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”

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### SCREW CHART

#### A
- **1/4-20 x 1”**
- **1/4-20 x 1-1/2”**
- **Trim mount or sex bolts:**
  - (1-3/4” door)
  - (2-1/4” door)

#### B
- **#10-24 X 3/4”**
- **#10-24 X 1-1/8”**
- **Surface mount or sex bolts (1-3/4” door)**
- **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
- **#8-32 X 5/16”**
- **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 (CL).

See “Backset information” on page 9.

Once hung, door should have 1/4” undercut (gap) at bottom of door to finished floor.

RHR shown (LHR opposite).

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

For wood doors - See pages 13 & 14 for special door preparation instructions.

Prepare mounting holes and cut-outs per template.

Paper template
Metal - pg. 11 & 12
Wood - pg. 15 & 16

See trim instructions for pull side door preparation.

RHR shown (LHR opposite).

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

Latch cases (drill top and bottom of door)

Fire device (metal door)

Panic device (metal door)

Panic and fire (wood door)

4. Drill ratchet release hole in door.

<table>
<thead>
<tr>
<th>Stop height</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2” Stop height</td>
</tr>
<tr>
<td>5/8” Stop height</td>
</tr>
<tr>
<td>3/4” Stop height</td>
</tr>
</tbody>
</table>

11/16” 13/16” 15/16”

Drill 1/2” dia. hole (inside face of door)

Reinforcing required
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

Cut device square and remove all burrs

6 Cut device to length.

Prepare device for cutting

Tape

Anti-rattle clip (remove while cutting)

Cover plate (flush to pushbar)

Pushbar

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

Total rod length (with latch bolt extended)

Subtract 1-9/16"

Fine tune the total length by threading latches in or out of rods

Total rod length (with latch bolt extended)

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.

CAUTION:
L-brackets must be installed in orientation shown

NOTE: Fire devices on metal doors use brackets on both sides of latches

Top latch & rod

Bottom latch & rod

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

10. Secure device to door and mount door to frame.

11. Install top strike and ratchet release.

12. Install bottom strike or prepare threshold.

Threshold application

Note: Thresholds are not to be used with 33/3547A-F.

Flat threshold application

Remove material as necessary to accommodate 5/8" latch bolt throw.
ADJUST RODS

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 latchbolt is not held retracted
- Bottom latchbolt does not retract or clear floor and bottom strike

15. Install end cap and center case covers.

Remove protective film from pushbar
### FRAME PREPARATION

#### 338 Top strike

- **Latch case**
- **Latch bolt RHR door**
- **Latch bolt LHR door**

**Beveled edge**
- Should face this direction in relation to doors

**Double door application**
- Doors swing out this direction

**Beveled edge**
- 82° csk. x 3/8” dia. in frame

**1-5/16”**
- 13/32”
- 13/16”
- 1-5/8”

**1-7/8”**
- 15/16”
- 1-5/16”
- 21/32”
- 15/16”

**Frame Preparation**
- Doors swing out this direction

#### Ratchet release

- **Latch case**
- **#25 Drill**
- **#10-24 tap, 2 places**

**Plugger must go thru hole in door.**

Adjust so plunger releases latch bolt when door is closed.
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**

**Dogging procedure**

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

**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 (panic)</td>
</tr>
<tr>
<td></td>
<td>1-1/2”</td>
<td>2-3/4” - 3-3/4”</td>
<td></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>1-1/2”</td>
<td>2-1/8” - 3-3/4”</td>
<td>Single door (panic)</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>Fire applications</td>
</tr>
</tbody>
</table>

**SPECIAL INSTRUCTIONS FOR 2” STILE DOORS**

For 2” stile doors ONLY! Latch $\mathcal{C}$ is offset 1/8” from Device $\mathcal{C}$ as shown
METAL DOOR RHR
33/3547A Device template

1/8" Radius

Cut-outs device side only

3-1/8" 2-7/8"

1-3/8"

1-3/4"

3-1/8"

13/16"

13/32"

1/4"

1/4"

7/8"

19/32"

RHR

X

Backset

See “Backset Information” on page 9

5/16" drill inside
13/32" drill outside

5/16" drill inside
1/2" drill outside

Sex bolts

Trim

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.
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

3-1/4” Minimum

2" Minimum

1/4”

4”

1/2” Maximum thickness blocking shown this view only. Not provided by Von Duprin.

Device and latch

1-3/4” door

2-1/4” door

1-5/16” Backset

13/16” 2 Places

13/32”

2-7/8” 7/8”

2-7/8” 7/8”

Slot thru inside face only

1/8” Radius

19/32”

1/4”

7/8” To Device and latch

11/16” Reference top & bottom

1-7/16” Minimum top & bottom

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

1/8” radius

Cut-out device side only

13/32” drill thru

1/2” drill thru

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.
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

1/8" radius

Cut-out device side only

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