, PS, PU, ST (PS, PU)	Flush	Rim exit device x Rim exit device (Corbin Russwin ED5200S x M107) x Hardware mullion (Corbin Russwin FE707A), Surface vertical rod x Surface vertical rod (Von Duprin 9827/9927)
±65	Yes	No	Outswing	Pair 6'0" x 7'0" (optional flat or Z astragal)	HC, PS, PU, ST (PS, PU)	Flush	Rim exit device x Rim exit device (Hager 4500 with Hager 4500 mullion)
±50	Yes	No	Outswing	Pair 6'0" x 8'0" (optional flat or Z astragal)	HC, PS, PU, ST (PS, PU)	Flush	Rim exit device x Rim exit device (Von Duprin 98/99) x Hardware mullion (Von Duprin HH9954), Surface vertical rod x Surface vertical rod (Corbin ED5470 x M107)

FL#46851.4 Outswing Double & Single Glazed Steel Door

Design Pressure	High-Velocity Hurricane Zone (HVHZ)	Water Infiltration ¹	Swing	Maximum Opening Size	Door Series	Flush ² / Glazed	Hardware Type (brand/model) ⁴
±70	Yes	±50	Outswing	Single 3'0" x 8'0"	PS, PU, ST (PS, PU)	Glazing up to HG 22' x 42' (924 sq.in.) with Sandwich kit (SK)	Cylindrical lock (Sargent 10 Line, Schlage D/ND, Cal-Royal Genesis), Mortise lock w/ deadbolt (Sargent 8200, Schlage L9000)
±65	Yes	±50	Outswing	Single 4'0" x 8'0"	PS, PU, ST (PS, PU)	Glazing up to HG 22' x 42' (924 sq.in.) with Sandwich kit (SK)	Cylindrical lock w/ deadbolt (Hager 3500 with Hager 3200)
±50	Yes	±50	Outswing	Single 4'0" x 8'0"	PS, PU, ST (PS, PU)	Glazing up to HG 22' x 42' (924 sq.in.) with Sandwich kit (SK)	Cylindrical lockset (Hager 3400)
±50	Yes	±50	Outswing	Single 3'0" x 8'0"	HC	Glazing up to HG 22' x 42' (924 sq.in.) with Sandwich kit (SK)	Cylindrical lock (Sargent 10 Line, Schlage D/ND, Cal-Royal Genesis), Mortise lock w/ deadbolt (Sargent 8200, Schlage L9000)
±70	Yes	±50	Outswing	Single 3'0" x 8'0"	PS, PU, ST (PS, PU)	Glazing up to HG 22' x 42' (924 sq.in.) with Sandwich kit (SK)	Rim exit device (Corbin Russwin ED5200S x M107), Surface vertical rod (Von Duprin WS9827/WS9927)
±50	Yes	±50	Outswing	Single 3'0" x 8'0"	HC	Glazing up to HG 22' x 42' (924 sq.in.) with Sandwich kit (SK)	Rim exit device (Corbin Russwin ED5200S x M107), Surface vertical rod (Von Duprin WS9827/WS9927)
±50	Yes	±50	Outswing	Single 3'0" x 8'0"	HC, PS, PU, ST (PS, PU)	Glazing up to HG 22' x 42' (924 sq.in.) with Sandwich kit (SK)	Rim exit device (Von Duprin 98/99), Surface vertical rod (Corbin Russwin ED5470 x M107)
±70	Yes	No	Outswing	Pair 6'0" x 8'0" (optional flat or Z astragal)	PS, PU, ST (PS, PU)	Glazing up to HG 22' x 42' (924 sq.in.) with Sandwich kit (SK)	Surface bolts x Surface bolts (Sargent 988, Ives 360)

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FL#46851.4 Outswing Double & Single Glazed Steel Door (cont'd)

Design Pressure	High-Velocity Hurricane Zone (HVHZ)	Water Infiltration ¹	Swing	Maximum Opening Size	Door Series	Flush ² / Glazed	Hardware Type (brand/model) ⁴
±50	Yes	No	Outswing	Pair 6'0" x 8'0" (optional flat or Z astragal)	HC	Glazing up to HG 22' x 42' (924 sq.in.) with Sandwich kit (SK)	Surface bolts x Surface bolts (Sargent 988, Ives 360)
±70	Yes	No	Outswing	Pair 6'0" x 8'0" (optional flat or Z astragal)	PS, PU, ST (PS, PU)	Glazing up to HG 22' x 42' (924 sq.in.) with Sandwich kit (SK)	Cylindrical lock (Sargent 10 Line, Schlage D/ND, Cal-Royal Genesis), Mortise lock w/ deadbolt (Sargent 8200, Schlage L9000) x Surface bolts (Sargent 988, Ives 360)
±50	Yes	No	Outswing	Pair 6'0" x 8'0" (optional flat or Z astragal)	HC	Glazing up to HG 22' x 42' (924 sq.in.) with Sandwich kit (SK)	Cylindrical lock (Sargent 10 Line, Schlage D/ND, Cal-Royal Genesis), Mortise lock w/ deadbolt (Sargent 8200, Schlage L9000) x Surface bolts (Sargent 988, Ives 360)
±70	Yes	No	Outswing	Pair 6'0" x 8'0" (optional flat or Z astragal)	PS, PU, ST (PS, PU)	Glazing up to HG 22' x 42' (924 sq.in.) with Sandwich kit (SK)	Rim exit device x Rim exit device (Corbin Russwin ED5200S x M107) x Hardware mullion (Corbin Russwin FE707A), Surface vertical rod x Surface vertical rod (Von Duprin 9827/9927)
±65	Yes	No	Outswing	Pair 6'0" x 7'0" (optional flat or Z astragal)	HC, PS, PU, ST (PS, PU)	Glazing up to HG 22' x 42' (924 sq.in.) with Sandwich kit (SK)	Rim exit device x Rim exit device (Hager 4500 with Hager 4500 mullion)
±50	Yes	No	Outswing	Pair 6'0" x 8'0" (optional flat or Z astragal)	HC	Glazing up to HG 22' x 42' (924 sq.in.) with Sandwich kit (SK)	Rim exit device x Rim exit device (Corbin Russwin ED5200S x M107) x Hardware mullion (Corbin Russwin FE707A), Surface vertical rod x Surface vertical rod (Von Duprin 9827/9927)
±50	Yes	No	Outswing	Pair 6'0" x 8'0" (optional flat or Z astragal)	HC, PS, PU, ST (PS, PU)	Glazing up to HG 22' x 42' (924 sq.in.) with Sandwich kit (SK)	Rim exit device x Rim exit device (Von Duprin 98/99) X Hardware mullion (Von Duprin HH9954), Surface vertical rod x Surface vertical rod (Corbin ED5470 x M107)

FL#46851.1 Inswing Single Flush Steel Door

Design Pressure	High-Velocity Hurricane Zone (HVHZ)	Water Infiltration ¹	Swing	Maximum Opening Size	Door Series	Flush ² / Glazed	Hardware Type (brand/model) ⁴
±70	Yes	No	Inswing	Single 3'0" x 8'0"	HC, PS, PU, ST (PS, PU)	Flush	Cylindrical lock (Sargent 10 Line, Schlage D/ND, Cal-Royal Genesis), Mortise lock w/ deadbolt (Sargent 8200, Schlage L9000)

FL#46851.2 Inswing Single Glazed Steel Door

Design Pressure	High-Velocity Hurricane Zone (HVHZ)	Water Infiltration ¹	Swing	Maximum Opening Size	Door Series	Flush ² / Glazed	Hardware Type (brand/model) ⁴
±70	Yes	No	Inswing	Single 3'0" x 8'0"	HC, PS, PU, ST (PS, PU)	Glazing up to HG 22' x 42' (924 sq.in.) with Sandwich kit (SK)	Cylindrical lock (Sargent 10 Line, Schlage D/ND, Cal-Royal Genesis), Mortise lock w/ deadbolt (Sargent 8200, Schlage L9000)

¹ Water/Air infiltration requires Rain drip (NGP 16A), Door shoe (NGP 331), Door sweep (NGP 200NA), Perimeter seal (NGP 137NA), Bulb seal (NGP 5050) and Silicone caulk.

² Optional 9/16" Peep viewers (2) allowed (Ives 698/U698).

³ Requires 9/16" O.A. laminated glass (2x 1/4" annealed glass with 0.090" Sentryglass layer by Kuraray).

⁴ All opening assemblies require Threshold (NGP 950N) and Ball-bearing hinges (Hager BB1191, BB1168, BB1199, BB1279) or Continuous hinge (Hager 780-112 Roton). Electrified and fire-rated options of approved hardware are deemed acceptable. Optional raceways, power transfers, monitoring switches and supplemental magnetic locks may also be used. To be reviewed by the AHJ.

FL#46851 Outswing/Inswing Double and Single Frame

Design Pressure	High-Velocity Hurricane Zone (HVHZ)	Material	Jamb Depth	Maximum Opening Size	Frame Series	Header	Anchors
±70	Yes	A40, A60, C90	Min. 5 ¾"	Outswing / Inswing Single 3'0" x 8'0"	SR	From 2" to 4" (optional anchors in head)	Wire (WMA,) T-strap (TMA) in grout-filled masonry, Existing wall and Existing wall with tube (EWA/EWAT) in grout-filled masonry or concrete (3/8" Tapcon, 3/8" Dynabolt), steel/ aluminum stud (3/8" Grade S self drilling/tapping screw), wood stud (3/8" lag screw), Base anchors (FA, ADJ FA) required for WMA and TMA.
±70	Yes	A40, A60, C90	Min. 5 ¾"	Outswing / Inswing Single 3'0" x 8'0"	DR, DW	From 2" to 4" (optional anchors in head)	Z type (ZBA) in steel/aluminum stud (#10 Grade S self drilling/tapping screw), Combination (DCA) in in steel/aluminum stud (#10 Grade 5 self drilling/tapping screw), wood stud (#10 wood screw), Base anchors (FA, ADJ FA) required for ZBA, DCA.
±65	Yes	A40, A60, C90	Min. 5 ¾"	Outswing only Single 4'0" x 8'0"	SR	From 2" to 4" (optional anchors in head)	Wire (WMA,) T-strap (TMA) in grout-filled masonry, Existing wall and Existing wall with tube (EWA/EWAT) in grout-filled masonry or concrete (3/8" Tapcon, 3/8" Dynabolt), steel/ aluminum stud (3/8" Grade S self drilling/tapping screw), wood stud (3/8" lag screw), Base anchors (FA, ADJ FA) required for WMA and TMA.
±65	Yes	A40, A60, C90	Min. 5 ¾"	Outswing only Single 4'0" x 8'0"	DR, DW	From 2" to 4" (optional anchors in head)	Z type (ZBA) in steel/aluminum stud (#10 Grade S self drilling/tapping screw), Combination (DCA) in in steel/aluminum stud (#10 Grade 5 self drilling/tapping screw), wood stud (#10 wood screw), Base anchors (FA, ADJ FA) required for ZBA, DCA.
±70	Yes	A40, A60, C90	Min. 5 ¾"	Outswing only Pair 6'0" x 8'0"	SR	From 2" to 4" with 3 anchors (EWA/EWAT)	Wire (WMA,) T-strap (TMA) in grout-filled masonry, Existing wall and Existing wall with tube (EWA/EWAT) in grout-filled masonry or concrete (3/8" Tapcon, 3/8" Dynabolt), steel/ aluminum stud (3/8" Grade S self drilling/tapping screw), wood stud (3/8" lag screw), Base anchors (FA, ADJ FA) required for WMA and TMA.
±70	Yes	A40, A60, C90	Min. 5 ¾"	Outswing only Pair 6'0" x 8'0"	DR, DW	From 2" to 4" with 3 anchors (EWA/EWAT)	Z type (ZBA) in steel/aluminum stud (#10 Grade S self drilling/tapping screw), Combination (DCA) in in steel/aluminum stud (#10 Grade 5 self drilling/tapping screw), wood stud (#10 wood screw), Base anchors (FA, ADJ FA) required for ZBA, DCA.