Devices covered by these instructions:
33/3527A Surface Vertical Rod Exit Device
33/3527A-F (Fire) Surface Vertical Rod Exit Device
CD33/3527A Surface Vertical Rod Exit Device
EL33/3527A Surface Vertical Rod Exit Device
SS33/3527A Surface Vertical Rod Exit Device

Special tools needed:
#10-24 tap
Drill bits: #25, 1/8", 1/4", 5/16", 13/32"

Index:
- Screw chart ....................... 2
- Device installation ............. 3-6
- Cut top rod ....................... 7
- Install rod extension ........... 7
- Optional equipment ............. 8
- Templates ......................... 9-14

Please give these instructions to building owner after device is installed
### SCREW CHART

<table>
<thead>
<tr>
<th>A</th>
<th>Trim mount or sex bolts:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1/4-20 x 1”</td>
</tr>
<tr>
<td></td>
<td>1/4-20 x 1-1/2”</td>
</tr>
<tr>
<td>B</td>
<td>Surface mount or sex bolts (1-3/4” door)</td>
</tr>
<tr>
<td></td>
<td>#10-24 X 3/4”</td>
</tr>
<tr>
<td></td>
<td>#10-24 X 1-1/8”</td>
</tr>
<tr>
<td>C</td>
<td>End cap</td>
</tr>
<tr>
<td></td>
<td>#10-16 X 3/8” Thread cutting</td>
</tr>
<tr>
<td>D</td>
<td>1-3/4” door</td>
</tr>
<tr>
<td></td>
<td>1/4-20 X 3/4”</td>
</tr>
<tr>
<td></td>
<td>1/4-20 X 1-1/4”</td>
</tr>
<tr>
<td>E</td>
<td>Metal or wood frame</td>
</tr>
<tr>
<td></td>
<td>#10-12 x 10-24 x 1-1/4” combination</td>
</tr>
<tr>
<td>F</td>
<td>Metal frame</td>
</tr>
<tr>
<td></td>
<td>#10-24 X 3/4”</td>
</tr>
<tr>
<td></td>
<td>#10-24 X 1-1/4” wood screw</td>
</tr>
<tr>
<td>G</td>
<td>Metal or wood frame</td>
</tr>
<tr>
<td></td>
<td>#10-12 x 10-24 x 1-1/4” combination</td>
</tr>
<tr>
<td>H</td>
<td>Variable floor surfaces</td>
</tr>
<tr>
<td></td>
<td>#10-12 x 10-24 x 1-1/4” combination</td>
</tr>
<tr>
<td>I</td>
<td>Metal or wood door</td>
</tr>
<tr>
<td></td>
<td>#8-16 x 8-32 x 1” combination</td>
</tr>
<tr>
<td>J</td>
<td>Latch covers</td>
</tr>
<tr>
<td></td>
<td>#8-32 X 1/4”</td>
</tr>
<tr>
<td>K</td>
<td>Center case cover</td>
</tr>
<tr>
<td></td>
<td>#8-18 x 3/8” thread cutting</td>
</tr>
</tbody>
</table>
1. Figure backset and draw device center lines (§) on door as shown.

Backset is measured from outer edge of door as shown. Minimum stile is less glass stop (rectangular glass stop is recommended for stiles less than 2-1/8”)

<table>
<thead>
<tr>
<th>Backset</th>
<th>Min. stile</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3/16”</td>
<td>2” - 2-3/4”</td>
<td>Two vertical rod devices</td>
</tr>
<tr>
<td>1-1/2”</td>
<td>2-3/4” - 3-3/4”</td>
<td>Two vertical rod devices</td>
</tr>
<tr>
<td>1-7/8”</td>
<td>3-3/4” - 5”</td>
<td>Single door</td>
</tr>
<tr>
<td>2-1/2”</td>
<td>5” to flush</td>
<td>Vertical rod and rim device</td>
</tr>
<tr>
<td>1-11/32”</td>
<td>2” - 2-3/4”</td>
<td>Vertical rod and rim device</td>
</tr>
<tr>
<td>1-1/2”</td>
<td>2-3/4” - 3-3/4”</td>
<td>Vertical rod and rim device</td>
</tr>
<tr>
<td>1-7/8”</td>
<td>3-3/4” - 5”</td>
<td>Vertical rod and rim device</td>
</tr>
<tr>
<td>2-1/2”</td>
<td>5” to flush</td>
<td>Vertical rod and rim device</td>
</tr>
<tr>
<td>2-7/32”</td>
<td>3” min.</td>
<td>Vertical rod and rim device</td>
</tr>
</tbody>
</table>

Note: For 299/299F top strike use minimum backsets shown below.

Double doors: 1-3/8” min. backset, 2-3/16” min. stile
Single door: 1-7/8” min. backset, 2-11/16” min. stile

2. Tape templates to door and prepare door and frame per templates.

See trim instructions for pull side door preparation.
**3 Measure to determine length to cut device.**

1. Measure to determine length to cut device.

   **Note**
   If 5/8” diameter wire access hole has been predrilled in door, cut device 5/16” from center of hole.

**4 Cut device to length.**

   **Prepare device for cutting**
   - Cover plate (flush to pushbar)
   - Tape
   - Anti-rattle clip (remove while cutting)

   **Cut device square**
   - Note: Device must be cut square for proper end cap fit

   **Cut device square and remove all burrs**

**5 Install tailpiece guide and trim (or sex bolts) and secure device center case to door.**

   **Tailpiece guide**
   - Cut tailpiece if needed
   - Rotate tailpiece guide to match tailpiece
   - *Tailpiece is attached to trim or cylinder depending on application

   **Trim or #325 sex bolts (required)**

   **Center case**

   **See page 2 for Screw Chart**

**6 Install hinge stile mounting bracket.**

   **Mark and prepare 2 mounting holes**
   - Mounting bracket flush
   - 1/4” drill inside
   - 13/32” drill outside
   - 13/32” drill thru

   **Secure mounting bracket**
   - #425 Sex bolts (required)**
7 Install top latch and rod.

If top rod is too long, see "Cut top rod" on page 7

If top rod is too short, see "Install rod extension" on page 7

Top latch

Top rod (longer of the two)

8 Install top strike.

266 strike
For panic device application only

260U strike
For panic device application only

299/299F strike

3/16” Shim to 3/16” as shown

3/16”

Strike plate (299 only)

9 Adjust top rod until latch bolt acts as shown.

Adjust rod by threading rod into latch clockwise to shorten, or counterclockwise to lengthen.

With door closed:

Latch bolt deadlocked (will not push in)

With door open:

Latch bolt stays retracted

Release trigger extended

10 Install bottom strike, latch, and rod.

248L-4 strike
Use 248L-4 strike for panic device application only. Use 304L for fire doors

304L strike

Grout strike into floor
11 Install bottom rod.

Install at midpoint of each rod

Inside surface preparation

- 1/8” drill
- 8-32 tap
- 3/32” pilot drill

<table>
<thead>
<tr>
<th>Metal</th>
<th>Wood</th>
</tr>
</thead>
</table>

12 Adjust bottom rod with door open (top latch retracted).

Open and close door a few times and check for deadlocking when door is closed

Readjust rods if needed

Latch bolt should be **deadlocked** (will not push in)

Latch bolt should clear floor and not bind on strike

13 Install rod guides.

14 Install covers and end cap.
**CUT TOP ROD**

1. Measure amount to cut off rod as shown below.  
Note: Rod cutting is required for doors shorter than 7’.

   ![Diagram of cutting rod](image)

   *Rods are factory sized for 7’ (84”) door. Measure actual door opening height and subtract that number from 84” to get amount to cut off top rod.*

2. Cut rod.

   
   ![Diagram of cutting roll pin](image)

3. Drill new hole.

   
   ![Diagram of drilling new hole](image)

4. Reinstall rod end and roll pin.

   
   ![Diagram of reinstalling rod end and roll pin](image)

**INSTALL ROD EXTENSION**

1. Measure door opening to determine amount to cut off rod extension.

   ![Diagram of measuring door height](image)

   *Standard door heights:
   - With no extension: 7’ (84”)
   - With 1’ extension: 8’ (96”)
   - With 3’ extension: 10’ (120”)*

   *Rods are factory sized for door heights shown above. Measure actual door opening height and subtract that number from 96” (for 1’ extension) or 120” (for 3’ extension) to get amount to cut off extension.*

2. Cut rod extension.

   
   ![Diagram of cutting roll pin on rod extension](image)

3. Drill new hole.

   
   ![Diagram of drilling new hole on rod extension](image)

4. Reinstall rod end and roll pin.

   
   ![Diagram of reinstalling rod end and roll pin on rod extension](image)

5. Connect top rod and rod extension.

   
   ![Diagram of connecting top rod and rod extension](image)
OPTIONAL EQUIPMENT

CD (CYLINDER DOGGING)

1. Remove mortise cylinder cam and reinstall in reverse (Figure 1).

2. Insert key and rotate cam to install the cylinder to the cover plate (Figure 2).

3. Remove key to slide cover plate in position in the mechanism case.

**Figure 1**

**Dogging procedure**

Turn cylinder key clockwise approx. 1/8 turn for standard dogging

Depress pushbar

**Figure 2**
TOP LATCH & 266 STRIKE
For panic device application only

2 Strike Holes
#25 drill
10-24 tap
1/8" pilot drill
9/16"
9/32"
1/2"
5/8"
9/16"
9/32"
2
Latch

2 Latch Holes
5/16" Drill (device side)
13/32" Drill (trim side)
13/32" Drill thru

TOP LATCH AND 260U STRIKE
For panic device application only

3 Strike Holes
#25 drill
10-24 tap
1/8" pilot drill
9/16"
9/16"
9/16"
1-1/8"
1-3/16"
1/2"
3/16"
1/2"
0.5"
9/16"

2 Latch Holes
5/16" Drill (device side)
13/32" Drill (trim side)
13/32" Drill thru
Note: For 299/299F top strike use minimum backsets shown below.
Double doors: 1-3/8" min. backset, 2-3/16" min. stile
Single door: 1-7/8" min. backset, 2-11/16" min. stile
For threshold application, remove roll pin and fitting, cut bottom rod, reinstall fitting and roll pin in second hole.

For panic device application only:

**2 Latch Holes**

- 5/16” Drill (device side)
- 13/32” Drill (trim side)

**2 Strike Holes**

- #25 drill
- 10-24 tap

**Materials**

- 1/8” pilot drill

**Dimensions**

- 2-5/8”
- 1-7/8” to floor or threshold
- 15/16”
- 9/32”
- 15/16”
**BOTTOM LATCH AND LATCH TRACK**

- **Bottom Latch and 304L Strike**
  - 2-5/8"
  - 1-11/16" to finished floor

**Cutout in floor for 304L strike**
- 1-5/8" square x 7/8" deep
- (start with four 1/4" holes in corners)

**Bottom Latch and Latch Track**
- 2-5/8"
- 1-9/16" to top of latch track

**Align with top of latch track as shown below**

**Latch Holes**
- 5/16" Drill (device side)
- 13/32" Drill (trim side)
- 1/4" Drill thru Metal Wood

**Fold here**
33/3527A Device Template

Cut-out device side only 5/8” deep for wood door

1/4” Radius
7/8”
19/32”

Line X-X is a reference line for trim and exit device alignment. Line X-X shown here should correspond to line X-X in the trim installation instructions.

Holes - 2 places

- 5/16” Drill inside
- 13/32” drill outside (sex bolts)
- 1/2” drill outside (trim)

Wood
- 13/32” Drill thru (sex bolts)
- 1/2” drill thru (trim)
**33/3527A Device Template**

- **Cut-out device side only**
  - 5/8” deep for wood door

- **Line X-X** is a reference line for trim and exit device alignment. Line X-X shown here should correspond to line X-X in the trim installation instructions.

- **Holes - 2 places**
  - 5/16” Drill inside
  - 13/32” drill outside (sex bolts)
  - 1/2” drill outside (trim)
  - 13/32” Drill thru (sex bolts)
  - 1/2” drill thru (trim)

- **Radii**
  - 1/4”
  - 7/8”
  - 19/32”

- **Dimensions**
  - 3-1/8”
  - 7/8”

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- **Device CL**
- **RHR**
- **Device side only**
- **5/8” deep for wood door**