## H16 and H14 Series flush doors



## About the product

The H16 and H14 Series doors have been specifically designed and tested to meet the performance-based provisions of the Florida Building Code (FBC) while providing architects, designers and building owners with the broadest choices for their specific applications.

Specifiable options include glass lights, transom and sidelights, louvers, exit hardware, cylindrical or mortise single point locks, as well as a variety of door core and edge construction options.

All H Series doors have been tested to protocols TAS 201, 202 and 203, indicating their ability to withstand the missile impact, structural load and cyclic wind pressure tests prescribed by the Codes.

## Approvals, design pressure ratings and hardware configurations

Design Pressure Ratings are based on ongoing testing for door, frame and hardware configurations. Applications are limited to the configurations tested.

For up to date online Approvals and instructions to access, go to http://us.allegion.com/en/home/products/categories/ doors-and-frames/steelcraft-h.html. Go to Approvals.

The Authority Having Jurisdiction is the final authority in issues related to the installation and use of any building products.

## **Features and benefits**

Steelcraft's H Series doors offer the following standard unique features, which enhance long term performance and durability:

- 1. A-60 Galvannealed steel face sheets
- 2. Core Systems that enhance structural integrity:
  - Honeycomb (Standard): 1" (25 mm) cell kraft honeycomb configuration that increases structural integrity while reducing overall weight
  - Polystyrene (optional): enhanced thermal performance
  - Polyurethane (optional): extreme thermal performance
  - Mineral Board (optional): rigid, temperature rise control
  - Steel Stiffened (optional): welded hat section stiffeners

- 3. **Full Height, Epoxy Filled Mechanical Interlock Edges** provide structural support and stability the full height of the door edges. Available edge options:
  - Visible Edge Seam (standard): full height, epoxy filled mechanical Interlocked edges
  - Filled Edge Seam (optional add to standard): seam filled with structural adhesive and dressed smooth. Includes tack welds above and below edge cutouts for hinges, locks, etc.
  - Welded Edge Seam (optional add to standard): intermittently welded using 1" long welds, then seam filled with structural adhesive and dressed smooth. Option available on L18, L16 and L14 doors.
- 4. **Full Height Lock Side Reinforcement Channel** ensures structural stability and locking hardware functionality under extreme pressure conditions.
- 5. Universal Hinge Preparations (patented) allow for easy field conversion from standard weight .134" (3.3 mm) hinges to heavy weight .180" (4.7 mm) hinges.
- 6. **14 Gauge [0.067" (1.7 mm)]** Top and Bottom Channels provide stability and protection for the top and bottom edges from abuse.
- 7. 3/8" undercut is standard on all H Series doors, to accommodate hurricane code requirements.
- 8. **Beveled Hinge and Lock Edges** allow for tighter installation tolerances, ensure easier operation and eliminate binding and sticking.
- 9. **Recessed Dezigner™ Glass Trim** provides a clean, neat and flush finish with the door surface.
- 10. **Screwed-in top caps** provide additional weather protection to exclude water and debris from exterior outswing doors.
- 11. Factory Applied Baked-On Rust Inhibiting Primer paint in accordance with ANSI A250.10-2011.

#### **Specification compliance**

- 1. Door construction for Steelcraft H Series full flush doors meets the requirements of ANSI A250.8-2017 (SDI 100).
- 2. Hardware preparations and reinforcements are in accordance with ANSI A250.6-2003 (R2009). Locations are in accordance with ANSI/DHI A115.
- 3. Florida Building Code test protocols TAS 201, TAS 202 & TAS 203.

#### Florida building code label

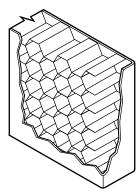
A Florida Building Code Label is applied to all H Series doors. An optional Miami-Dade County label is also available.

#### **Fire ratings**

Steelcraft H Series doors meet fire rating requirements. They are listed for installations requiring compliance to both neutral pressure testing UL-10B and positive pressure standard UL-10C.

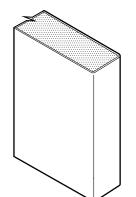
## Cores

#### **Rigid Honeycomb Core**



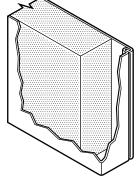
#### **Standard H Series Core**

- 1" (25 mm) cell, 99 pound Kraft honeycomb
- Honeycomb surfaces sanded for maximum adhesion
- Impregnated with phenolic resin (resists mildew and vermin)
- Laminated to both face sheets with contact adhesive
- Assembled door is run through high pressure pinch rollers, achieving ultimate bond



#### STANDARD Edge Construction

- Beveled hinge & lock edges
- Full height mechanical interlock with epoxy adhesive
- Visible edge seam standard
- Seamless edge optional



### **Optional Polystyrene Core**

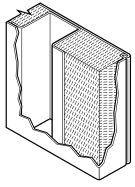
- 1 pound (453.6g) per ft<sup>3</sup> density slab
- Laminated to both face sheets with contact adhesive
- Labeled applications

#### **Optional Polyurethane Core**

- 1.8 pound (816.5g) per ft<sup>3</sup> density slab
- Laminated to both face sheets with contact adhesive
- Non-Labeled applications

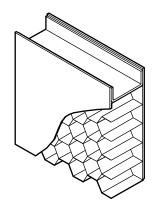
#### **Optional Mineral Fiber Board Core**

 TH Series 250°F (121°C) or 450°F (232°C) Temperature Rise Hurricane door



#### **Optional Steel Stiffened Core**

- Stiffeners welded to inside of face sheets
  - Located 6" (152.4 mm) on center
  - Weld spacing 6" (152 mm) maximum along the full height of each stiffener
- Areas between stiffeners filled with 1 pound (453.6g) per ft3 density fiberglass batt

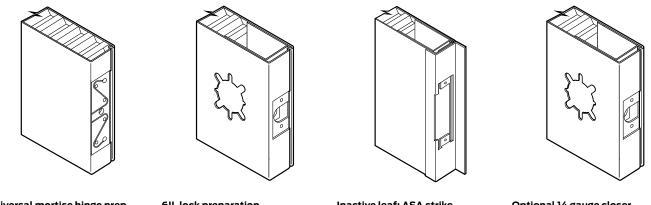


## STANDARD Rigid 14 gauge End Channel Construction

- 14 gauge inverted galvannealed top & bottom channels
- Projection welded to both face sheets
- For optional caps, see "Weather seals" on page 81

| Door Application and Usage |                               |                              |                  |   |  |  |
|----------------------------|-------------------------------|------------------------------|------------------|---|--|--|
| Series                     | eries Steel Thickness Opening |                              | Usage Frequency  |   |  |  |
| H16                        | 16 Ga (1.3 mm)                | Exterior: Galvannealed Steel | Extra Heavy Duty | Extra Heavy Commercial & Institutional applications with potential of very high use |  |  |
| H14                        | 14 Ga (1.7 mm)                | Exterior: Galvannealed Steel | Maximum Duty     | Extra Heavy Commercial & Institutional applications with extremely high use         |  |  |

#### Standard hardware preparations



Universal mortise hinge prep

**6IL lock preparation** 

Inactive leaf: ASA strike preparation

Optional 14 gauge closer reinforcement

#### Standard: mortised and reinforced for

- Patented Universal hinge preparations allow for easy field conversion from standard 4 1/2" (114 mm) x .134" (3.3 mm) standard weight hinges to 4 <sup>1</sup>/<sub>2</sub>" (114 mm) x .180" (4.7 mm) heavy weight hinges. Optional hinge preparation for 5" (127 mm) x .146" (3.7 mm) standard weight hinges or for 5" (127 mm) x .190" (4.8 mm) heavy weight hinges is also available.
- The cylindrical 161, 61L and mortise 86 lock preps are the most commonly used active leaf preparations. The 4 7/8" (124 mm) strike prep is the most commonly used inactive leaf preparation.
- Optional reinforcements for surface closers are available.

## **Product Selection**

#### Door Sizes and ANSI A250.8 Conversions

Steelcraft product selection for H Series doors has been matched to SDI designations for Level and Model. Recommended minimum frame gauge also applies to the frequency of operation of the opening.

| Series    | ANSI A250.8 - SDI 100                                 |           | Edge Construction | Maximum Sizes     |                                    | Decomposed of Course of Frome |  |  |
|-----------|---|-----------|-------------------|-------------------|------------------------------------|-------------------------------|--|--|
| Series    | Level   | Model     | Description       | Edge Construction | Single                             | Pair                          | Recommended Gauge of Frame                               |  |
| Level 3 - | Level 3 - Extra Heavy Duty Commercial & Institutional |           |                   |                   |                                    |                               |  |  |
| H16       |   | 1         | Full Flush        | Visible           |                                    | 8'0" x 8'0"                   |  |  |
| HF16      | З   | 2         | Coomlana          | Filled            | 4' 0" x 8' 0"<br>1219 mm x 2438 mm | 2438 mm x                     | 14 Gauge [0.067" (1.7 mm)]<br>16 Gauge [0.053" (1.3 mm)] |  |
| HW16      | ]   | 2         | Seamless          | Welded            | 121911111 245011111                | 2438 mm                       |  |  |
| Level 4 - | Maximur   | n Duty Co | mmercial & Ins    | titutional        |                                    |                               |  |  |
| H14       |   | 1         | Full Flush        | Visible           | (1.011) 01.01                      | 8' 0" x 8' 0"                 |  |  |
| HF14      | 4   | 2         | Coordooo          | Filled            | 4' 0" x 8' 0"<br>1219 mm x 2438 mm | 2438 mm x                     | 12 Gauge [0.093" (2.3 mm)]<br>14 Gauge [0.067" (1.7 mm)] |  |
| HW14      |   | 2         | Seamless          | Welded            | 121911111 x 245011111              | 2438 mm                       | 14 Gauge [0.007 (1.7 mm)]                                |  |

### **Code Compliance**

- Florida Building Code test protocols TAS 201, TAS 202 & TAS 203.
  - A mylar Florida Building Code label is included as standard
  - Optional mylar Miami-Dade County label

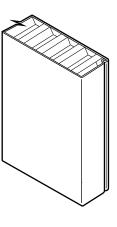
## Door edge construction

#### Optional Edge Seams available in the L Series doors:

- H: Standard feature includes visible edge seams with full height interlocked edges.
- **HF:** The mechanical edge seam is filled and dressed smooth prior to applying the factory primer.
- HW: The mechanical edge seam is welded and dressed smooth prior to applying the factory primer.

#### Standard visible edge seam

- H Series Visible Seam Features
- Full height mechanical interlock
- Interlock filled with epoxy adhesive
- Visible edge seam



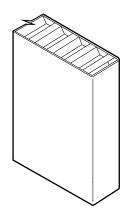
#### Optional seamless edge

#### **HF Series Seam Filled Features**

- Standard Visible Edge Seam is tack welded above and below edge cutouts for hinges, locks, etc.
- Edge Seam is then filled with structural adhesive and dressed smooth
- No visible edge seam

#### HW Series Seam Welded Features

- Standard Visible Edge Seam is intermittently welded using 1" long welds
- Edge Seam is then filled with structural adhesive and dressed smooth
- No visible edge seam



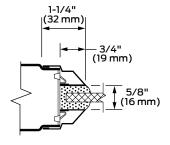
#### **Glass light options**

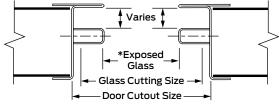
(Refer to the Lights section for further details and options)

#### Dezigner® Trim

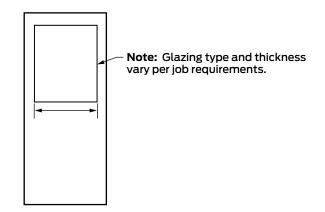
• Standard for 1/2" Thick Glass

Optional for ¼" Thick Glass





Divider Muntins Are Not Available



#### Note:

- 1. Glazing material and methods of glazing are subject to approval by applicable authorities and may change without notice. Refer to the applicable product approvals.
- 2. Doors used in elevations must use  $1{\!\!\!/}_2$  " or  $9{\!\!\!/}_{16}$  " glass only per NOA.

## HE16 Series embossed doors

## About the product

The HE16 Series embossed panel doors have been specifically designed and tested to meet the performance-based provisions of the Florida Building Code (FBC) while providing architects, designers and building owners with the broadest choices for their specific applications.

Specifiable options to meet application, specification and performance requirements include mechanical and electrical hardware preparations for exit hardware, cylindrical or mortise single point locks and double locks. No glass lights are allowable.

All HE16 Series doors have been tested to protocols TAS 201, 202 and 203, indicating their ability to

withstand the missile impact, structural load and cyclic wind pressure tests prescribed by the Codes.

# Design pressure ratings and hardware configurations

Design Pressure Ratings are based on ongoing testing for door, frame and hardware configurations. Applications are limited to the configurations tested. For up to date online Approvals and instructions to access, go to http://us.allegion.com/en/home/ products/categories/doors-and-frames/steelcraft-h.html. Go to Approvals.

The Authority Having Jurisdiction is the final authority in issues related to the installation and use of any building products.

## **Features and benefits**

Steelcraft's HE16 Series doors offer the following standard unique features, which enhance long term performance and durability:

- 1. A-40 Galvannealed Steel face sheets.
- 2. **Polystyrene Core (Standard)**: enhances the structural integrity of the door with enhanced thermal capabilities
- 3. **Full Height, Epoxy Filled Mechanical Interlock Edges** provide structural support and stability the full height of the door edges. Available edge options:
  - Visible Edge Seam (standard): full height, epoxy filled mechanical Interlocked edges
  - Filled Edge Seam (optional add to standard): seam filled with structural adhesive and dressed smooth. Includes tack welds above and below edge cutouts for hinges, locks, etc.
  - Welded Edge Seam (optional add to standard): intermittently welded using 1" long welds, then seam filled with structural adhesive and dressed smooth. Option available on L18, L16 and L14 doors.
- 4. **Full Height Lock Side Reinforcement Channel** ensures structural stability and locking hardware functionality under extreme pressure conditions.

- 5. **Universal Hinge Preparations** (patented) allow for easy field conversion from standard weight .134" (3.3 mm) hinges to heavy weight .180" (54.7 mm) hinges.
- 6. **14 Gauge [0.067" (1.7 mm)] Inverted Top and Bottom Channels** provide stability and protection for the top and bottom edges from abuse.
- 7. 3/8" undercut is standard on all H Series doors, to accommodate hurricane code requirements.
- 8. **Beveled Hinge and Lock Edges** allow for tighter installation tolerances, ensure easier operation and eliminate binding and sticking.
- 9. **Screwed-in top caps** provide additional weather protection to exclude water and debris from exterior outswing doors.
- 10. Factory Applied Baked-On Rust Inhibiting Primer paint in accordance with ANSI A250.10-2011.

## Specification compliance

- 1. Door construction for Steelcraft HE16 Series embossed panel doors meets the requirements of ANSI A250.8-2017 (SDI 100).
- 2. Hardware preparations and reinforcements are in accordance with ANSI A250.6-2003 (R2009). Locations are in accordance with ANSI/DHI A115.
- 3. Door construction for the HE16 Series embossed panel doors meets ANSI A117.1-1998 (ADA) requirements for minimum 10" (254 mm) bottom rail height measured from the floor.
- 4. Florida Building Code test protocols TAS 201, TAS 202 & TAS 203.

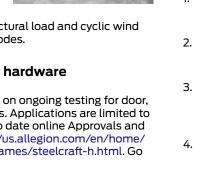
## Florida building code label

A Florida Building Code Label is applied to all H Series doors. An optional Miami-Dade County label is also available.

## **Fire ratings**

Steelcraft HE16 Series doors meet fire rating requirements.

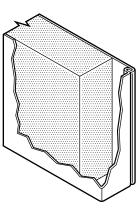
They are listed for installations requiring compliance to both neutral pressure testing UL-10B and positive pressure standard UL-10C.



## Cores

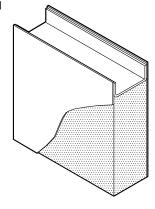
#### **Insulated** Core

- 1 pound (453.6 g) per ft<sup>3</sup> density slab
- Preferred for extreme temperature variations
- Laminated to both face sheets with contact adhesive
- Assembled door is run through high pressure pinch rollers achieving ultimate bond



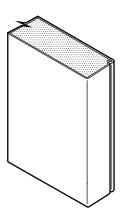
#### Standard Rigid 14 gauge End Channel Construction

- 14 gauge inverted galvannealed top & bottom channels
- Projection welded to both face sheets
- For optional caps, see ""Weather seals" on page 151



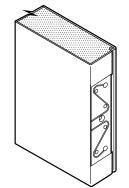
### **Standard Edge Construction**

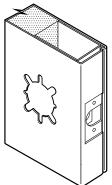
- Beveled hinge & lock edges
- Full height mechanical interlock with epoxy adhesive
- Visible edge seam standard
- Seamless edge optional



| Door Application and Usage |                 |                               |                  |   |  |
|----------------------------|-----------------|-------------------------------|------------------|---|--|
| Series                     | Steel Thickness | Opening                       | Usage Frequency  |   |  |
| HE16                       | 16 Ga (1.3 mm)  | Exterior - Galvannealed Steel | Extra Heavy Duty | Extra Heavy Commercial & Institutional applications with potential of very high use |  |

#### Standard hardware preparations



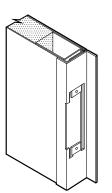


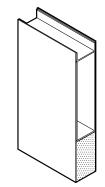
**61L Lock Preparation** 

Standard Mortise Hinge Prep 4 1/2" x .134" or 4 1/2" x .180"

#### Standard: mortised and reinforced for

- Patented Universal hinge preparations allow for easy field conversion from standard 4 ½" (114 mm) x .134" (3.3 mm) standard weight hinges to 4 ½" (114 mm) x .180" (4.7 mm) heavy weight hinges. Optional hinge preparation for 5" (127 mm) x .146" (3.7 mm) standard weight hinges or for 5" (127 mm) x .190" (4.8 mm) heavy weight hinges is also available.
- The cylindrical 161, 61L and mortise 86 lock preps are the most commonly used active leaf preparations. The 4 <sup>7</sup>/<sub>8</sub>" (124 mm) strike prep is the most commonly used inactive leaf preparation.
- Optional reinforcements for surface closers are available.





Inactive Leaf: ASA Strike Preparation and Astragal Optional 14 Gauge [0.067" (1.7 mm)] Closer Reinforcement

#### **SDI Conversion Chart**

Steelcraft product selection for HE Series doors has been matched to SDI designations for Level and Model. Recommended minimum frame gauge also applies to the frequency of operation of the opening.

#### **Code Compliance**

- Florida Building Code test protocols TAS 201, TAS 202 & TAS 203.
  - A mylar Florida Building Code label is included as standard
  - Optional mylar Miami-Dade County label

## **Product Selection**

### Door Sizes and ANSI A250.8 Conversions

| Series    | ANSI A250.8 - SDI 100                                 |       | Edge        | Maximum Sizes |                  | Recommended Gauge of |                            |  |
|-----------|---|-------|-------------|---------------|------------------|----------------------|----------------------------|--|
| Series    | Level   | Model | Description | Construction  | Single           | Pair                 | Frame                      |  |
| Level 3 - | Level 3 - Extra Heavy Duty Commercial & Institutional |       |             |               |                  |                      |                            |  |
| HE16      | 2   | 1     | Full Flush  | Visible       | 3'0" x 8'0"      | 6'0" x 8'0"          | 14 Gauge [0.067" (1.7 mm)] |  |
| HEF16     | 5   | 2     | Seamless    | Filled        | 914 mm x 2438 mm | 1829 mm x 2438 mm    | 16 Gauge [0.053" (1.3 mm)] |  |

#### Door edge construction (H, HF, HE, HEF)

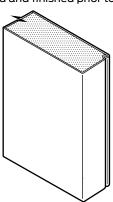
Optional Edge Seams available in the HE Series doors:

- HE: Standard feature includes visible edge seams with full height interlocked edges.
- HEF: the mechanical edge seam is filled and finished prior to applying the factory primer.

#### Standard visible edge seam

#### **HE Series Visible Seam Features**

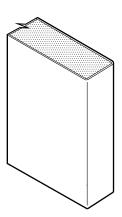
- Full height mechanical interlock
- Interlock filled with epoxy adhesive
- Visible edge seam



#### **Optional seamless edge**

#### **HEF Series Seam Filled Features**

- Standard Visible Edge Seam is tack welded above and below edge cutouts for hinges, locks, etc.
- Edge Seam is then filled with structural adhesive and dressed smooth
- No visible edge seam



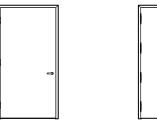
Book Rev. 11/29/18 · Page Rev. 10/13/16 · Technical data manual · STEELCRAFT · 199

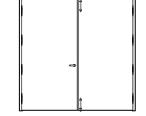
## Approvals

## Inland regions Tested in accordance with ASTM E-330

#### Flush doors

#### Locking applications





| Maximum Door Size    | Singles   | 4' 0" x 8' 0"                |  |
|----------------------|---|------------------------------|--|
| Maximum Door Size    | Pairs   | 8' 0" x 8' 0"                |  |
| Door Design          | Flush doors only                                  |                              |  |
|                      | Active  | Cylindrical or Mortise locks |  |
| Hardware Application | Inactive IVES <sup>®</sup> Surface or Flush Bolts |                              |  |

Single Door

| Lock type           | Lock s                          | eries      | Florida approval |                 | Door series     |  |
|---------------------|---------------------------------|------------|------------------|-----------------|-----------------|--|
| Lock type           | Schlage <sup>®</sup> Mechanical | Falcon     | Fiorida approvat | Design pressure | Door series     |  |
| Cylindrical (Bored) | ND, AL, A, S                    | Т, В, Х, Н | FL10356          | +/- 50 PSF      | L, B, CE, SL, T |  |
| Mortise             | L9000, L9400                    | Т, В, Х, Н | FL10356          | +/- 50 PSF      | L, B, CE, SL, T |  |

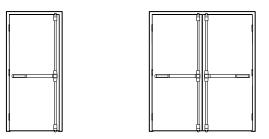
#### Exit alarm applications



| Maximum Door Size    | Singles                 | 4' 0" x 8' 0" |  |
|----------------------|-------------------------|---------------|--|
| Maximum Door Size    | Pairs                   | not available |  |
| Door Design          | Flush doors only        |               |  |
| Hardware Application | 2670 GUARD-X Alarm Lock |               |  |

Single Door Only

| Exit type | Exit series             | - Florida approval |                    | Door series     |  |
|-----------|-------------------------|--------------------|--------------------|-----------------|--|
| Exit type | Von Duprin <sup>®</sup> | Fiolida approvai   | Design pressure    |                 |  |
| Alarm     | 2670 GUARD-X Alarm Lock | FL10356            | + 55 PSF /- 40 PSF | L, B, CE, SL, T |  |



| Maximum Door Size    | Singles   | 4' 0" x 8' 0" |  |
|----------------------|---|---------------|--|
| Maximum Door Size    | Pairs   | 8' 0" x 8' 0" |  |
| Door Design          | Flush doors only         Exit Device As Noted Below |               |  |
| Hardware Application |   |               |  |

Single Door

Double Door

|                             | Exit series                          |                        |                                      | Design message  | Deereriee       |  |
|-----------------------------|--------------------------------------|------------------------|--------------------------------------|-----------------|-----------------|--|
| Exit type                   | Von Duprin <sup>®</sup>              | Falcon                 | <ul> <li>Florida approval</li> </ul> | Design pressure | Door series     |  |
| RIM                         | 33A, 55, 88                          | 19-R, XX-R             | FL10356                              | +/- 50 PSF      |                 |  |
| RIN                         | 22, 99/98                            | No                     | FLIUSSO                              | +50/-40 PSF     | L, B, CE, SL, T |  |
| C)/D                        | 2227, 3327A, 3527A, 8827, 8827, 9927 | No                     | FL10356                              | +50/-40 PSF     |                 |  |
| SVR                         | No                                   | 19-V, XX-V, 24-V, 25-V |                                      | +/- 50 PSF      | L, B, CE, SL, T |  |
|                             | 3347A, 3547A, 9447, 9847, 9947       | No                     |                                      | +/- 50 PSF      |                 |  |
| CVR                         | No                                   | 19-C, XX-C, 24-C, 25-C |                                      |                 | L, B, CE, SL, T |  |
|                             | 5547                                 | No                     |                                      | +/- 60 PSF      |                 |  |
|                             | 9957 No                              |                        | 5110056                              | +50/-40 PSF     |                 |  |
| 3 POINT                     | No                                   |                        | - FL10356                            | +/- 50 PSF      | L, B, CE, SL, T |  |
| Mortise Single<br>Door Only | 8875, 9475, 9575, 9875, 9975         | No                     | 5110256                              | + 50/ -45 PSF   | L, B, CE, SL, T |  |
|                             | No                                   | XX-M, 25-M             | FL10356                              | +/- 50 PSF      |                 |  |

## Doors with glass lights

Locking applications



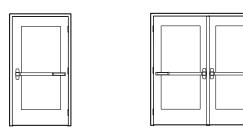


| Maximum Door Size    | Singles   | 4' 0" x 8' 0"                            |  |
|----------------------|---|--|--|
| Maximum Door Size    | Pairs   | 8' 0" x 8' 0"                            |  |
| Door Design          | FG, FG2, FG3, G,V, N, N3, N4, LNL glass designs only                  |  |  |
| Hardware Application | Active  | Cylindrical or Mortise locks             |  |
| Hardware Application | Inactive  | IVES <sup>®</sup> Surface or Flush Bolts |  |
| Approved Glass       | Refer to the appropriate Florida Approval for glass and glazing types |  |  |

Single Door

Double Door

|                     | Lock series               |            |            |                  |                 |                 |  |
|---------------------|---------------------------|------------|------------|------------------|-----------------|-----------------|--|
| Lock type           | Schlage®                  |            | Falsan     | Florida approval | Design pressure | Door series     |  |
|                     | Mechanical                | Electronic | Falcon     |                  |                 |                 |  |
| Cylindrical (Bored) | ND, AL, A, S              | No         | Т, В, Х, Н | FL10356          | +50 / -40 PSF   | L, B, CE, SL, T |  |
| Mortise             | L9000/9400<br>LV9000/9400 | No         | М          | FL10356          | +50 / -40 PSF   | L, B, CE, SL, T |  |



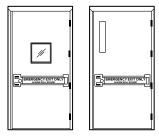
| Maximum Door Size    | Singles   | 4' 0" x 8' 0" |  |
|----------------------|---|---------------|--|
| Maximum Door Size    | Pairs   | 8' 0" x 8' 0" |  |
| Door Design          | FG, FG2, FG3, G,V, N, N3, N4, LNL glass designs only                  |               |  |
| Hardware Application | RIM Exit Devices as noted below                                       |               |  |
| Approved Glass       | Refer to the appropriate Florida Approval for glass and glazing types |               |  |

Single Door

Double Door

| Exit             | Exit series                         |                        | Florida   | Design prosecure | Deer series     |  |
|------------------|-------------------------------------|------------------------|-----------|------------------|-----------------|--|
| Exit type        | Von Duprin <sup>®</sup>             | Falcon                 | approval  | Design pressure  | Door series     |  |
| RIM              | 33A, 55, 88                         | 19-R, XX-R             | FL10356   | +/- 50 PSF       | L, B, CE, SL, T |  |
| RIN              | 22, 99/98                           | No                     | - FL10356 | +50/-40 PSF      | L, D, CE, SL, I |  |
| SVR              | 2227, 3327A, 3527A, 8827 8827, 9927 | No                     | FL10356   | +50/-40 PSF      |                 |  |
| SVR              | No                                  | 19-V, XX-V, 24-V, 25-V | FLIUSSO   | +/- 50 PSF       | L, B, CE, SL, T |  |
|                  | 3347A, 3547A, 9447, 9847, 9947      | No                     |           | +/- 50 PSF       |                 |  |
| CVR              | No                                  | 19-C, XX-C, 24-C, 25-C | FL10356   |                  | L, B, CE, SL, T |  |
|                  | 5547                                | No                     |           | +/- 60 PSF       |                 |  |
| 3 POINT          | 9957                                | No                     | FL10356   | +50/-40 PSF      | L, B, CE, SL, T |  |
| SPOINT           | No                                  |                        | FLIUSSO   | +/- 50 PSF       |                 |  |
| Mortise          | 8875, 9475, 9575, 9875, 9975        | No                     | FL 10256  | + 50/-45 PSF     | L, B, CE, SL, T |  |
| Single Door Only | No                                  | XX-M, 25-M             | FL10356   | +/- 50 PSF       |                 |  |

#### Exit alarm applications



| Maximum Door Size    | Singles                               | 4' 0" x 8' 0" |  |
|----------------------|---------------------------------------|---------------|--|
| Maximum Door Size    | Pairs                                 | not available |  |
| Door Design          | V or N3, N4 and N5 glass designs only |               |  |
| Hardware Application | 2670 GUARD-X Alarm LockV              |               |  |

Single Door Only

| ΕΧΙΤ ΤΥΡΕ               | EXIT Series             | - Florida Approval | Design Dressure   | Door Series     |  |
|-------------------------|-------------------------|--------------------|-------------------|-----------------|--|
| Von Duprin <sup>®</sup> |                         | Florida Approval   | Design Pressure   | Door Series     |  |
| Alarm                   | 2670 GUARD-X Alarm Lock | FL10356            | + 55 PSF - 40 PSF | L, B, CE, SL, T |  |

Note: See 81 or 197 for online resource links to access the most current approvals.

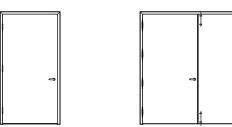
## Wind-born debris (coastal) regions

## Tested in accordance with Florida Building Code test:

- Protocols (TAS 201, TAS 202 & TAS 203)
- Large missile impact and ASTM E-330 applications

#### **Flush doors**

## Locking applications



| Maximum Door Size    | Singles          | 4' 0" x 8' 0"                |  |
|----------------------|------------------|------------------------------|--|
|                      | Pairs            | 8' 0" x 8' 0"                |  |
| Door Design          | Flush doors only |                              |  |
|                      | Active           | Cylindrical or Mortise locks |  |
| Hardware Application | Inactive         | IVES® Surface (360)          |  |

Single Door

Double Door

|                        | Lock series |            |        |  |                     |                    |             |       |
|------------------------|-------------|------------|--------|--|---------------------|--------------------|-------------|-------|
| Lock type              | Sch         | lage*      | Falcon | Miami-Dade NOA                                   | Florida<br>approval | Design<br>pressure | Door series |       |
|                        | Mechanical  | Electronic | Faicon |  | approvat            | pressore           |             |       |
|                        | ND*         | AD/CO      | Т      |  | Single Door         | +/- 75 PSF         |             |       |
| Cylindrical<br>(Bored) | ND          | AD/CO      | No     | Single Door 17-0320.06<br>Double Door 17-0320.08 | 0                   | FL12400.3          | +/- 65 PSF  | H. HE |
| (Dorea)                | AL          | No         | No     |  | Double Door         | +/- 55 PSF         | п, пе       |       |
| Mortise                | L9400       | AD/CO      | М      | Lxp. 05/25/1/                                    | FL12400.1           | +/- 75 PSF         |             |       |

requires a ¾" projection latch

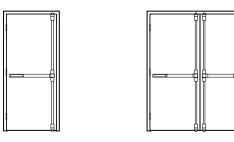
## Exit alarm applications



| Maximum Door Size    | Singles                 | 4' 0" x 8' 0" |  |
|----------------------|-------------------------|---------------|--|
| Maximum Door Size    | Pairs                   | not available |  |
| Door Design          | Flush doors only        |               |  |
| Hardware Application | 2670 GUARD-X Alarm Lock |               |  |

Single Door

| Exit type | Exit series<br>Von Duprin® | Miami-Dade NOA              | Florida approval | Design pressure | Door series |
|-----------|----------------------------|-----------------------------|------------------|-----------------|-------------|
| Alarm     | 2670 GUARD-X Alarm Lock    | 17-0320.06<br>Exp. 05/23/17 | FL12400.3        | +/- 55 PSF      | H, HE       |



| Maximum Door Size    | Singles                    | 4' 0" x 8' 0" |  |
|----------------------|----------------------------|---------------|--|
| Maximum Door Size    | Pairs                      | 8' 0" x 8' 0" |  |
| Door Design          | Flush doors only           |               |  |
| Hardware Application | Exit device as noted below |               |  |

Single Door

Double Door

| Evitture                 | Exit series                                 |        | Miami-Dade NOA  | Florida Approval                                     | Design Pressure   | Door Series  |            |  |
|--------------------------|---|--------|---|--|---|--------------|------------|--|
| Exit type                | Von Duprin®                                 | Falcon | Miami-Dade NOA  | Florida Approval                                     | Design Pressure   | Door Series  |            |  |
| RIM                      | 99, 98                                      | No     |   |  | +/-70 PSF   |              |            |  |
| RIM                      | No  | 25R    | Single Door   | Single Door  | +70 /- 55 PSF   |              |            |  |
| SVR                      | 9927  | 25-V   | - 17-0320.06<br>- Double Door   | FL12400.3  | +/- 70 PSF  |              |            |  |
| CVR                      | 9947-F                                      | 25-C   | 17-0320.08  | Double Door  | +/- 70 PSF  | H, HE        |            |  |
| 3-POINT                  | 9957  | No     | Exp. 05/05/2017   | Exp. 05/05/2017                                      | Exp. 05/05/2017   | FL12400.1 +/ | +/- 70 PSF |  |
| Mortise Single Door Only | 8875 & 98/9975                              | 25-M   |   |  | +/- 70 PSF  |              |            |  |
| Enhanced Wind-Born Deb   | Enhanced Wind-Born Debris (Coastal) Regions |        |   |  |   |              |            |  |
| RIM                      | XP98/99                                     | No     | Single Door<br>17-0320.06<br>Double Door<br>17-0320.08<br>Exp. 05/23/17 | Single Door<br>FL12400.3<br>Double Door<br>FL12400.1 | +/- 100 PSF<br>With Water<br>Infiltration<br>+/- 75 PSF | H, HE        |            |  |
| SVR                      | WS98/9927                                   | No     | Single and Double<br>Door 15-0930.03<br>Exp. 05/05/20                   | Single and Double<br>Door FL14022                    | +/- 150 PSF<br>With Water<br>Infiltration<br>+/- 75 PSF |              |            |  |

## Doors with glass lights

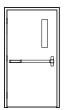
## Exit alarm applications

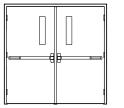


| Maximum Door Size    | Singles   | 4' 0" x 8' 0" |  |  |
|----------------------|---|---------------|--|--|
| Door Design          | V, N3, N4, N5 glass designs only                                      |               |  |  |
| Hardware Application | 2670 Guard-X Alarm Lock   |               |  |  |
| Approved Glass       | Refer to the appropriate Florida Approval for glass and glazing types |               |  |  |

Single Door

| Exit type | Exit series<br>Von Duprin <sup>®</sup> | Miami-Dade NOA                          | Florida Approval         | Design Pressure | Door Series |
|-----------|--|---|--------------------------|-----------------|-------------|
| Alarm     | 2670 GUARD-X Alarm<br>Lock             | Single Door 17-0320.05<br>Exp. 05/23/17 | Single Door<br>FL12400.4 | +/- 55 PSF      | H, HE       |



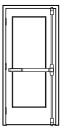


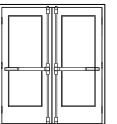
| Maximum Door Size    | Singles   | 4' 0" x 8' 0" |  |  |
|----------------------|---|---------------|--|--|
|                      | Pairs   | 8' 0" x 8' 0" |  |  |
| Door Design          | V, N3, N4, N5 Glass Designs only                                      |               |  |  |
| Hardware Application | Exit device as noted below  |               |  |  |
| Approved Glass       | Refer to the appropriate Florida Approval for glass and glazing types |               |  |  |

Single Door

Double Door

| ΕΧΙΤ ΤΥΡΕ | EXIT Series             |        | Miami-Dade NOA Florida Approv              |                          | Design Dressure | De su Carriere |
|-----------|-------------------------|--------|--|--------------------------|-----------------|----------------|
| EXILITYPE | Von Duprin <sup>®</sup> | Falcon | Miami-Dade NOA                             | Florida Approval         | Design Pressure | Door Series    |
| RIM       | XP98/99(F)              | No     | Single Door<br>17-0320.05<br>Exp. 05/23/17 | Single Door<br>FL12400.4 | +/-100 PSF      |                |
| RIM       | XP98/99(F)              | No     | Double Door<br>17-0320.07<br>Exp. 05/23/17 | Double Door<br>FL12400.2 | +/- 90 PSF      | H, HE          |



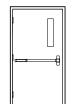


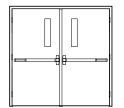
| Maximum Door Size    | Singles   | 3' 0" x 7' 0" |  |  |
|----------------------|---|---------------|--|--|
|                      | Pairs   | 6' 0" x 7' 0" |  |  |
| Door Design          | FG, FG2, FG3, G, V, N, N3, N4, LNL                                    |               |  |  |
| Hardware Application | Exit device as noted below  |               |  |  |
| Approved Glass       | Refer to the appropriate Florida Approval for glass and glazing types |               |  |  |

Single Door

Double Door

| ΕΧΙΤ ΤΥΡΕ | EXIT                    | Series  | Miami-Dade NOA            |  | Design Dressure | Door Series |
|-----------|-------------------------|---------|---------------------------|--|-----------------|-------------|
| EXIT TYPE | Von Duprin <sup>®</sup> | Falcon  | Miami-Dade NOA            | Florida Approval                                     | Design Pressure | Door Series |
| RIM       | 98/99(F)                | No      |                           |  |                 |             |
| RIM       | 88-F                    |         | Single Door               | Single Door<br>FL12400.4<br>Double Door<br>FL12400.2 | +/- 60 PSF      | H, HE       |
| SVR       | 98/9927(F)              | (F)25-V | 17-0320.05                |  |                 |             |
| CVR       | 98/9947(F)              |         | Double Door<br>17-0320.07 |  |                 |             |
| CVR       | 33/3547(F)              | F-25-C  | Exp. 05/23/17             |  |                 |             |
| 3-Point   | 98/9957(F)              | No      | ]                         |  |                 |             |





| Maximum Door Size    | Singles   | 4' 0" x 8' 0" |  |  |
|----------------------|---|---------------|--|--|
|                      | Pairs   | 8' 0" x 8' 0" |  |  |
| Door Design          | FG, FG2, FG3, G, V, N, N3, N4, LNL                                    |               |  |  |
| Hardware Application | Exit device as noted below  |               |  |  |
| Approved Glass       | Refer to the appropriate Florida Approval for glass and glazing types |               |  |  |

Single Door

Double Door

|           | EXIT                    | Series | Miami-Dade NOA Florida Approval                          |                                       |                 | De su Casilas |
|-----------|-------------------------|--------|--|---------------------------------------|-----------------|---------------|
| EXIT TYPE | Von Duprin <sup>®</sup> | Falcon | Miami-Dade NOA   | Florida Approval                      | Design Pressure | Door Series   |
| RIM       | 98/99(F)                | No     | Single Door  | Single Door                           |                 |               |
| 3-Point   | 98/9957(F)              | No     | 17-0320.05<br>Double Door<br>17-0320.07<br>Exp. 05/23/17 | FL12400.4<br>Double Door<br>FL12400.2 | +/- 50 PSF      | H, HE         |

## Locking applications



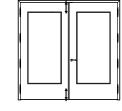
| Maximum Door Size    | Singles   | 3' 0" x 7' 0" |  |  |  |
|----------------------|---|---------------|--|--|--|
| Door Design          | FG, FG2, FG3, G,V, N, N3, N4, LNL glass designs only                  |               |  |  |  |
| Hardware Application | Cylindrical or Mortise locks  |               |  |  |  |
| Approved Glass       | Refer to the appropriate Florida Approval for glass and glazing types |               |  |  |  |

Single Door

|                     | L                         | OCK Series |        |                             |                  |                 |             |
|---------------------|---------------------------|------------|--------|-----------------------------|------------------|-----------------|-------------|
| LOCK TYPE           | Schl                      |            |        | Miami-Dade NOA              | Florida Approval | Design Pressure | Door Series |
|                     | Mechanical                | Electronic | Falcon |                             |                  |                 |             |
| Cylindrical (Bored) | D/ND                      | AD/CO      | Т      | Single Door                 |                  |                 |             |
| Mortise             | L9000/9400<br>LV9000/9400 | AD/CO      | м      | 17-0320.05 Exp.<br>05/23/17 | FL12400.4        | +/- 75 PSF      | H, HE       |

requires a ¾" projection latch





|                      | Singles   | 4' 0" x 8' 0"                |  |  |
|----------------------|---|------------------------------|--|--|
| Maximum Door Size    | Pairs   | 8' 0" x 8' 0"                |  |  |
| Door Design          | FG, FG2, FG3, G, V, N, N3, N4, LNL glass designs only                 |                              |  |  |
| Hardware Application | Active  | Cylindrical or Mortise locks |  |  |
| Hardware Application | Inactive IVES® Surface Bolts (360)                                    |                              |  |  |
| Approved Glass       | Refer to the appropriate Florida Approval for glass and glazing types |                              |  |  |

Single Door

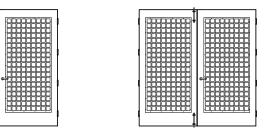
Double Door

|                     | LOCK Series               |            |        |  |                                       |                 |             |
|---------------------|---------------------------|------------|--------|--|---------------------------------------|-----------------|-------------|
| LOCK TYPE           | Schla                     | age*       | Falsan | Miami-Dade NOA   | Florida Approval                      | Design Pressure | Door Series |
|                     | Mechanical                | Electronic | Falcon |  |                                       |                 |             |
| Cylindrical (Bored) | D/ND                      | AD/CO      | Т      | Single Door  | Single Door                           |                 |             |
| Mortise             | L9000/9400<br>LV9000/9400 | AD/CO      | м      | 17-0320.05<br>Double Door<br>17-0320.07<br>Exp. 05/23/17 | FL12400.4<br>Double Door<br>FL12400.2 | +/- 75 PSF      | H, HE       |

\* requires a ¾" projection latch

#### Doors with louvers

### Locking applications



| Maximum Door Size    | Singles             | 4' 0" x 8' 0"                |  |
|----------------------|---------------------|------------------------------|--|
|                      | Pairs               | 8' 0" x 8' 0"                |  |
| Door Design          | Louvered Doors Only |                              |  |
| Hardware Application | Active              | Cylindrical or Mortise locks |  |
|                      | Inactive            | IVES® Surface or Flush Bolts |  |

Single Door

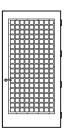
|                     | L           | OCK Series |            |  |                                  |                 |             |
|---------------------|-------------|------------|------------|--|----------------------------------|-----------------|-------------|
| LOCK TYPE           | Schlage*    |            | <b>_</b> . | Miami-Dade NOA   | Florida Approval                 | Design Pressure | Door Series |
|                     | Mechanical  | Electronic | Falcon     |  |                                  |                 |             |
| Cylindrical (Bored) | D/ND        |            | Т          | Single and Double<br>Door<br>15-0427.03<br>Exp. 11/13/18 |                                  | +/- 60 PSF      | H, HE       |
| Mortise             | L9000/9400  | No         |            |  | Single and Double<br>Door FL1591 |                 |             |
|                     | LV9000/9400 |            | MA         |  | 200.12.001                       |                 |             |

Double Door

|           | LOCK Series |            |        |                |                  |                 |             |
|-----------|-------------|------------|--------|----------------|------------------|-----------------|-------------|
| LOCK TYPE |             | age*       | Falcon | Miami-Dade NOA | Florida Approval | Design Pressure | Door Series |
|           | Mechanical  | Electronic | Faicon |                |                  |                 |             |

\* Fire louver, max opening is 24" x 24" for  $\pm$  60 psf rating.

### **Deadlocking applications**



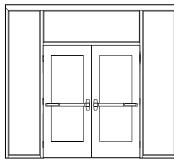
| Maximum Door Size    | Singles  | 4' 0" x 8' 0" |
|----------------------|----------|---------------|
| Maximum Door Size    | Pairs    | not available |
| Door Design          | Louvered | Doors Only    |
| Hardware Application | Active   | Deadlock      |

Single Door

|           | LOCK Series         |            |        |                             |                  |                 |             |
|-----------|---------------------|------------|--------|-----------------------------|------------------|-----------------|-------------|
| LOCK TYPE | Schlage*            |            | Falsan | Miami-Dade NOA              | Florida Approval | Design Pressure | Door Series |
|           | Mechanical          | Electronic | Falcon |                             |                  |                 |             |
| Deadlock  | B600, B700,<br>B800 | No         | D200   | 15-0427.03 Exp.<br>11/13/18 | FL1591           | +/- 60 PSF      | H, HE       |

#### Transom and side lights

**Glass doors: Exit device applications** 



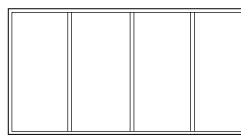
Single or Double Door

| Maximum Overall<br>Frame Size | 10' 8" x 9' 6"  |               |  |  |  |
|-------------------------------|---|---------------|--|--|--|
| Maximum Door Size             | Singles   | 3' 0" x 7' 0" |  |  |  |
| Maximum Door Size             | Doubles   | 6' 0" x 7' 0" |  |  |  |
| Door Design                   | Glass doors only FG, FG2, FG3   |               |  |  |  |
| Hardware Application          | Von Duprin® Exit Devices as Noted Below                               |               |  |  |  |
| Approved Glass                | Refer to the appropriate Florida Approval for glass and glazing types |               |  |  |  |

| EXIT TYPE EXIT Series |                         | Series  | Miami-Dade NOA              | Florida Approval |                 | Door Series |
|-----------------------|-------------------------|---------|-----------------------------|------------------|-----------------|-------------|
| EATTTPE               | Von Duprin <sup>®</sup> | Monarch | Miami-Dade NOA              | Florida Approval | Design Pressure | Door Series |
| RIM                   | 99, 88                  |         | 15-0930.06<br>Exp. 05/23/17 | FL1592           | +/- 60 PSF      | H, HE       |
| SVR                   | 9927                    | No      |                             |                  |                 |             |
| CVR                   | 9947-F, 3347F           |         |                             |                  |                 |             |

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## **Borrowed light elevations**



| Maximum Door Size | 14' 8" x 10' 2"   |
|-------------------|---|
| Door Design       | FG, FG2, FG3, G, V, N, N3, N4, LNL glass designs only                           |
| Approved Glass    | Refer to the appropriate NOA or Florida<br>Approval for glass and glazing types |

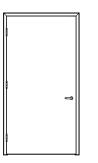
\* When max height of 10' 2" is designed the max width can not exceed 9' 8". If width exceeds 9' 8" then height cannot exceed 8' 2".

| Miami-Dade NOA              | Florida Approval | Design Pressure | Missile Impact |
|-----------------------------|------------------|-----------------|----------------|
| 16-1206.06<br>Exp. 06/30/22 | FL4622           | +/- 60 PSF      | YES            |

## Extreme Exposure: Wind-born debris regions

Flush doors

#### Locking applications



| Maximum Door Size    | Singles     | 3' 0" x 7' 0" |
|----------------------|-------------|---------------|
| Maximum Door Size    | Pairs       | not available |
| Door Design          | Flush door  | s only        |
| Hardware Application | Mortise loo | ks            |

Single Door

|           | L 1                            | LOCK Series               |                                       |  |                  |                                | Door Series |
|-----------|--------------------------------|---------------------------|---------------------------------------|--|------------------|--------------------------------|-------------|
| LOCK TYPE | Sch                            | Schlage*                  |                                       | Miami-Dade NOA                           | Florida Approval | Design Pressure                |             |
|           | Mechanical                     | Electronic                | Falcon                                |  |                  |                                |             |
| Mortisa   | L9400 No M Out-Swing Out-Swing | In-Swing and<br>Out-Swing | +/- 170 PSF Stainless<br>Steel Strike | H. HE                                    |                  |                                |             |
| Mortise   | 29400                          | No                        |                                       | Out-Swing<br>16-1206.05<br>Exp. 02/24/22 | FL-3905          | +/- 120 PSF Standard<br>Strike | н, не       |

Note: See 192 or 197 for online resource links to access the most current approvals.