This instruction covers new installation of the 33/3549A concealed vertical device for aluminum and hollow metal doors.

Also covered is the CS 33/3549A retrofit cabling system for converting 33/3547A Series to 33/3549A Series (compatible with models 33/3547A, 33/3547A-F, 33/3547A-LBR, and 33/3547A-F-LBR).

AL = for Aluminum Door applications
HM = for Hollow Metal Door applications
RF = for Hollow Metal Door Retrofit applications

Customer Service
1-877-671-7011 www.allegion.com/us
1 Identify Cables and Locations.
(If not preinstalled in door)

For easy identification, each cable is labeled with part number and location.

<table>
<thead>
<tr>
<th>Cable Identification (Standard Sizes)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HOLLOW METAL AND WIDE STILE ALUMINUM DOORS</strong></td>
</tr>
<tr>
<td>Door Opening Height</td>
</tr>
<tr>
<td>---------------------</td>
</tr>
<tr>
<td>6' 8&quot;</td>
</tr>
<tr>
<td>7' 0&quot;</td>
</tr>
<tr>
<td>8' 0&quot;</td>
</tr>
<tr>
<td>9' 0&quot;</td>
</tr>
<tr>
<td>10' 0&quot;</td>
</tr>
</tbody>
</table>

2 Install Cable(s).

a. Position red cable end to clip on center slide

b. Pull cable into clip to snap it into place

IMPORTANT: Ensure cable end is fully seated in clip

c. Push cable snap against center slide to secure cable

d. In the same way, install opposite end of red cable to top latch in the position marked red

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CABLE REMOVAL

A cable removal tool has been provided. Slot in tool fits over cable, holding tabs down. Pull on cable snap to loosen cable for removal.

For 2-Point Latch Only

e. There is an adjuster on one end of the white cable. Install this end to the remaining top latch position (marked as white)

IMPORTANT: Ensure cable end is fully seated in clip

f. Install opposite end of white cable to bottom latch
3 Determine if Bottom Latch Retraction Adjustment is Necessary.  
**For 2-Point Latch Only**

a. Flex the cable into an L-shape as shown to simulate the installed condition of the latches.

b. To determine whether an adjustment is required, actuate the top latch to the hold-open position by pressing down on the connecting rod. Bottom latch should retract to within $\frac{1}{16}$ of flush. If it does not, an adjustment is necessary.

4 Adjust Bottom Latch Retraction (if necessary).  
**For 2-Point Latch Only**

a. While holding the snap-fitting with a $\frac{3}{8}$" wrench, use a 10mm wrench to break loose the lock nut.

b. While holding the lock nut in place, rotate the barrel of the snap-fitting clockwise by hand until the bottom latch is retracted to within $\frac{1}{16}$ of flush.

c. While holding the conduit cap with a $\frac{3}{8}$" wrench, use a 10mm wrench to turn the lock nut in a clockwise direction to close the gap between the lock nut and snap-fitting. Stop when the gap is closed and the snap-fitting begins to turn with the locknut.

d. While holding the snap-fitting with a $\frac{3}{8}$" wrench, continue to tighten the locknut until it is secure.

**NOTE:** Adjustment must be made while the top latch is in the hold-open position, with cable flexed into an L-shape to simulate the installed condition of the latches.
5 If Retrofit Installation
   a. Remove device from existing door.
   b. Remove and discard existing door.
   c. Remove and discard existing strikes.

6 With Door Laying Flat, Draw Horizontal and Vertical Device Center Lines (€).

7 Align Paper Template to Mark and Prepare Door, if Required.

8 Assemble Latch Mounting Brackets. Hollow Metal

9 Prepare Access Hole for Bottom Latch Adjustment Pin. Hollow Metal For 2-Point Latch Only
10 If Necessary, Prepare Door for Top Strike Cutout.

Push side of door, RHR shown

13 If Using 360/386/388 Thru-Bolting Trim, Remove Center Slide Mounting Nut.

Thru-bolting trim uses standoffs (360L trim shown)

11 Prepare Top of Door for Latch Mounting.

Aluminum

Push Side of Door

12 Prepare Bottom of Door for Latch Mounting.

Aluminum For 2-Point Latch Only

Push Side of Door

14 Slide Latch and Center Slide Assembly thru Door.

NOTE: Confirm top latch (and bottom latch, if applicable) is in correct orientation before proceeding.

1-Point Latch (LBL)

Holes should face push side of door

2-Point Latch

Holes should face push side of door

Aluminum Door application shown

NOTE: It is normal for the cable to bend inside the door, forcing the latch outward.
15 Secure Center Slide to Door.

Secure center slide to door by lightly tightening lower screw.

Align upper hole visually.

Insert small screwdriver into upper hole to prevent center slide from rotating.

Fully tighten lower screw.

16 Align Bottom Latch and Install Mounting Screws.

**Aluminum For 2-Point Latch Only**

17 Secure Top Latch with 2 Screws.

**Aluminum**

18 Install Bottom Latch Mounting Bracket Assembly.

**Hollow Metal For 2-Point Latch Only**

- **NOTE:** Confirm correct orientation of assembly before proceeding. Open side of housing should face pull side of door.

- **NOTE:** Use 2 screws per bracket (center hole not used for this application).

- If using ¾” undercut door, 2 spacer blocks are required.

- **NOTE:** Spacer Block Kit (24231516) purchased separately.
19 Insert Latch Adjustment Pin to Hold Bottom Latch in Place.
Hollow Metal For 2-Point Latch Only

Pin must go thru both sides of bracket

Bottom edge of latch housing should be flush with bottom of door (for 3/4" standard undercut)

a Assemble pin
b Squeeze tabs on cap, then insert pin

20 Secure Top Latch Mounting Bracket.
Hollow Metal

NOTE: It is normal for the cable to bend inside the door, forcing the latch outward as shown here.

#25 #10-24

NOTE: Use 2 screws per bracket (center hole not used for this application).

21 Hang Door on Frame.

CAUTION: For 2-point latches, bottom latch cannot be in locked position while hanging door on frame. Latch must be retracted.

22 If Necessary, Cut Device.

Door

Temporarily Remove Anti-Rattle Clip

Cover Plate Flush

1 1/4" (38 mm) Recommended

23 Attach Center Case to Door.

Block may need to be pushed down to insert screw

Top mounting screw is secured into upper hole of center slide

NOTE: If using 360/386/388 trim, this screw will pass thru top center slide hole and secure directly into trim.

Thru-bolting Trim

Sex Bolt

OR

(1 3/4" door)

(2 1/2" door)

(Bottom hole only)
24 Mark and Prepare 2 Holes.

![Diagram showing hole preparation for strike installation]

- Surface Mount (metal doors only)
  - #25
  - #10-24

OR

Sex Bolts
- ¼" (device side)
- ⅛" (trim side)

25 Install End Cap Bracket and End Cap.

- Surface Mount or Sex Bolts
  - (1¾" door)
- Sex Bolts
  - (2¼" door)

26 If New Installation, Prepare Door Frame for Top Strike.

- Use strike to mark location of 2 holes
- ¼"

Edge of stop

27 If Retrofit Installation, Install Steel Cover Plate to Cover Existing 338 Strike Opening in Accordance with the Frame Manufacturer’s Fire Listing.

![Diagram showing cover plate installation]

- Strike Filler Plate
  - (3FP0116A001-GL)
purchased separately

28 Install 2 Top Strike Screws Using the Slot Features on the Strike.

![Diagram showing screws installation]

29 Prepare Floor for Bottom Strike.

Hollow Metal For 2-Point Latch Only

- Chisel out pocket
- ¼" Deep
- ⅛"

Pull Side

- ¾" x 1¾" Deep
- 2 places

Push Side

- ¾"
- 1" x 1"

- ⅛" Drill
- Pilot 1" Deep x2

- Metal
  - #25 x ⅛" Deep x2
  - #10-24

- Wood
  - ¼" Drill
30 Install Bottom Strike.
Hollow Metal For 2-Point Latch Only

Clear holes of debris, then drop in anchors (slotted end first).

Secure the anchors using a hammer and punch.

IMPORTANT: Anchors must be below flush.

Install strike plate and secure with 2 screws.

31 Prepare Threshold.
Aluminum For 2-Point Latch Only

a. After closing door with bottom latch installed, mark the location the bottom latch bolt is contacting the threshold.

b. Drill a ⅜" diameter hole in the threshold.

32 Install Lift Finger and Retainer Clip.

NOTE: The lift finger installation and adjustment must be performed while the latches are in the extended (latched) position.

Slide L-shaped lift finger thru block in device center case and then into center slide.

For 2-Point Latch Only

Push cable to the side so it does not interfere with lift finger.

Insert adjustment screw through top slot and rotate with screwdriver to raise lift finger until it is snug against block.

Lift finger must insert into center slide here.

Install retainer clip against lift finger, snapping it into the slot of the adjustment screw.

Secure lift finger and retainer clip with screw.

33 Adjust Lift Finger.

NOTE: Lift finger adjustment must be performed while the latches are in the extended (latched) position.

Loosen retainer clip screw

Loosen adjustment screw until the lift finger drops and you feel contact with the center slide

Tighten retainer clip screw
34 Perform Functional Test of Door.
   a. Depress pushbar. Door should begin to open when pushbar is nearly fully depressed. If necessary, refer to Step 33 to readjust lift finger.
   b. With door closed, top latch should be secure.

   **For 2-Point Latch Only**
   c. With door closed, bottom latch should be secure.
   d. Confirm that bottom latch does not drag against floor when door is opened.

   **Hollow Metal For 2-Point Latch Only**
   If this occurs, remove latch adjustment pin and raise latch, then reinsert pin in next notch.

   - Pin must go thru both sides of bracket
   - To remove pin, slide a screwdriver beneath the latch adjustment pin cap

35 Adjust Top Strike as Necessary, then Install the Third Strike Screw to Fix the Strike Position.

36 Install Center Case Cover.

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**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.

**CD function conversion**

- Std. mortise cylinder
- Mortise cylinder cam

**Dogging procedure**

- Turn cylinder key approximately ⅛ turn for standard dogging
- Depress pushbar

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**Figure 1**

**Figure 2**
ALUMINUM AND HOLLOW METAL DOORS - RHR
33/3549A Device Template

Device Side only

8 3/16"

6 1/4"

1 5/8"

1 9/16"

7/8"

3 7/8" 2 7/8"

Device Side only

1/8" Radius (4 places)

1/8" Radius (8 places)

13/16"

19/32"

13/32"

39 5/8" to finished floor

NOTE: Consult aluminum door manufacturer to confirm backset compatibility.

A = stile width

B = backset

RHR

A

C

Device

D

33/3549A

Installation

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 1/4&quot; to 2 1/2&quot;</td>
<td>1 13/16&quot;</td>
</tr>
<tr>
<td>2 3/4&quot; to 3 1/4&quot;</td>
<td>1 1/2&quot;</td>
</tr>
<tr>
<td>3 3/4&quot; to 5 &quot;</td>
<td>1 7/8&quot;</td>
</tr>
<tr>
<td>5&quot; to flush</td>
<td>2 1/2&quot;</td>
</tr>
</tbody>
</table>

single door

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 1/2&quot; to 3 1/4&quot;</td>
<td>1 1/2&quot;</td>
</tr>
<tr>
<td>3 3/4&quot; to 5 &quot;</td>
<td>1 7/8&quot;</td>
</tr>
<tr>
<td>5&quot; to flush</td>
<td>2 1/2&quot;</td>
</tr>
</tbody>
</table>

NOTE: Use of outside trim may alter minimum stile requirement. See trim template.

A = stile width

B = backset

82° Csk to 3/8" Dia.

Aluminum Door

1/4" Dia. (Device Side only)

Hollow Metal Door

1/4" Dia. (Device Side only)

Sex Bolt (for bottom hole only)

1/8" (device side)

7/32" (trim side)

Thru-Bolting Trim

1/8" (device side)

7/32" (trim side)
**Device C**

- **33/3549A Device Template**

<table>
<thead>
<tr>
<th>Installation</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1(\frac{3}{8})&quot;</td>
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<tr>
<td></td>
<td>2(\frac{3}{4})&quot; to 3(\frac{3}{4})&quot;</td>
<td>1(\frac{5}{8})&quot;</td>
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<tr>
<td></td>
<td>3(\frac{3}{4})&quot; to 5&quot;</td>
<td>1(\frac{7}{8})&quot;</td>
</tr>
<tr>
<td></td>
<td>5&quot; to flush</td>
<td>2(\frac{1}{2})&quot;</td>
</tr>
<tr>
<td>single door</td>
<td>2(\frac{1}{2})&quot; to 3(\frac{3}{4})&quot;</td>
<td>1(\frac{3}{8})&quot;</td>
</tr>
<tr>
<td></td>
<td>3(\frac{3}{4})&quot; to 5&quot;</td>
<td>1(\frac{7}{8})&quot;</td>
</tr>
<tr>
<td></td>
<td>5&quot; to flush</td>
<td>2(\frac{1}{2})&quot;</td>
</tr>
</tbody>
</table>

**NOTE:** Consult aluminum door manufacturer to confirm backset compatibility.

<table>
<thead>
<tr>
<th>33/3549A-F</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>3(\frac{3}{4})&quot; Min.</td>
<td>2(\frac{3}{4})&quot;</td>
</tr>
</tbody>
</table>

- Use of outside trim may alter minimum stile requirement. See trim template.

**Aluminum Door**
- ¼" Dia. (Device Side only)
- $82^\circ$ Csk to ¾" Dia.

**Hollow Metal Door**
- ¼" Dia. (Device Side only)
- $82^\circ$ Csk to ¾" Dia.

**Sex Bolt (for bottom hole only)**
- 9/32" (device side)
- 13/32" (trim side)

**Thru-Bolting Trim**
- 9/32" (device side)
- ¼" (trim side)