PREPARATION FOR WOOD DOOR

Applications | Dimension
---|---
Exit Only | 13/32" (10.3mm) Drill
Door Only | 1/8" (3mm) Pilot 1" Deep

RHR shown (LHR opposite)

Patent No. 7,634,927 7,748,757
D623,499 7,836,738 7,887,107
and other patents pending.
SPECIAL TOOLS REQUIRED

<table>
<thead>
<tr>
<th>Tool</th>
<th>Size/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hex Wrench</td>
<td>5/64&quot;</td>
</tr>
<tr>
<td>Tap</td>
<td>#8-32,#10-24</td>
</tr>
<tr>
<td>Drill Bits</td>
<td>#25, 1/8&quot;, 1/4&quot;, 5/16&quot;, 13/32&quot;</td>
</tr>
<tr>
<td>Spade Drill</td>
<td>5/8&quot; (For Wood Door)</td>
</tr>
</tbody>
</table>

OPTIONAL DOGGING

Cut Device (If Required)

Minimum recommended clearance between frame and device end (with end cap removed) is 1-1/2".

1. With anti-rattle clip removed, tape and mark area being cut.
2. Cut off device and deburr.

NOTE: Device must be cut perpendicularly for proper end cap fit.
### INSTALL FIRE BOLT

- Install fire bolt on edge of door 4"-6" from finished floor as shown. Drill 4 Holes and TAP (#8-32).

**NOTE:** Fire rated device with less bottom rod (LBR) applications must use FIRE BOLT.

### CUT TOP ROD / EXTEND TOP ROD

**CUT TOP ROD**

- Step 1: Cut off the rod to fit the door's dimension. Measure from flat end.
- **NOTE:** Rod cutting is required for doors shorter than 7'.

- Step 2: Tap #1/4-20; 1" deep.

**EXTEND TOP ROD**

- Install rod extension & spring washer to connect two(2) rods tightly.

### SCREW CHART

<table>
<thead>
<tr>
<th>SCREW CHART</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>APPLICATION</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Center Case Screws</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>End Cap Bracket Screws</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Plunger Screws</td>
</tr>
<tr>
<td>216 Strike Screws</td>
</tr>
<tr>
<td>225 Strike Screws</td>
</tr>
<tr>
<td>Top / Bottom Latch Screws</td>
</tr>
<tr>
<td>227 Strike Screws</td>
</tr>
<tr>
<td>Side Screws</td>
</tr>
<tr>
<td>Top / Bottom Rod Screws</td>
</tr>
<tr>
<td>End Cap Screws</td>
</tr>
<tr>
<td>Cover Screws</td>
</tr>
</tbody>
</table>

**CUT TOP ROD / EXTEND TOP ROD**

- **Step 1:** Cut off the rod to fit the door's dimension. Measure from flat end.
- **Step 2:** Tap #1/4-20; 1" deep.

**NOTE:** Rod cutting is required for doors shorter than 7'.

<table>
<thead>
<tr>
<th><strong>CUT TOP ROD</strong></th>
<th><strong>EXTEND TOP ROD</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount to Cut Off</td>
<td>Top Rod Length</td>
</tr>
<tr>
<td>Actual Door Opening Height</td>
<td>Top Rod Length</td>
</tr>
<tr>
<td>For 7' High door</td>
<td>23-37/32&quot; (605mm)</td>
</tr>
<tr>
<td>For 8' High door</td>
<td>51-5/32&quot; (1305mm)</td>
</tr>
<tr>
<td>For 9' High door</td>
<td>51-5/8&quot; (1318mm)</td>
</tr>
</tbody>
</table>

**NOTES:**
- **Fire Bolt:** INSTALL FIRE BOLT 4"-6" from finished floor as shown. Drill 4 Holes and TAP (#8-32).
- **Fire Rated Device:** Fire rated device with less bottom rod (LBR) applications must use FIRE BOLT.
- **Fire Bolt Installation:** Install fire bolt on edge of door 4"-6" from finished floor as shown. Drill 4 Holes and TAP (#8-32).

### Rod Extension Specifications

- **Top Rod Length Specification**:
  - For 7' High door: 23-37/32" (605mm)
  - For 8' High door: 51-5/32" (1305mm)
  - For 9' High door: 51-5/8" (1318mm)

### Cut Top Rod / Extend Top Rod

- Cut off the rod to fit the door's dimension. Measure from flat end.
- Tap #1/4-20; 1" deep.

### Install Fire Bolt

- Install fire bolt on edge of door 4"-6" from finished floor as shown. Drill 4 Holes and TAP (#8-32).

**NOTE:** Fire rated device with less bottom rod (LBR) applications must use FIRE BOLT.
**DOOR PREPARATION CHART**

**TOP STRIKE**

<table>
<thead>
<tr>
<th>Material</th>
<th>#25 Drill</th>
<th>#10-24 Tap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal</td>
<td>#25 Drill</td>
<td>#10-24 Tap</td>
</tr>
<tr>
<td>Wood</td>
<td>1/8&quot; Drill</td>
<td>Pilot 1&quot; Deep</td>
</tr>
</tbody>
</table>

**CENTER CASE - 4 HOLES**

<table>
<thead>
<tr>
<th>Surface Mount</th>
<th>Sex Bolts or Trim</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal</td>
<td>1/4&quot; Drill (Device Side)</td>
</tr>
<tr>
<td></td>
<td>13/32&quot; Drill (Trim Side)</td>
</tr>
<tr>
<td>Wood</td>
<td>1/8&quot; Drill (Device Side)</td>
</tr>
<tr>
<td></td>
<td>13/32&quot; Drill Thru</td>
</tr>
</tbody>
</table>

**END CAP BRKT - 2 HOLES**

<table>
<thead>
<tr>
<th>Surface Mount</th>
<th>Sex Bolts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal</td>
<td>1/8&quot; Drill (Device Side)</td>
</tr>
<tr>
<td></td>
<td>Pilot 1&quot; Deep</td>
</tr>
<tr>
<td>Wood</td>
<td>1/8&quot; Drill (Device Side)</td>
</tr>
<tr>
<td></td>
<td>Pilot 1&quot; Deep</td>
</tr>
</tbody>
</table>

**DOOR CUT-OUTS**

- Outward Cylinder Applications: Mark with Template and Cut Out (5/8" Dia.)
- Trace Cut-Outs from Template (Cut Device Side Only)

**LATCH HOLE PREPARATION**

(Drill Top and Bottom of Door)

<table>
<thead>
<tr>
<th>Vertical 1 of Device</th>
<th>1.5/8&quot;</th>
<th>1.5/8&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5/8&quot;</td>
<td>1.5/8&quot;</td>
<td>1.5/8&quot;</td>
</tr>
<tr>
<td>1.5/8&quot;</td>
<td>1.5/8&quot;</td>
<td>1.5/8&quot;</td>
</tr>
</tbody>
</table>

Cut Out for Latchbolt - 1-1/2"

**FRAME PREPARATION**

**216 STRIKES**

**FRONT VIEW**

- Bottom Latch Bolt (Clears floor and strike)
- Reinforcing required

**RELEASE PLUNGER**

- Edge of Stop
- Inside View
- Double Door Application
- Reinforcing required

Plunger must go thru hole in door. See "Step 4" on page 5.

**ADJUST LATCHES AND SECURE TOP & BOTTOM LOCKING SCREWS.**

1. Depress push bar to retract the latch bolt and open the door.
2. Check top latch for HOLDBACK (Latchbolt stays retracted in latch case). See Figure 1
3. Loosen top locking screw.
4. Rotate top adjustment screw until top latchbolt is fully retracted.
5. Release top latchbolt. See Figure 2
6. Check top latchbolt for DEADLOCK (Latchbolt should not push in).
7. Rotate top adjustment screw until top latchbolt is in DEADLOCK.
8. Tighten top locking screw.
9. Depress push bar and retract latchbolt.
10. Make sure top latchbolt stays retracted as shown. See Figure 1
11. Loosen bottom locking screw.
12. With top latchbolt still retracted, adjust bottom rod by rotating bottom adjustment screw, so latchbolt clears floor and bottom strike in HOLDBACK. See Figure 3
13. Release top latchbolt. See Figure 2
14. Check bottom latchbolt for DEADLOCK.
15. Tighten bottom locking screw.
16. Open and close door several times and check device operation and function of DEADLOCK & HOLDBACK.

**SIDE VIEW**

- Bottom Latch Bolt (Clears floor and strike)
**Cover**

Attach cover to center case with two(2) center case screws.

**Install Bottom Strike.**

1. Mark floor for fasteners, prepare floor according to the type of strike and fastener furnished. Provide clearance in floor for bolt.
2. For threshold application:
   - Provide hole in threshold according to type of strike and fasteners furnished.

**Prepare Door for Device and Top & Bottom Latch.**

- See "DOOR PREPARATION CHART" on page 4 for drill tap, and cut-out information.

**Drill Top of Door for Release Plunger.**

- See "FRAME PREPARATION" on page 9 for cut-out and holes. After preparing, install top strike into door frame and mount two(2) strike screws.

**Hang Door and Install Top Strike & Release Plunger.**

- See "FRAME PREPARATION" on page 9 for cut-out and holes. After preparing, install release plunger with two(2) plunger screws.

**Install Case Cover.**

- Remove protective film from push bar.
- Attach cover to center case with two(2) center case screws.

**Draw Horizontal Device Center Line(\(G_1\)).**

- Lay door in place and draw horizontal device center line as shown.

**Draw Vertical \(G_1\) & Mark Backset.**

- Position template as shown, then mark vertical center line for device center case.

**227 Strike Hole Preparation**

- See "DOOR PREPARATION CHART" on page 4 for drill tap, and cut-out information.
5 DETERMINE USE OF NL DRIVE SCREW.

NL drive screw is factory assembled in cam on back of device center case, when the NL drive screw is left in back of center case, the outside cylinder will function only as a Night Latch.

NOTE: 1. DO NOT remove NL drive screw for Pull Plate or Escutcheon with night latch cylinder.
2. REMOVE NL drive screw from back of center case when installing trim that has a functional lever, knob, or thumbpiece AND an outside cylinder to lock and unlock the trim.

6 ATTACH RODS TO LATCHES.

Thread rod onto latch stud until screw holes in rod bars face center case.

7 INSTALL RODS AND LATCH.

1. Install top latch and latch screws from top of door.
2. Install bottom latch and latch screws from bottom of door.
3. Fine tune the overall length by threading latch in or out of rod.

8 INSTALL CONNECTORS.

After adjusting the lengths, install connectors on both concealed rods with rod screws.

9 INSTALL TRIM (IF USING) AND SECURE DEVICE CENTER CASE TO DOOR.

2" Minimum clearance (with end cap removed) if device is too long for door, see "CUT DEVICE" on page 11.

1. DEVICE WITH TRIM - See "Trim Instructions".
2. CYLINDER ONLY - Install cylinder with cylinder back plate as shown. Make sure the tailpiece is extending 1/2" from the inside face of door. Insert tailpiece into cam in the center case and mount it to the door with four(4) center case screws.
3. EXIT ONLY - Mount center case to the door with four(4) center case screws.

10 INSTALL MOUNTING BRACKET AND END CAP.

1. Remove cover plate, insert end cap bracket into push bar assembly against mechanism case. Level device, mark and drill two(2) holes for Bracket Screws. Fasten end cap bracket screws to door.
2. Insert cover plate, slide anti-rattle clip in position(2" minimum from end), and attach end cap with two(2) end cap screws.

11 INSTALL SIDE SCREWS.

1. Make sure both latchbolts are extended.
2. Apply both sides "side screws" through round holes in connector with threaded holes in retractors and tighten.

NOTE: Both sides of connectors and retractors must have side screws installed.