Devices covered by these instructions:
33/3547A and 33/3548A Concealed Vertical Rod Exit Device
33/3547A-F and 33/3548A-F Fire Concealed Vertical Rod Exit Device
CD33/3547A and CD33/3548A Concealed Vertical Rod Exit Device
EL33/3547A and EL33/3548A Concealed Vertical Rod Exit Device

Special tools needed:
#10-24 tap
Drill bits: #25, 5/16", 13/32", 1/2"

Index:
• Screw chart ......................... 2
• Device installation .............. 3-5
• Adjust rods .......................... 6
• Frame preparation ............... 7
• Optional equipment .............. 8
• Backset information ............. 9
• Metal door templates .......... 11-12
• Wood door preparation ...... 13-14
• Wood door templates ....... 15-16
### SCREW CHART

| A | 1/4-20 x 1" | Trim mount or sex bolts: (1-3/4" door) |
|   | 1/4-20 x 1-1/2" | (2-1/4" door) |
| B | #10-24 X 3/4" | Surface mount or Sex bolts (1-3/4" door) |
|   | #10-24 X 1-1/8" | Sex bolts (2-1/4" door) |
| C | #10-16 X 3/8” Thread cutting | End cap |
| D | #10-32 X 1/4" | Bracket to latch |
| E | #10-24 X 1/2” | Bracket to door |
|   | *#10 X 1” Wood screw | Bracket to door |
|   | *Used with external tooth lock washer |
| F | #10-32 X 3/8” Socket head | Rod attachment |
| G | Rod adjusting screw | Rod length adjustment |
| H | #8-32 X 5/16” | Retaining clip |
| I | #10-24 X 1/2” | 338 Strike |
| J | #10-24 X 1-1/2” | Ratchet release |
| K | #8-18 x 3/8” Thread cutting | Center case cover |
1. **Draw horizontal and vertical device center lines (C).**

   - See “Backset information” on page 9

2. **Place paper device template on door and prepare door.**

3. **Prepare top and bottom of door for latch mounting brackets.**

4. **Drill ratchet release hole in door.**

   - Fire device (metal door)
     - Drill & tap #10-24 (metal door)
     - 1/8" pilot drill (wood door)

   - Panic device (metal door)
     - Drill & tap #10-24 (metal door)
     - 1/8" pilot drill (wood door)

   - Panic and fire (wood door)
     - 1/8" pilot drill (wood door)

   - 11/16" - 1/2" Stop height
   - 13/16" - 5/8" Stop height
   - 15/16" - 3/4" Stop height

   - Reinforcing required

   - Drill 1/2" dia. hole (inside face of door)
5 **Measure to determine length to cut device.**

1-3/16” minimum clearance (with end cap removed)

Note: Device must be cut square for proper end cap fit.

7 **Assemble rods and latches and adjust length.**

Follow white and brown instruction cards on rods to set initial rod length.

- Measure top length
- Subtract 1-9/16”
- Measure bottom length
- Subtract 1-9/16”
- Total rod length (with latch bolt extended)
- Fine tune the total length by threading latches in or out of rods

8 **Install rods as shown.**

Rods are shipped with L-bracket attached. Insert rods with L-bracket pointing toward lock stile. Rotate rod until L-bracket protrudes through door cutout. If this is not possible, remove L-bracket and re-insert rod, then re-attach L-brackets.

- L-brackets
- CAUTION: L-brackets must be installed in orientation shown
- NOTE: Fire devices on metal doors use brackets on both sides of latches

- Shims used when required for alignment
9 Install tailpiece guide and attach rods to center case.

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

10 Secure device to door and mount door to frame.

- Cut tailpiece if needed
- Place device over L-brackets and install adjusting screws, then install retainers and locking screws
- Ratchet release

11 Install top strike and ratchet release.

- 338 Top strike
- Strike
- Ratchet release
- Shim (if needed)
- Spacer (use when frame has no door stop)
- See “Frame Preparation” on page 7 for cut-out and holes

12 Install bottom strike or prepare threshold.

- 385-A Bottom strike
  - 385-A strike has two pieces. Grout bottom piece into floor and attach top piece to bottom with screw through slot.
  - Threshold application
    - Note: Thresholds are not to be used with 38/3947-F

- Flat threshold application
  - Remove material as necessary to accommodate 5/8” latch bolt throw
1. Open door and release top latch bolt as shown (Figure 1).

2. Remove bottom locking screw and retaining clip (Figure 2).

3. Disconnect bottom vertical rod by removing bottom adjusting screw.

4. Loosen top locking screw.

5. Rotate top adjusting screw clockwise until top latch bolt is fully extended (Figure 1).

6. Check top latch bolt for deadlocking (latch bolt should not push in).

7. Turn top locking screw in against flat on adjusting screw. Do not over-tighten.

8. Depress pushbar and release.

9. Make sure top latch bolt stays retracted as shown.

10. Install bottom adjusting screw through bottom rod and install bottom retaining clip and locking screw (Figure 2).

11. With top latch bolt still retracted, adjust bottom rod so latch bolt clears floor and bottom strike.

12. Close door and check bottom latch bolt for dead locking.

13. After bottom rod is fully adjusted per steps 11 and 12, turn bottom locking screw in against flat on adjusting screw. Do not over-tighten.

14. Check device operation by opening and closing door several times from the outside.

Redo adjustment procedure if:

- Top latch bolt is not held retracted
- Bottom latch bolt does not clear floor and bottom strike

15. Install end cap and center case covers.

Remove protective film from pushbar.
**338 Top strike**

**FRAME PREPARATION**

**Ratchet release**

<table>
<thead>
<tr>
<th>Beveled edge</th>
<th>Should face this direction in relation to doors</th>
</tr>
</thead>
<tbody>
<tr>
<td>82° csk. x 3/8” dia. in frame</td>
<td>Doors swing out this direction</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reinforcing required</th>
<th>Plunger must go thru hole in door.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjust so plunger releases latch bolt when door is closed.</td>
<td>Plunger</td>
</tr>
</tbody>
</table>
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

Figure 2

Doggling procedure

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

Depress pushbar
BACKSET INFORMATION

NOTE: For 2” stile doors see bottom half of page

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”)

Beveled edge door

Rounded edge door

Backset Table

<table>
<thead>
<tr>
<th>Door type</th>
<th>Backset</th>
<th>Min. stile</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood</td>
<td>1-5/16”</td>
<td>NA</td>
<td>All</td>
</tr>
<tr>
<td>Metal</td>
<td>1-3/16”</td>
<td>2-1/8” - 2-3/4”</td>
<td>Two vertical rod devices</td>
</tr>
<tr>
<td></td>
<td>1-1/2”</td>
<td>2-3/4” - 3-3/4”</td>
<td>(panic)</td>
</tr>
<tr>
<td></td>
<td>1-7/8”</td>
<td>3-3/4” - 5”</td>
<td>Single door</td>
</tr>
<tr>
<td></td>
<td>2-1/2”</td>
<td>5” to flush</td>
<td>(panic)</td>
</tr>
<tr>
<td></td>
<td>1-1/2”</td>
<td>2-1/2” - 3-3/4”</td>
<td>Fire applications</td>
</tr>
<tr>
<td></td>
<td>1-7/8”</td>
<td>3-3/4” - 5”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2-1/2”</td>
<td>5” to flush</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2-3/4”</td>
<td>3-5/8” to flush</td>
<td></td>
</tr>
</tbody>
</table>

SPECIAL INSTRUCTIONS FOR 2” STILE DOORS

For 2” stile doors ONLY! Latch C is offset 1/8” from Device C 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”)

1/8” offset

1-3/16” Device backset

2” Door stile

Door stile

CL of latch

CL of device

1/8” offset

2” Door stile

1-3/16” Device backset

CL of latch

CL of device
**METAL DOOR RHR**

**33/3547A Device template**

- **Cut-outs device side only**
- **5/16” drill inside**
- **13/32” drill outside**
- **Trim**
- **5/16” drill inside**
- **1/2” drill outside**

For 3347A-F on hollow metal doors #7 drill, 1/4-20 tap if no outside trim or sex bolts are used.

**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.**

See “Backset Information” on page 9.
METAL DOOR LHR

33/3547A Device template

Sex bolts
- 5/16” drill inside
- 13/32” drill outside

Trim
- 5/16” drill inside
- 1/2” drill outside

For 3347A-F on hollow metal doors #7 drill, 1/4-20 tap if no outside trim or sex bolts are used.

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.
WOOD DOOR PREPARATION - DOOR ROUTING

NOTE:
Required door undercut is 1/4" from finished floor (panic and fire) or 1/8" from threshold (panic only)

NOTES:
1. Mounting holes to be prepared at installation on door.
2. Trim or control application may require additional preparation, see trim or control instruction sheet.
3. Door edging should be installed after device installation.
WOOD DOOR PREPARATION - DOOR BLOCKING AND WRAP

A. Install door blocking. See page 13 for door blocking dimensions.

Note: If not using door wrap, the blocking can be installed after device is installed.

B. Install door wrap if needed. Door wrap is required for Fire rated (F) devices.

Note: Required on fire doors only, not supplied by Von Duprin
(See door manufacturer’s requirements)
WOOD DOOR RHR
33/3547A Device Template

A = 1-5/16” Backset as shown to outer edge of door

Beveled edge door
Rounded edge door

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.
A = 1-5/16” Backset as shown to outer edge of door

1-5/16” Backset
Beveled edge door

1-5/16” Backset
Rounded edge 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.

Sex bolts
13/32” drill thru

Trim
1/2” drill thru

Cut-out device side only

1/8” radius

13/32” drill thru

19/32”

7/8”

2-7/8”

3-1/8”

2-7/8”

3-1/8”

13/32”

1/4”

3-1/8”