THIS PRODUCT MEETS THE REQUIREMENTS OF THE SOUTH FLORIDA BUILDING CODE CHAPTER 32.
DESIGN RATING: 65 PSF.

ONLY 992L/BE/L-DT, 994L/BE/L-DT, OR 990DT TRIM CAN BE USED WITH THIS PRODUCT. NO NL FUNCTION TRIM.
REFER TO CATALOG FOR OUTSIDE TRIM OPTIONS.

ONLY LX, ALK, AND SS ELECTRICAL OPTIONS ARE AVAILABLE.

INDEX:
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- PREPARATION CHART .............. 6
- CUT TOP ROD ......................... 7
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- CUT DEVICE .......................... 8
- CD (CYLINDER DOGGING) .......... 9
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SPECIAL TOOLS NEEDED:
5/64” HEX WRENCH
#10-24 TAP
DRILL BITS: #25, 1/8”, 1/4”,
5/16”, 13/32”

This product is covered by the following patent numbers:

3,767,238  4,427,223
3,854,763  4,466,643
4,167,280  4,741,563
### SCREW CHART

#### A

<table>
<thead>
<tr>
<th>Screw</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>#10-24 x 1”</td>
<td>SURFACE MOUNT OR SEXBOLTS (1-3/4” DOOR)</td>
</tr>
<tr>
<td>#10-24 x 1-1/2”</td>
<td>SEXBOLTS (2-1/4” DOOR)</td>
</tr>
<tr>
<td>#10 x 1-1/4” WOOD SCREW</td>
<td>SURFACE MOUNT (WOOD)</td>
</tr>
</tbody>
</table>

**- Packaged with trim -**

<table>
<thead>
<tr>
<th>Screw</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#10-24 x 1-3/8”</td>
<td>990 TRIMS (1-3/4” DOOR)</td>
</tr>
<tr>
<td>#10-24 x 1-7/8”</td>
<td>990 TRIMS (2-1/4” DOOR)</td>
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#### B

<table>
<thead>
<tr>
<th>Screw</th>
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<tbody>
<tr>
<td>#10-24 x 3/4”</td>
<td>SURFACE MOUNT OR SEXBOLTS (1-3/4” DOOR)</td>
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<tr>
<td>#10-24 x 1-1/8”</td>
<td>SEXBOLTS 2-1/4” DOOR</td>
</tr>
<tr>
<td>#10 x 1-1/4” WOOD SCREW</td>
<td>SURFACE MOUNT (WOOD)</td>
</tr>
</tbody>
</table>

#### C

<table>
<thead>
<tr>
<th>Screw</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#10-16 x 3/8” THREAD CUTTING</td>
<td>END CAP</td>
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#### D

<table>
<thead>
<tr>
<th>Screw</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4-20 x 3/4”</td>
<td>1-3/4” DOOR</td>
</tr>
<tr>
<td>1/4-20 x 1-1/4”</td>
<td>2-1/4” DOOR</td>
</tr>
</tbody>
</table>

#### E

<table>
<thead>
<tr>
<th>Screw</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#10-24 x 3/4”</td>
<td>METAL FRAME</td>
</tr>
<tr>
<td>#10 x 1-1/4” WOOD SCREW</td>
<td>WOOD FRAME</td>
</tr>
</tbody>
</table>

#### F

<table>
<thead>
<tr>
<th>Screw</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#8-32 x 1/4”</td>
<td>LATCH COVERS</td>
</tr>
</tbody>
</table>

#### G

<table>
<thead>
<tr>
<th>Screw</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#10-12 x 10-24 x 1” COMBINATION</td>
<td>METAL OR WOOD DOOR</td>
</tr>
</tbody>
</table>

#### H

<table>
<thead>
<tr>
<th>Screw</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#8-18 x 3/8” THREAD CUTTING</td>
<td>CENTER CASE COVER</td>
</tr>
</tbody>
</table>
1. **Draw Horizontal Center Line (C) and Assemble Device Template.**

2. **Position Template as Shown and Mark Vertical C.**

   - Draw vertical center line from points on template.
   - 2 3/16" standard backset (from outermost edge of door).

3. **Align Top and Bottom Templates Along Center Line, Then Mark and Prepare Door.**

   - See "Preparation Chart" on page 6 for drill, tap, and cut-out information.

4. **If Using an Outside Locking Cylinder, Install Tailpiece Guide.**

   - Use 499-F strike template (page 11).
   - Use 304L strike template (page 11).

   - Rotate tailpiece guide to match tailpiece.

   - Cylinder tailpiece length:
     - Cut tailpiece to 1/2" if needed.
5 Install trim (if using) and secure device center case to door.

- 1-1/2" minimum clearance (with endcap removed) if device is too long for door, see "cut device" on page 9

*Trim (optional)*

See "screw chart" on page 2 for screw types and sizes

6 Install mounting bracket and end cap.

*Mark and prepare 2 mounting holes*

See "preparation chart" on page 6 for preparation information

*Secure mounting bracket and end cap*

9 Adjust top rod (screw rod into or out of latch) until adjusted as shown.

*With door closed:*

  - Latch bolt deadlocked (will not push in)

*With door open:*

  - Latch bolt stays retracted

10 Install bottom strike, latch, and rod.

*304L strike*

- Grout strike into floor

- #325 sex bolts (required)

- Bottom rod

- Bottom latch

- Door open (top latch retracted)
7 INSTALL TOP LATCH AND ROD.

TOP LATCH

TOP ROD (LONGER OF THE TWO)

#325 SEX BOLTS (REQUIRED)

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

8 INSTALL TOP STRIKE.

3/16”

SHIM TO 3/16” AS SHOWN (IF SHIM IS NEEDED)

1/16”

#7 Drill 1/4”-20 TAP

#25 Drill #10-24 TAP

11 ADJUST BOTTOM ROD WITH DOOR OPEN (TOP LATCH RETRACTED).

WITH DOOR OPEN:

LATCH BOLT SHOULD CLEAR FLOOR AND NOT BIND ON STRIKE

WITH DOOR CLOSED:

LATCH BOLT SHOULD BE DEADLOCKED (WILL NOT PUSH IN)

OPEN AND CLOSE DOOR A FEW TIMES AND CHECK FOR DEADLATCHING WHEN DOOR IS CLOSED

READJUST RODS IF NEEDED

12 INSTALL ROD GUIDES AND COVERS.

*LATCH COVER(2)

*ROD GUIDE (2)

“SEE “PREPARATION CHART” ON PAGE 3

INSTALL AT MID POINT OF EACH ROD

REMOVE BLUE FILM

CENTER CASE COVER
PREPARATION CHART

GO TO INSTRUCTIONS ON NEXT PAGE BEFORE USING PREPARATION CHART

TOP STRIKE
- #25 DRILL
- #10-24 TAP

STRIKE HOOK
- #25 DRILL
- #10-24 TAP

*ROD GUIDES
- #25 DRILL
- #10-24 TAP

*INSTALL AT MID-POINT OF ROD

CENTER CASE - 4 HOLES

<table>
<thead>
<tr>
<th>SURFACE MOUNT</th>
<th>SEX BOLTS OR 990 SERIES TRIM</th>
</tr>
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<tbody>
<tr>
<td>#25 DRILL</td>
<td>1/4&quot; DRILL (DEVICE SIDE)</td>
</tr>
<tr>
<td>#10-24 TAP</td>
<td>13/32&quot; DRILL (TRIM SIDE)</td>
</tr>
</tbody>
</table>

*END CAP BRKT. - 2 HOLES

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<th>SURFACE MOUNT</th>
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</table>

*PREPARE HOLES AFTER LOCK SIDE OF DEVICE IS MOUNTED AND HINGE SIDE OF DEVICE IS LEVELED

DOOR CUT-OUTS

OUTSIDE CYLINDER APPLICATIONS:
MARK WITH TEMPLATE AND CUT OUT:
METAL DOOR (CUT DEVICE SIDE)
WOOD DOOR (CUT THRU)

FOR TRIM APPLICATIONS WITH WORKING LEVER, THUMBPIECE, OR KNOB:
MARK WITH TEMPLATE AND CUT OUT:
(CUT DEVICE SIDE ONLY)

IF DOOR ALREADY HAS THIS CUT-OUT FOR TRIM, NO FURTHER CUTTING IS NECESSARY

BOTTOM STRIKE
- GROUT STRIKE INTO FLOOR
CUT TOP ROD

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

RODS ARE FACTORY SIZED FOR 7’ (84”) DOOR. MEASURE ACTUAL DOOR HEIGHT AND SUBTRACT THAT NUMBER FROM 84” TO GET AMOUNT TO CUT OFF TOP ROD.

2. Cut rod.

3. Drill new hole.

4. Reinstall rod end and roll pin.

INSTALL ROD EXTENSION

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

   "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 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.

3. Drill new hole.

4. Reinstall rod end and roll pin.

5. Connect top rod and rod extension.
1 Measure amount to cut off device.

2 Tape and mark area being cut.

3 Cut device square.

4 Slide anti rattle clip into device.

1-1/2" minimum clearance (with endcap removed)

Device aligned with mounting holes

Remove anti rattle clip

Tape

Cover plate (flush to pushbar)

Pushbar

Cut device square and remove all burrs

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

2" min.

Anti rattle clip inside
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
LATCH AND STRIKE TEMPLATES

BOTTOM LATCH & 304L STRIKE

FOLD HERE

1-11/16" TO FINISHED FLOOR

2-9/16"

3/16" STRIKE

LATCH

304L STRIKE

1/8"

CUTOUT FOR 304L; 1-5/8" SQUARE 7/8" DEEP; START WITH FOUR 1/4" HOLES IN CORNERS

TOP LATCH & 499F STRIKE

FOLD HERE

13/16"

2-3/16"

2-9/16"

1-1/16"

1-3/16"

3/16"

LATCH

499F STRIKE