DOOR HARDWARE
SPECIFICATION GUIDELINE
SECTION 087100

January 2009
The purpose of this booklet is to support the District’s building standards for door hardware. The District maintains the following hardware and is currently stocking replacement parts. The products listed in this booklet are pursuant to Public Contract Code Section 3400. The following particular products are designated by brand name in order to match other products in use on a particular improvement, either completed or in the course of completion. No substitutions will be accepted for these products.

It is the intent of this booklet to provide guidelines for the architect’s specification section 087100, for product groups and the hardware schedule. It remains the architect's responsibility to coordinate these products to meet the applicable building codes, life safety codes, and ADA requirements.

Section 087100 door hardware preamble must specify the following:

Door and frame prep
Before hardware installation, verify that all doors and frames are properly prepared to receive the specified hardware. Hollow metal frames shall be prepared for ANSI strike plates per A115.1-2 (4-7/8” high), hinge preps will be mortised and reinforced with a minimum of 8 gauge reinforcement material for closer installation. Hollow metal doors shall be properly prepared and reinforced with a minimum or 16 gauge material for either mortised or cylindrical locks as specified. It is preferred that all hollow metal doors receiving door closers have 12 gauge reinforcement. If this is not possible, the use of sex bolts is mandatory. Wood doors shall be factory prepared to receive the scheduled hardware.

Hardware installation
The manufacturer’s representative for the locking devices and closing devices must inspect and approve, in writing, the installation of their products. Hardware installed incorrectly must be reported to the architect prior to the architect’s final punch list.
# DOOR HARDWARE

<table>
<thead>
<tr>
<th>Description</th>
<th>Manufacturer</th>
<th>Model / Series</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hanging Devices</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butt Hinge</td>
<td>Ives</td>
<td>5BB1HW x NRP</td>
<td>630</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5BB1</td>
<td>652</td>
</tr>
<tr>
<td><strong>Securing Devices</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lock Set</td>
<td>Schlage</td>
<td>Cylindrical Locks</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ND Series x Rhodes:</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ND66TD Store Lock</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ND82TD Institution Lock</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ND85PD Single Stall Staff Restroom Lock</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ND91TD Office Lock</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ND91TD Single Student Restroom Lock</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ND94TD Multi Student Restroom Lock</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ND95TD Classroom Security Lock</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ND96TD Storeroom Lock</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ND96TD Multi Staff Restroom Lock</td>
<td></td>
</tr>
<tr>
<td>Card Access/Lock</td>
<td>Schlage</td>
<td>RX-ND80TDEUxN123-062</td>
<td>US26D</td>
</tr>
<tr>
<td>Schlage</td>
<td></td>
<td>Use Schlage Electric Locks on new projects</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use Von Duprin 6000 Series electric strikes when existing doors and frames remain</td>
<td></td>
</tr>
<tr>
<td>Exit Device</td>
<td>Von Duprin</td>
<td>CD99L x 996L</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CD99L x 996L x CD99L-DT x 996L-DT</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>x SNB x KR4954 Mullion x154 (at pairs)</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>99L-2-F-996L-NL-R (F-rated single doors)</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>99L-2-F-996L-NL-R x 99EO-F x KR9954 Mullion x 154 (F pairs)</td>
<td>US26D</td>
</tr>
<tr>
<td>Card Access/Exit</td>
<td>Von Duprin</td>
<td>RX-LD-E99LxE996LxFSE (Single Access Control Doors)</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RX-E99L-F-E996LxFSE (Single Access Control Fire Rated Doors)</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RX-LD-E99LxE996L xFSERX-LDxE99LBEExE996LBExFSE US26D</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>xSNBxKR4954 Mullion x 154 (at pairs Access Control)</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RX-E99L-F-E996LxFSE RX-E99LBE-FxE996LBExFSE x</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KR9954 Mullion x 154 (Fire Rated pairs Access Control)</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use Von Duprin Electric Unlocking Trims on new projects</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use HES9500 electric strikes at pair of doors with existing center mullions</td>
<td></td>
</tr>
<tr>
<td>Cabinet Locks</td>
<td>Schlage</td>
<td>CL Series</td>
<td>US26D</td>
</tr>
<tr>
<td>Padlocks</td>
<td>Schlage</td>
<td>KS43F3200</td>
<td>US4</td>
</tr>
<tr>
<td>Key System</td>
<td>Schlage</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>All locks to be shipped with construction keyed I.C. cores. All permanent Schlage Everest Primus XP Level 9 I.C. cores are to be installed by the contractor.</td>
<td></td>
</tr>
<tr>
<td>Coordinator</td>
<td>Ives</td>
<td>COR x FL x MB (Storage &amp; Utility rooms)</td>
<td>USP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use coordinator only where required by fire code</td>
<td></td>
</tr>
</tbody>
</table>
## Door Hardware

<table>
<thead>
<tr>
<th>Description</th>
<th>Manufacturer</th>
<th>Model / Series Details</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flush Bolts</td>
<td>Ives</td>
<td>FB31P (Automatic) (metal doors) (Storage &amp; Utility rooms)</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FB41P (Automatic) (wood doors) (Storage &amp; Utility rooms)</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FB51P (Manual) (metal doors) (Storage &amp; Utility rooms)</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FB61P (Manual) (wood doors) (Storage rooms)</td>
<td>US26D</td>
</tr>
<tr>
<td>Closing Device</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closer</td>
<td>LCN</td>
<td>4041 – Thru Bolted</td>
<td>689</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All door frames to be reinforced for soffit shoe</td>
<td></td>
</tr>
<tr>
<td>Stops &amp; Holders</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door Holder</td>
<td>Glynn-Johnson</td>
<td>100ADJ series (Overhead)</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td>Ives</td>
<td>WS45 (Automatic Holders &amp; Stops)</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FS43 (Automatic Door Stops &amp; Holders)</td>
<td>US26D</td>
</tr>
<tr>
<td>Door Stops</td>
<td>Ives</td>
<td>FS436/R435 (Interior Floor Stop)</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FS18S (Security Floor Stops)</td>
<td>Black</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WS401/WS402 (Wall Stops)</td>
<td>US26D</td>
</tr>
<tr>
<td>Accessories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kick Plate</td>
<td>Ives</td>
<td>10” x 2” LDW x .050” Thick x B3E  (Single doors)</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10” x 1” LDW x .050” Thick x B3E  (Pair doors)</td>
<td>US26D</td>
</tr>
<tr>
<td>Mop Plate</td>
<td>Ives</td>
<td>10” x 2” LDW x .050” Thick x B3E  (Single doors)</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10” x 1” LDW x .050” Thick x B3E  (Pair doors)</td>
<td>US26D</td>
</tr>
<tr>
<td>Push/Pull Plates</td>
<td>Ives</td>
<td>8200/8300 Series</td>
<td>US26D</td>
</tr>
<tr>
<td>Latch Guard</td>
<td>Ives</td>
<td>LG12</td>
<td>US32D</td>
</tr>
<tr>
<td>Threshold</td>
<td>National Guard Prod.</td>
<td>896S (1/2” x 5” step threshold)</td>
<td>Alum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R Series Interlocking ramps at modernization projects</td>
<td>Alum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Architect to coordinate with project conditions</td>
<td></td>
</tr>
<tr>
<td>Smoke Seal</td>
<td>National Guard Prod.</td>
<td>2525 (1/4 x 3/8 Silicone bulb with adhesive tape)</td>
<td>White</td>
</tr>
<tr>
<td>Weather Seal</td>
<td>National Guard Prod.</td>
<td>162SA (at jambs)</td>
<td>Alum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>700SA (at head for PA closers)</td>
<td>Alum</td>
</tr>
<tr>
<td>Door Silencer</td>
<td>Ives</td>
<td>SR64</td>
<td>Gray</td>
</tr>
<tr>
<td>Astragal</td>
<td>National Guard Prod.</td>
<td>139SS (Wood doors) (Use only where required by fire code)</td>
<td>US26D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Astragal by door manufacturer at HM door</td>
<td></td>
</tr>
<tr>
<td>Drip Guard</td>
<td>National Guard Prod.</td>
<td>16A (Exterior doors exposed to rain)</td>
<td>Alum</td>
</tr>
</tbody>
</table>

End of Specification
<table>
<thead>
<tr>
<th>Mfr</th>
<th>Description</th>
<th>Item#</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IVE</td>
<td>HINGE</td>
<td>5BB1 4.5 X 4.5</td>
<td></td>
</tr>
<tr>
<td>IVE</td>
<td>HINGE</td>
<td>5BB1HW 4.5 X 4.5</td>
<td></td>
</tr>
<tr>
<td>VON</td>
<td>MULLION STABILIZER</td>
<td></td>
<td>154</td>
</tr>
<tr>
<td>VON</td>
<td>MULLION</td>
<td></td>
<td>KR4954</td>
</tr>
<tr>
<td>VON</td>
<td>MULLION</td>
<td></td>
<td>KR9954</td>
</tr>
<tr>
<td>VON</td>
<td>GLOBAL CUT</td>
<td></td>
<td>GLOBAL CUT</td>
</tr>
<tr>
<td>IVE</td>
<td>AUTO FLUSH BOLT</td>
<td></td>
<td>FB31P</td>
</tr>
<tr>
<td>IVE</td>
<td>AUTO FLUSH BOLT</td>
<td></td>
<td>FB41P</td>
</tr>
<tr>
<td>IVE</td>
<td>CONST LATCHING BOLT</td>
<td></td>
<td>FB51P</td>
</tr>
<tr>
<td>IVE</td>
<td>CONST LATCHING BOLT</td>
<td></td>
<td>FB61P</td>
</tr>
<tr>
<td>VON</td>
<td>PANIC HARDWARE</td>
<td></td>
<td>CD98L 996L</td>
</tr>
<tr>
<td>VON</td>
<td>FIRE EXIT HARDWARE</td>
<td></td>
<td>98EO-F</td>
</tr>
<tr>
<td>VON</td>
<td>GLOBAL CUT</td>
<td></td>
<td>GLOBAL CUT</td>
</tr>
<tr>
<td>VON</td>
<td>GLOBAL CUT</td>
<td></td>
<td>GLOBAL CUT</td>
</tr>
<tr>
<td>VON</td>
<td>GLOBAL CUT</td>
<td></td>
<td>GLOBAL CUT</td>
</tr>
<tr>
<td>VON</td>
<td>GLOBAL CUT</td>
<td></td>
<td>GLOBAL CUT</td>
</tr>
<tr>
<td>VON</td>
<td>GLOBAL CUT</td>
<td></td>
<td>GLOBAL CUT</td>
</tr>
<tr>
<td>VON</td>
<td>GLOBAL CUT</td>
<td></td>
<td>GLOBAL CUT</td>
</tr>
<tr>
<td>VON</td>
<td>GLOBAL CUT</td>
<td></td>
<td>GLOBAL CUT</td>
</tr>
<tr>
<td>VON</td>
<td>GLOBAL CUT</td>
<td></td>
<td>GLOBAL CUT</td>
</tr>
<tr>
<td>VON</td>
<td>GLOBAL CUT</td>
<td></td>
<td>GLOBAL CUT</td>
</tr>
<tr>
<td>VON</td>
<td>GLOBAL CUT</td>
<td></td>
<td>GLOBAL CUT</td>
</tr>
<tr>
<td>VON</td>
<td>GLOBAL CUT</td>
<td></td>
<td>GLOBAL CUT</td>
</tr>
<tr>
<td>SCH</td>
<td>CABINET LOCK</td>
<td></td>
<td>CL2009PB</td>
</tr>
<tr>
<td>SCH</td>
<td>CABINET LOCK</td>
<td></td>
<td>CL1540PB</td>
</tr>
<tr>
<td>SCH</td>
<td>CLASSROOM LOCK</td>
<td></td>
<td>ND94TD RHO</td>
</tr>
<tr>
<td>SCH</td>
<td>PADLOCK</td>
<td></td>
<td>PL4741</td>
</tr>
<tr>
<td>Mfr</td>
<td>Description</td>
<td>Item#</td>
<td>Catalog Number</td>
</tr>
<tr>
<td>-----</td>
<td>----------------------</td>
<td>--------</td>
<td>----------------</td>
</tr>
<tr>
<td>SCH</td>
<td>PADLOCK</td>
<td>PL4001</td>
<td></td>
</tr>
<tr>
<td>SCH</td>
<td>PRIVACY SET</td>
<td>ND40S RHO</td>
<td></td>
</tr>
<tr>
<td>SCH</td>
<td>PASSAGE SET</td>
<td>ND10S RHO</td>
<td></td>
</tr>
<tr>
<td>IVE</td>
<td>PUSH PLATE</td>
<td>8200 8&quot; X 16&quot;</td>
<td></td>
</tr>
<tr>
<td>IVE</td>
<td>PULL PLATE</td>
<td>8302-6 4&quot; X 16&quot;</td>
<td></td>
</tr>
<tr>
<td>IVE</td>
<td>PULL PLATE</td>
<td>8302-0 3.5&quot; X 15&quot;</td>
<td></td>
</tr>
<tr>
<td>IVE</td>
<td>GLOBAL CUT</td>
<td>GLOBAL CUT</td>
<td></td>
</tr>
<tr>
<td>IVE</td>
<td>GLOBAL CUT</td>
<td>GLOBAL CUT</td>
<td></td>
</tr>
<tr>
<td>IVE</td>
<td>COORDINATOR</td>
<td>COR X FL</td>
<td></td>
</tr>
<tr>
<td>IVE</td>
<td>MOUNTING BRACKET</td>
<td>MB1</td>
<td></td>
</tr>
<tr>
<td>NGP</td>
<td>ASTRAGAL</td>
<td>139SS</td>
<td></td>
</tr>
<tr>
<td>LCN</td>
<td>SURFACE CLOSER</td>
<td>4041</td>
<td></td>
</tr>
<tr>
<td>GLY</td>
<td>OVERHEAD STOP</td>
<td>100S-ADJ</td>
<td></td>
</tr>
<tr>
<td>GLY</td>
<td>OVERHEAD HOLDER</td>
<td>100H-ADJ</td>
<td></td>
</tr>
<tr>
<td>IVE</td>
<td>KICK PLATE</td>
<td>8400 10&quot; X 1&quot; LDW</td>
<td></td>
</tr>
<tr>
<td>IVE</td>
<td>SECURITY FLOOR STOP</td>
<td>FS18S</td>
<td></td>
</tr>
<tr>
<td>IVE</td>
<td>FLOOR STOP &amp; HOLDER</td>
<td>FS43</td>
<td></td>
</tr>
<tr>
<td>IVE</td>
<td>WALL STOP</td>
<td>WS401CCV</td>
<td></td>
</tr>
<tr>
<td>IVE</td>
<td>WALL STOP &amp; HOLDER</td>
<td>WS45</td>
<td></td>
</tr>
<tr>
<td>IVE</td>
<td>DOME STOP</td>
<td>FS436</td>
<td></td>
</tr>
<tr>
<td>NGP</td>
<td>SEALS</td>
<td>2525B</td>
<td></td>
</tr>
<tr>
<td>NGP</td>
<td>SEALS</td>
<td>162S</td>
<td></td>
</tr>
<tr>
<td>NGP</td>
<td>SEALS</td>
<td>700SA</td>
<td></td>
</tr>
<tr>
<td>NGP</td>
<td>DRIP CAP</td>
<td>16A</td>
<td></td>
</tr>
<tr>
<td>Mfr</td>
<td>Description</td>
<td>Item#</td>
<td>Catalog Number</td>
</tr>
<tr>
<td>------</td>
<td>-----------------</td>
<td>------</td>
<td>----------------</td>
</tr>
<tr>
<td>NGP</td>
<td>Threshold</td>
<td></td>
<td>896V</td>
</tr>
<tr>
<td>NGP</td>
<td>Threshold</td>
<td></td>
<td>896SS</td>
</tr>
<tr>
<td>IVE</td>
<td>Silencer</td>
<td></td>
<td>SR64</td>
</tr>
<tr>
<td>IVE</td>
<td>Lock Guard</td>
<td></td>
<td>LG12</td>
</tr>
</tbody>
</table>
FULL MORTISE HINGES - 5 KNUCKLE

PLAIN BEARING • LOW FREQUENCY • STANDARD WEIGHT
For use on Medium Weight Doors with Low Frequency Usage, not intended for use with door closing devices.

5PB1 Steel with steel pin
5PB1 Stainless Steel with stainless steel pin (630 finish)

- Hinges tested to ANSI - A156.1.
- Dimensions & tolerances conform to ANSI - A156.7.
- Packed with wood and machine screws.

<table>
<thead>
<tr>
<th>Size (Inches)</th>
<th>Size (MM)</th>
<th>Gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5 x 4.5</td>
<td>114 x 114</td>
<td>.134</td>
</tr>
</tbody>
</table>

2 BALL BEARING • MEDIUM FREQUENCY • STANDARD WEIGHT
For use on Standard Weight Doors with Medium Frequency Usage

5BB1 Steel with steel pin
5BB1 Stainless Steel with stainless steel pin (630 finish only)
Non-Removable Pin suffix “NRP”

- Hinges tested to ANSI - A156.1.
- Dimensions & tolerances conform to ANSI - A156.7.
- 5BB1 Steel description conforms to ANSI - A8112.
- 5BB1 Stainless description conforms to ANSI – A5112.
- Packed with wood and machine screws.

<table>
<thead>
<tr>
<th>Size (Inches)</th>
<th>Size (MM)</th>
<th>Gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5 x 4.5</td>
<td>114 x 114</td>
<td>.134</td>
</tr>
</tbody>
</table>

2 BALL BEARING • MEDIUM FREQUENCY • STANDARD WEIGHT • SECURITY STUDS
Two studs hold leaves secure when hinge is closed.

5BB1SH Steel with steel pin
5BB1SH Stainless Steel with stainless steel pin (630 finish only)

- Hinges tested to ANSI - A156.1.
- Dimensions & tolerances conform to ANSI - A156.7.
- 5BB1SH Steel description conforms to ANSI - A8112.
- 5BB1SH Stainless description conforms to ANSI – A5112.
- Packed with wood and machine screws.

<table>
<thead>
<tr>
<th>Size (Inches)</th>
<th>Size (MM)</th>
<th>Gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5 x 4.5</td>
<td>114 x 114</td>
<td>.134</td>
</tr>
</tbody>
</table>
FULL MORTISE HINGES - 5 KNUCKLE

4 BALL BEARING • HIGH FREQUENCY • HEAVY WEIGHT
For use on Heavy Weight Doors or High Frequency Usage

5BB1HW Steel with steel pin
5BB1HW Stainless Steel with stainless steel pin (630 finish only)
Non-Removable Pin suffix “NRP” (4.5 x 4.5 only)

- Hinges tested to ANSI - A156.1.
- Dimensions & tolerances conform to ANSI - A156.7.
- 5BB1HW Steel description conforms to ANSI - A8111.
- 5BB1HW Stainless description conforms to ANSI – A5111.
- Packed with wood and machine screws.

<table>
<thead>
<tr>
<th>Size (Inches)</th>
<th>Size (MM)</th>
<th>Gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5 x 4.5</td>
<td>114 x 114</td>
<td>0.180</td>
</tr>
<tr>
<td>5 x 4.5</td>
<td>127 x 114</td>
<td>0.190</td>
</tr>
</tbody>
</table>

2 BALL BEARING • MEDIUM FREQUENCY • STANDARD WEIGHT • SWING CLEAR
Designed to completely clear the opening when door is opened 90 degrees. Pins and tips are reversible.

5BB1SC Steel with steel pin
5BB1SC Stainless Steel with stainless steel pin (630 finish only)
Non-Removable Pin suffix “NRP”

- Hinges tested to ANSI – A8122.
- Dimensions & tolerances conform to ANSI - A156.7.
- 5BB1SC Steel Description conforms to ANSI - A8133.
- 5BB1SC Stainless Description conforms to ANSI - A5121.
- Packed with flat head wood and machine screws.

<table>
<thead>
<tr>
<th>Size (Inches)</th>
<th>Size (MM)</th>
<th>Gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5</td>
<td>114</td>
<td>0.134</td>
</tr>
<tr>
<td>5</td>
<td>127</td>
<td>0.134</td>
</tr>
</tbody>
</table>
SIX STEEL MULLIONS

Electric and Monitor Strikes
Includes an electric cable for transferring power from frame to strikes. The cable has five wires to a twist-apart plug that is connected to a mating socket through a hole in the top fitting.

For use with all Von Duprin panic exit rim devices.

4754 — Prepared for two 4263 monitor strikes.
4854/9854 — Using one electric strike

4854 — Prepared for one 299 and one 6111 electric strike. Indicate handing for electric strike.
4854/9854 — Using one electric strike

Standard Doors
4954 — Prepared for two 264 or 299 strikes. For use with all Von Duprin panic rim devices. Note: specify strike choice with device.
9854 — Prepared for one 499-F and one 6111 electric strike. Indicate handing for electric strike UL fire label mullion for 90 minute openings up to 8’ × 8’ (2438mm × 2438mm). This mullion is not easily removed due to special fittings.

Fire Doors
9954 — UL fire label mullion for up to 3 hour openings up to 8’ × 8’ (2438mm × 2438mm) using Von Duprin fire exit rim devices. Must be used with two 268 (for 88-F) or two 499F (for 22-F, 98-F, 99-F) strikes. This mullion is not easily removed due to special fittings.

1654 — Prepared for two 1606 strikes.

Sizes — 4754, 4854, 4954, 1654 — 7’2” (2184mm), 8’2” (2489mm), 10’2” (3099mm). 9854/9954 — 7’3” (2209mm), 8’ (2438mm), 10’3” (3124mm) (no UL label on 10’ (3048mm).

Finishes
SP28 (sprayed aluminum), SP313 (sprayed dark bronze) or sprayed black.
KEYED REMOVABLE MULLION

Keyed Removable Mullion makes removal faster and easier by a single operation of the mortise cylinder. Mullions provide single door performance and security on double door applications. Once the mullion is removed, large equipment or furniture can freely pass through the opening. The unit will self lock when re-installed, without use of the cylinder key.

TWO ALUMINUM MULLIONS

5654 — Prepared for two 264 or 299 strikes with weatherstripping.
5754 — Prepared and furnished with one 1408 double door strike. Note: Specify device “less strike”.

Sizes — 7’2” (2184mm), 8’2” (2489mm), 10’2” (3099mm).

Finishes
US4 (brass anodized), US10 (bronze anodized), US28 (aluminum anodized) or 313AN (dark bronze anodized).

This new lock assembly is available on Von Duprin’s standard and fire labeled steel mullions, and can be purchased separately for retrofit on existing steel mullion applications. Sizes include 7’2” (2184mm), 8’2” (2489mm) and 10’2” (3099mm).

To order, specify:

MT54 Storage Mount
MT54 is a set of floor and wall brackets that provide convenient storage of the keyed removable mullion when removed from the opening.

To order, specify:
1. MT54

Furnished standard on aluminum mullions; optional for steel and all blank mullions.

Angle Plate
Used with narrow transom frames. The plate attaches to the transom to extend the surface area needed to mount the mullion. Must be ordered separately (specify mullion type).

Weatherstripping
Weatherstripping retards cold air from blowing between doors and mullion. It also serves as a silencer when the door is closed against the mullion. The silicone treated weatherstrip pile is bonded to a polypropylene backing. A slide-in molding houses the weatherstripping, covers mounting screws of the strike and extends to both the top and bottom of the mullion.
Automatic Flush Bolts - Metal Doors

FB30 Series for Metal Doors

- Fully Automatic—inactive door is latched when active door closes, bolts retract when active door is opened.
- Low Actuation Forces—Top Bolt Has No Spring Tension.
- UL Listed for Fire Doors.
- Fits standard ANSI A115.4 Door Frame Preparations.
- Non-handed.
- Models with Auxiliary Fire Latch eliminates the bottom bolt and is UL Listed for Fire Doors.

FB31P Pair
Top and Bottom Bolts
Both bolts are non-handed, but are not identical. The top bolt has no spring tension, resulting in lower actuation force with a smoother operation.

- UL Listed 3 hours on 8’0” x 10’0” Opening

FB32
Top Bolt with Auxiliary Fire Latch
FB32 combination includes FB31T Top Bolt with auxiliary fire latch. Provides a fire-listed application without a bottom bolt—meaning no floor prep and strike. The auxiliary fire latch, mounted in the door edge, releases under extremely high temperatures to keep the doors in alignment during a fire.

- UL Listed 3 hours on 8’0” x 8’0” Opening

FB33
Top Bolt with Auxiliary Fire Latch and Retrofit Plate
FB33 used to update existing flush bolt installations with auxiliary fire latch eliminating bottom bolt and floor strike. FB33 consists of FB31T Top Bolt, auxiliary Fire Latch and Filler plate to cover existing cutout when bottom bolt is removed.

- UL Listed 3 hours on 8’0” x 8’0” Opening

FB31T
Top Bolt Only

FB31B
Bottom Bolt Only

Dimensions:

Body Size: 1” Wide x 6-3/4” Long x 2” Deep
Guide Size: 1” Wide x 1-27/32” Long x 27/32” High x 3/32” Thick
Strike Size: 15/16” Wide x 2-1/4” Long x 1/16” Thick
Rub Plate Size: 1-1/4” Wide x 1-11/16” Long x 3/64” Thick
Auxiliary Fire Latch Size: 1” Wide x 1-3/4” Long x 3-1/4” Deep
Filler Plate Size: 1” Wide x 6-3/4” Long x 3/32” Thick
### Automatic Flush Bolts - Wood Doors

#### FB40 Series for Wood Doors

- **Fully Automatic**—inactive door is latched when active door closes, bolts retract when active door is opened.
- **Low Actuation Forces**—Top Bolt Has No Spring Tension.
- **UL Listed for Fire Doors.**
- **Non-handed.**
- Models with **Auxiliary Fire Latch** eliminates the Bottom Bolt and is UL Listed for Fire Doors.

#### FB41P Pair
- **Top and Bottom Bolts**
  - Both bolts are non-handed, but are not identical. The top bolt has no spring tension, resulting in lower actuation force with a smoother operation.

#### FB42
- **Top Bolt with Auxiliary Fire Latch**
  - FB42 combination includes FB41T Top Bolt with auxiliary fire latch. Provides a fire-listed application without a bottom bolt—meaning no floor prep for strike. The auxiliary fire latch, mounted in the door edge, releases under extremely high temperatures to keep the doors in alignment during a fire.

- **UL Listed 90 minutes on 8’0” x 8’0” Opening**

#### FB41T Top Bolt Only
- **UL Listed 20 minutes on 8’0” x 8’0” Opening**

#### FB41B Bottom Bolt Only

**Dimensions:**

- Body Size: 1” Wide x 8-1/2” Long x 2” Deep
- Guide Size: 1” Wide x 6’ Long x 1/8” Thick
- Strike Size: 15/16” Wide x 2-1/4” Long x 1/16” Thick
- Rub Plate Size: 1-1/4” Wide x 1-11/16” Long x 3/64” Thick
- Auxiliary Fire Latch Size: 1” Wide x 1-3/4” Long x 3-1/4” Deep
Constant Latching Flush Bolts - Metal Doors

FB50 Series for Metal Doors

- Constant Latching—inactive door remains latched until the active door is opened, releasing the automatic bottom bolt and then the top bolt can be manually released. Inactive door will relatch automatically when closed.
- Low Actuation Forces.
- UL Listed for Fire Doors.
- Fits standard ANSI A115.4 Door and Frame Preparations.
- Non-handed.
- Models with Auxiliary Fire Latch eliminates the bottom bolt and is UL Listed for Fire Doors.
- Finished Cover Plates permit finish changes in stock or at job site.
- Bolts have 3/4" throw with a 7/8" vertical adjustment.
- Meets ANSI A156.3 Type 27.
- Standard Rod Length is 12", which is measured from the center of the flush bolt body to the bolt tip.
- Optional Dust Proof Strikes—DP1 or DP2, prevents dirt build-up assuring full engagement of bottom bolt.
- Optional rod lengths available for top bolt for non-fire rated openings—18", 24", 36" and 48".

FB51P Pair
- Top and Bottom Bolts
  FB51P combines FB51T constant latching top bolt with FB31B automatic bottom bolt. Non-handed.
- UL Listed 3 hours on 8’0” x 10’0” Opening.

FB52
- Top Bolt with Auxiliary Fire Latch
  FB52 combination includes FB51T Top Bolt with auxiliary fire latch. Provides a fire-listed application without a bottom bolt—meaning no floor prep for strike. The auxiliary fire latch, mounted in the door edge, releases under extremely high temperatures to keep the doors in alignment during a fire.
- UL Listed 3 hours on 8’0” x 8’0” Opening.

FB53
- Top Bolt with Auxiliary Fire Latch and Retrofit Plate
  FB53 used to update existing flush bolt installations with auxiliary fire latch eliminating bottom bolt and floor strike. FB53 consists of FB51T top bolt, auxiliary fire latch and filler plate to cover existing cutout when bottom bolt is removed.
- UL Listed 3 hours on 8’0” x 8’0” Opening.

Dimensions:
Body Size: 1” Wide x 6-3/4” Long x 2” Deep
Guide Size: 1” Wide x 1-27/32” Long x 11/16” High x 3/32” Thick
Strike Size: 15/16” Wide x 2-1/4” Long x 1/16” Thick
Rub Plate Size: 1-1/4” Wide x 1-11/16” Long x 3/64” Thick
Auxiliary Fire Latch Size: 1” Wide x 1-3/4” Long x 3-1/4” Deep
Filler Plate Size: 1” Wide x 6-3/4” Long x 3/32” Thick
FB60 Series for Wood Doors

- Constant Latching—inactive door remains latched until the active door is opened, releasing the automatic bottom bolt and then the top bolt can be manually released. Inactive door will relatch automatically when door closes.
- Low Actuation Forces.
- UL Listed for Fire Doors.
- Non-handed.

- Models with Auxiliary Fire Latch eliminates the bottom bolt and is UL Listed for Fire Doors.
- Finished Cover Plates permit finish changes in stock or at job site.
- Bolts have 3/4" throw with a 7/8" vertical adjustment.
- Meets ANSI A156.3 Type 27.
- Optional Dust Proof Strikes—DP1 or DP2, prevents dirt build-up assuring full engagement of bottom bolt.

<table>
<thead>
<tr>
<th>FB61P Pair</th>
<th>Top and Bottom Bolts</th>
<th>FB62 Top Bolt with Auxiliary Fire Latch</th>
<th>FB61T Top Bolt Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>FB61P combines FB61T constant latching top bolt with FB41B bottom bolt.</td>
<td>FB62 combination includes FB61T top bolt with Auxiliary Fire Latch. Provides a fire-listed application without a bottom bolt—meaning no floor prep for strike. The Auxiliary Fire Latch, mounted in the door edge, releases under extremely high temperatures to keep the doors in alignment during a fire.</td>
<td>• UL Listed 90 minutes on 8’0” x 8’0” Opening</td>
<td>• UL Listed 20 minutes on 8’0” x 8’0” Opening</td>
</tr>
</tbody>
</table>

Dimensions:
Body Size: 1” Wide x 8-1/2” Long x 2” Deep
Guide Size: 1” Wide x 6” Long x 1/8” Thick
Strike Size: 15/16” Wide x 2-1/4” Long x 1/16” Thick
Rub Plate Size: 1-1/4” Wide x 1-11/16” Long x 3/64” Thick
Auxiliary Fire Latch Size: 1” Wide x 1-3/4” Long x 3-1/4” Deep
Dust Proof Strikes

DP1 and DP2 Dust Proof Strikes

- Designed for use with the bottom bolt of all flush bolts.
- Spring-loaded plunger returns to floor or threshold level anytime flush bolt is retracted, eliminating need to clean standard floor strikes.
- Meets ANSI/BHMA 156.16, L14011.

Dimensions:
- DP1 Face Plate: 1-7/16" Diameter
- DP2 Face Plate: 1-5/8" Wide x 3-1/2" Long x 1/8" Thick
- DP1 and DP2 Body: 1-3/16" Diameter x 1-7/8" Deep

**DP1**
Threshold only.

**DP2**
Floor and/or threshold.

DP3 and DP4 Dust Proof Strikes

- Designed for use with the bottom bolt of the Ives extension flush bolts on non-fire rated openings. DP3 for installation in thresholds up to 1/4" thick. DP4 includes plate for installation in thresholds or floor.
- 3/4" diameter plunger accepts up to 5/8" diameter round bolts or 1/2" square bolts.
- Can be locked in up position by rotating plunger with screwdriver or coin. Eliminates trapping of spiked heels.
- Made from polished wrought brass.
- Brass Finishes: B3, B4, B5, B10, B10B, B14, B15, B15A, B26, B26D.

Dimensions:
- DP3 Faceplate: 1-3/8" Diameter
- DP4 Faceplate: 1-5/8" Wide x 3-1/2" Long x 1/8" thick
- DP3 and DP4 Body: 1-61/64" Overall Depth, Fits Hole 1-1/16" in Diameter

**DP3**
Threshold only.

**DP4**
Floor and/or threshold.
98 and 99 rim exit devices for all types of single and double doors with mullion, UL listed for Panic Exit Hardware. Devices are ANSI A156.3 – 2001 Grade 1. The 98 device has a smooth mechanism case and the 99 device has a grooved case. The rim device is non-handed except when the following device options are used: SD (Special Dogging), -2 (Double Cylinder) or SS (Signal Switch). See Opposite page for available outside trim and device functions. Covers stock hollow metal doors with 86 or 161 cutouts on single doors (may cover cutouts on pairs – consult template).


**Specifications**

<table>
<thead>
<tr>
<th>Device Functions</th>
<th>Device ships EO/DT/NL. Field selectable. For TP, K, or L remove NL drive screw from device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device Lengths</td>
<td>3’ 2 4/16” to 3’ (711 mm to 914 mm) Door Size</td>
</tr>
<tr>
<td></td>
<td>4’ 2 10/16” to 4’ (864 mm to 1219 mm) Door Size</td>
</tr>
<tr>
<td>Strikes</td>
<td>299 – Dull Black</td>
</tr>
<tr>
<td>Optional Strikes</td>
<td>see page 39</td>
</tr>
<tr>
<td>Dogging Feature</td>
<td>Hex key dogging standard</td>
</tr>
<tr>
<td>Dogging Options</td>
<td>CD Cylinder Dogging, see page 48</td>
</tr>
<tr>
<td></td>
<td>SD Special Center Case Dogging, see page 48</td>
</tr>
<tr>
<td></td>
<td>LD Less Dogging, see page 48</td>
</tr>
<tr>
<td>Electric Options</td>
<td>LX Latchbolt Monitor Switch, see page 42</td>
</tr>
<tr>
<td></td>
<td>RX Pushpad Monitor Switch, see page 42</td>
</tr>
<tr>
<td></td>
<td>RX2 Double Pushpad Monitor Switch, see page 42</td>
</tr>
<tr>
<td></td>
<td>E Electric Locking &amp; Unlocking, see page 44</td>
</tr>
<tr>
<td></td>
<td>EL Electric Latch Retraction, see page 43</td>
</tr>
<tr>
<td></td>
<td>SS Signal Switch, see page 43</td>
</tr>
<tr>
<td></td>
<td>CK Chexit Delayed Exit, see page 45</td>
</tr>
<tr>
<td></td>
<td>ALK Alarm Exit Kit, see page 42</td>
</tr>
<tr>
<td>Miscellaneous Options</td>
<td>PN Pneumatic Latch Retraction, see page 48</td>
</tr>
<tr>
<td></td>
<td>-2 Double Cylinder, see page 48</td>
</tr>
<tr>
<td></td>
<td>GBK Glass Bead Kit, see page 49</td>
</tr>
<tr>
<td>Fasteners &amp; Sex</td>
<td>Includes 1 3/4” (19mm) – 2 1/4” (57mm) Wood &amp; Metal Doors</td>
</tr>
<tr>
<td>Bolts (SNB)</td>
<td>Optional SNB available for device, see next page for quantities</td>
</tr>
<tr>
<td>Latch Bolt</td>
<td>Deadlocking, 3/4” (19mm) throw</td>
</tr>
<tr>
<td>Device Centerline from Finished Floor</td>
<td>39 13/16” (1011 mm)</td>
</tr>
<tr>
<td>Center Case Dimensions</td>
<td>39 11/16” (1008 mm) with Mullion</td>
</tr>
<tr>
<td>Mechanism Case Dimensions</td>
<td>2 1/4” x 2 1/4” (57mm x 57mm)</td>
</tr>
<tr>
<td>Projection</td>
<td>Pushbar Neutral – 3 13/16” (97 mm)</td>
</tr>
<tr>
<td></td>
<td>Pushbar Depressed – 3 1/4” (78 mm)</td>
</tr>
</tbody>
</table>

See page 53 for How to Order specification
### 98/99™ Rim Exit Device Standard Trim

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Exit only</th>
<th>Dummy Trim</th>
<th>Night Latch</th>
<th>Night Latch</th>
</tr>
</thead>
<tbody>
<tr>
<td>98EO 99EO</td>
<td>98EO 99EO</td>
<td>98DT 99DT</td>
<td>98NL 99NL</td>
<td>98NL-OP 99NL-OP</td>
</tr>
<tr>
<td><strong>Trim Description</strong></td>
<td>—</td>
<td>990DT</td>
<td>990NL-R/V</td>
<td>110NL-MD 110NL-WD</td>
</tr>
<tr>
<td>Escutcheon Plate Size</td>
<td>—</td>
<td>3&quot; x 14½&quot; x ¾&quot; (76x360x2mm)</td>
<td>3&quot; x 14½&quot; x ¾&quot; (76x360x2mm)</td>
<td>—</td>
</tr>
<tr>
<td>Pull Center to Center</td>
<td>—</td>
<td>5½&quot; (140mm)</td>
<td>5½&quot; (140mm)</td>
<td>—</td>
</tr>
<tr>
<td>Projection</td>
<td>—</td>
<td>2&quot; (51mm)</td>
<td>2&quot; (51mm)</td>
<td>—</td>
</tr>
<tr>
<td>ANSI Function</td>
<td>01</td>
<td>02</td>
<td>03</td>
<td>03</td>
</tr>
<tr>
<td>Cylinder Type</td>
<td>—</td>
<td>—</td>
<td>Rim</td>
<td>Rim</td>
</tr>
<tr>
<td>Optional Trim (See pages 32 – 34)</td>
<td>x990EO x992EO x994EO x996EO</td>
<td>x991K-DT x992L-DT x994L-DT x996L-DT</td>
<td>x991K-NL x992L-NL x994L-NL x996L-NL</td>
<td>x991K-NL x992L-NL x994L-NL x996L-NL</td>
</tr>
<tr>
<td>Optional #425 Sex Bolt Quantity for Device</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

### Lever Products

- **Lever** Key Locks & Unlocks
- **Lever – Night Latch** Key Retracts Latchbolt
- **Lever – Blank Escutcheon** Always operable (No Cylinder)
- **Lever Dummy Trim** Pull when Dogged

<table>
<thead>
<tr>
<th>Product Description</th>
<th>98L 99L</th>
<th>98L-NL 99L-NL</th>
<th>98L-BE 99L-BE</th>
<th>98L-DT 99L-DT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trim Description</strong></td>
<td>996L-R/V</td>
<td>996L-NL-R/V</td>
<td>996L-BE-R/V</td>
<td>996L-DT-R/V</td>
</tr>
<tr>
<td>Escutcheon Plate Size</td>
<td>2¾&quot; x 10¾&quot; x ⁷/₈&quot; (70x273x21mm)</td>
<td>2¼&quot; x 10¼&quot; x ⁷/₈&quot; (70x273x21mm)</td>
<td>2¾&quot; x 10¾&quot; x ⁷/₈&quot; (70x273x21mm)</td>
<td>2¾&quot; x 10¾&quot; x ⁷/₈&quot; (70x273x21mm)</td>
</tr>
<tr>
<td>Pull Center to Center</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Projection</td>
<td>2¾&quot; (73mm)</td>
<td>2¾&quot; (73mm)</td>
<td>2¾&quot; (73mm)</td>
<td>2¾&quot; (73mm)</td>
</tr>
<tr>
<td>ANSI Function</td>
<td>08</td>
<td>09</td>
<td>—</td>
<td>02</td>
</tr>
<tr>
<td>Cylinder Type</td>
<td>Rim</td>
<td>Rim</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Optional Trim (See pages 32 – 34)</td>
<td>x992L x994L</td>
<td>x992L-NL x994L-NL</td>
<td>x992L-BE x994L-BE</td>
<td>x992L-DT x994L-DT</td>
</tr>
<tr>
<td>Optional #425 Sex Bolt Quantity for Device</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

For optional trims and functions see pages 32-34
98-F and 99-F rim fire exit devices for all types of single doors up to 4’ x 10’ (1219mm x 3048mm) or 8’ x 10’ (2438mm x 3048mm) double doors with 9954 or 9854 mullion, UL listed for Fire Exit Hardware. See page 41 for detailed information on UL listed fire exit hardware label and door opening size information. Devices are ANSI A156.3 – 2001 Grade 1. The 98-F device has a smooth mechanism case and the 99-F device has a grooved case. The rim device is non-handed except when the following device options are used: -2 (Double Cylinder) or SS (Signal Switch). See Opposite page for available outside trim and device functions.


### Specifications

<table>
<thead>
<tr>
<th>Device Functions</th>
<th>Device ships EO/DT/NL. Field selectable. For TP,K,or L remove NL drive screw from device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device Lengths</td>
<td>3’ 2’4” to 3’ (711mm to 914 mm) Door Size 4’ 2’10” to 4’ (864 mm to 1219 mm) Door Size</td>
</tr>
<tr>
<td>Strikes</td>
<td>299F – Dull Black, 499F with Mullions Optional Strikes – see page 39</td>
</tr>
<tr>
<td>Dogging Feature</td>
<td>No Mechanical Dogging, EL option available</td>
</tr>
<tr>
<td>Electric Options</td>
<td>LX Latchbolt Monitor Switch see page 42 RX Pushpad Monitor Switch see page 42 RX2 Double Pushpad Monitor Switch see page 42 E Electric Latch &amp; Unlocking see page 44 EL Electric Latch Retraction see page 43 SS Signal Switch see page 43 CX Chexit Delayed Exit see page 45 ALK Alarm Exit Kit see page 42</td>
</tr>
<tr>
<td>Miscellaneous Options</td>
<td>PN Pneumatic Latch Retraction see page 48 -2 Double Cylinder see page 48 GBK Glass Bead Kit see page 49</td>
</tr>
<tr>
<td>Fasteners &amp; Sex Bolts (SNB)</td>
<td>Includes 1 ¾” (19mm) – 2 ¾” (57mm) Wood &amp; Metal Doors Optional SNB available for device, see next page for quantities Optional SLM Blocking Pkg for wood doors with SLM blocking SNB required for wood doors, unless SLM Blocking Pkg specified</td>
</tr>
<tr>
<td>Latch Bolt</td>
<td>Deadlocking, ¾” (19mm) throw</td>
</tr>
<tr>
<td>Device Centerline from Finished Floor</td>
<td>39 13/16” (1011 mm) 39 13/16” (1008 mm) with Mullion</td>
</tr>
<tr>
<td>Center Case Dimensions</td>
<td>8” x 2 3/4” x 2 3/4” (203mm x 70mm x 60mm)</td>
</tr>
<tr>
<td>Mechanism Case Dimensions</td>
<td>2 1/4” x 2 1/4” (57mm x 57mm)</td>
</tr>
<tr>
<td>Projection</td>
<td>Pushbar Neutral – 3 ¾” (97 mm) Pushbar Depressed – 3 ¼” (78 mm)</td>
</tr>
</tbody>
</table>

See page 53 for How to Order specification
### Trim Description

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Exit only</th>
<th>Dummy Trim</th>
<th>Night Latch</th>
<th>Night Latch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trim Description</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Escutcheon Plate Size</td>
<td>—</td>
<td>—</td>
<td>3&quot; x 143/8&quot; x 3/8&quot; (76x360x2mm)</td>
<td>—</td>
</tr>
<tr>
<td>Pull Center to Center</td>
<td>—</td>
<td>—</td>
<td>5 1/2&quot; (140mm)</td>
<td>—</td>
</tr>
<tr>
<td>Optional Trim</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>ANSI Function</td>
<td>01</td>
<td>02</td>
<td>03</td>
<td>03</td>
</tr>
<tr>
<td>Cylinder Type</td>
<td>—</td>
<td>—</td>
<td>Rim</td>
<td>Rim</td>
</tr>
<tr>
<td>Optional Trim (See pages 32 – 34)</td>
<td>—</td>
<td>x990EO</td>
<td>x991K-DT</td>
<td>x991K-NL</td>
</tr>
<tr>
<td>#425 SNB optional-HMD Req. WD w/o SLM Pkg.</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>#825 SNB Req. WD w/o SLM Pkg.</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>#425 SNB Req. w/ 499F</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

### Trim Description

<table>
<thead>
<tr>
<th>Product Description</th>
<th>98L-F</th>
<th>98L-NL-F</th>
<th>98L-BE-F</th>
<th>—</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trim Description</td>
<td>996L-R/V</td>
<td>996L-NL-R/V</td>
<td>996L-BE-R/V</td>
<td>996L-DT-R/V</td>
</tr>
<tr>
<td>Escutcheon Plate Size</td>
<td>2 3/4&quot; x 10 1/4&quot; x 3/8&quot; (70x273x21mm)</td>
<td>2 3/4&quot; x 10 1/4&quot; x 3/8&quot; (70x273x21mm)</td>
<td>2 3/4&quot; x 10 1/4&quot; x 3/8&quot; (70x273x21mm)</td>
<td>2 3/4&quot; x 10 1/4&quot; x 3/8&quot; (70x273x21mm)</td>
</tr>
<tr>
<td>Pull Center to Center</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Projection</td>
<td>2 1/8&quot; (73mm)</td>
<td>2 1/8&quot; (73mm)</td>
<td>2 1/8&quot; (73mm)</td>
<td>2 1/8&quot; (73mm)</td>
</tr>
<tr>
<td>ANSI Function</td>
<td>08</td>
<td>09</td>
<td>—</td>
<td>02</td>
</tr>
<tr>
<td>Cylinder Type</td>
<td>RIm</td>
<td>RIm</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Optional Trim (See pages 32 – 34)</td>
<td>x992L</td>
<td>x992L-NL</td>
<td>x992L-BE</td>
<td>x992L-DT</td>
</tr>
<tr>
<td>#425 SNB optional-HMD Req. WD w/o SLM Pkg.</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>#825 SNB Req. WD w/o SLM Pkg.</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>#425 SNB Req. w/ 499F</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

For optional trims and functions see pages 32-34
Knob and Thumbpiece Trim

<table>
<thead>
<tr>
<th>Trim Description</th>
<th>991K</th>
<th>991K-NL</th>
<th>991K-BE</th>
<th>991K-DT</th>
<th>990TP</th>
<th>990TP-BE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escutcheon Plate Size</td>
<td>2¼” x 10¾” x 9½” (70x273x21mm)</td>
<td>2¼” x 10¾” x 9½” (70x273x21mm)</td>
<td>2¼” x 10¾” x 9½” (70x273x21mm)</td>
<td>2¼” x 10¾” x 9½” (70x273x21mm)</td>
<td>2¼” x 10¾” x 9½” (70x273x21mm)</td>
<td></td>
</tr>
<tr>
<td>Pull Center to Center</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>5½” (140mm)</td>
<td>5½” (140mm)</td>
</tr>
<tr>
<td>Projection</td>
<td>3½” (83mm)</td>
<td>3½” (83mm)</td>
<td>3½” (83mm)</td>
<td>3½” (83mm)</td>
<td>2” (51mm)</td>
<td>2” (51mm)</td>
</tr>
<tr>
<td>ANSI Function</td>
<td>08</td>
<td>09</td>
<td>—</td>
<td>02</td>
<td>05</td>
<td>05</td>
</tr>
<tr>
<td>Cylinder Type</td>
<td>Rim</td>
<td>Rim</td>
<td>—</td>
<td>—</td>
<td>Rim</td>
<td>—</td>
</tr>
<tr>
<td>Mortise Lock Device</td>
<td>1¼” Mortise</td>
<td>1¼” Mortise</td>
<td>—</td>
<td>1¼” Mortise</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>#425 SNB optional-HMD Req. WD w/o SLM Pkg.</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>#825 SNB Req. WD w/o SLM Pkg. F/Rim device ONLY</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>#425 SNB Req. w/ 499F</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Lever Design Options

![#01](image1.png)  ![#02](image2.png)  ![#03](image3.png)  ![#05](image4.png)  ![#06](image5.png)

![#07](image6.png)  ![#12](image7.png)  ![#16](image8.png)  ![#17](image9.png)  ![#18](image10.png)
Pneumatic Controlled Exit Devices—PN

The PN feature provides remote latch bolt retraction in hazardous areas where electrically operated devices would not be permitted. The pneumatic solenoid will retract the latch bolt for momentary or prolonged periods. PN exit devices are particularly suited for use with automatic door operators. The PN feature is available on both Panic and Fire Exit Hardware devices.

The PN feature includes a special actuating linkage that gives building owners the option of mechanically or pneumatically dogging the exit device. If manual hex-key dogging is required, specify HD-PN (Dogging the device, whether mechanically or pneumatically, makes the device function as a push/pull unit and reduces the wear on its moving parts.) If cylinder dogging is required, the standard cylinder dogging is not available, but special center case dogging is available, specify SD-PN. SD-PN is not available on the 9875 or 9975 devices.

When activated pneumatically, the latch bolt(s) of the exit device retract in $\frac{1}{4}$ to $\frac{1}{2}$ seconds. This pneumatic operation uses air pressure ranging from 50 to 100 pounds per square inch.

This product will function only when it is part of a pneumatic system (air compressor, air lines, pneumatic system, etc.). Contact LCN for correct control boxes.

To Order, Specify:
1. Standard — Use prefix PN, example PN99NL
2. Hex Key Dogging — Use prefix HD-PN, example HD-PN99NL
3. Special Center Case Dogging — Use prefix SD-PN, example SD-PN99NL

Double Cylinder — 2

Double cylinder features an inside key cylinder which locks or unlocks the outside trim and an outside key cylinder which retracts the latch bolt only (Night Latch Function). Available on rim or mortise lock device.

Rim requires two rim type cylinders. Mortise device requires 1 rim cylinder and 1 mortise cylinder with a straight cam. (Schlage Cam reference B502-191.)

Available functions are thumbpieces, knob or lever.

To Order, Specify:
1. Suffix-2 with device/trim number, example 99TP-2
2. Handing required, LHR or RHR.

Less Dogging — LD

Less Dogging is available in all 98/99™ Panic Exit devices to remove the dogging option.

To Order, Specify:
1. Use prefix LD, example LD99L

Special Center Case Dogging — SD

Special cylinder dogging in the center case is available for Chexit, EL, ALK panic devices to allow for mechanical push/pull operation. With this option, the latchbolt is held retracted and pushbar is still operable. Specify handing — RHR or LHR.

SD requires 1 1/4” (32mm) mortise cylinder with a straight cam. (Schlage Cam reference B502-191.)

Note: Available on Rim and Vertical Rod Panic Exit Devices only.

To Order, Specify:
1. Use prefix SD, example SD99L

Cylinder Dogging — CD

Cylinder dogging is available on all 98/99™ Panic Exit devices to replace the standard hex key dogging. Unit requires a standard 1 1/4” (32mm) mortise cylinder with a straight cam (Schlage Cam B502-191 reference).

To Order, Specify:
1. Use prefix, CD, example CD99L

Cylinder Dogging Kit — CDK

For field conversion, a cylinder dogging conversion kit is available. Cannot be added to fire exit hardware.

Order: 33A/99CDK or 35A/98CDK, specify finish.

Hex Key Dogging Kit — HDK

For field conversion, a hex key dogging conversion kit is available. Cannot be added to fire exit hardware.

Order: 33A/99HDK or 35A/98HDK, specify finish.

Braille, Embossed and Knurled Touchpads

Braille touchpad is embossed with the message “CAUTION STAIRWELL” in braille and raised letters provides assistance to person with impaired vision. Letters are 1/8” (13mm) high and braille is #2, raised height is 1/8” (2mm). Other messages are available on special order, limited to 20 characters per line.

Embossed touchpad is embossed with the word “PUSH” Knurled touchpad is to provide warning to person with impaired vision.
Electric Latch Retraction — EL

The EL feature allows for the remote unlatching of exit devices. A control station operator can flip a switch to retract the latch bolt and immediately change an exit door to push-pull operation. A powerful, continuous duty solenoid retracts the latch bolt, either for momentary unlatching, or for extended periods of time. The EL feature is an alternative to manual dogging. If manual hex-key dogging is required, specify HD-EL. If cylinder dogging is required, the standard cylinder dogging is not available, but special center case dogging is available, specify SD-EL. SD-EL is not available on the 9875 or 9975 devices.

EL devices are also useful with automatic door operators, and may be applied to fire-rated applications when under the control of an automatic fire alarm system. UL approved for Class II circuit applications.

The EL option does not include the power transfer from door to frame, the power supply, or the control operator. Refer to EPT-2 power transfer and the PS873 power supply.

The PS873 with the 871-2 option card is minimum option card required. Other option cards available for other functions, see PS873 power supply for additional information.

Solenoid Specifications:
Continuous Duty — 24 VDC
Current Inrush — 16 Amps
Current Holding — 0.3 Amps

To order, specify:
Standard — Use prefix EL, example EL99L
Hex Key dogging — Use prefix HD-EL, example HD-EL99L
Special Center Case Dogging — Use prefix SD-EL, example SD-EL99L

Popular EL Application
Power Supply PS873-2
Electric Power Transfer EPT-2 or EPT-10

Signal Switch — SS

Monitors pushpad and latch bolt
The SS feature is used to signal the unauthorized use of an opening. This device is equipped with two internal SPDT switches. One switch monitors both the pushpad and the latch bolt assembly, making the latch bolt tamper resistant, for positive security. An additional SPDT switch is connected to the 1 1/4" (32mm) mortise with straight cam for alarm "bypass." (Schlage cam reference B502-191). The device can be connected to a security console, or may be used as a single door alarm when used with a horn and power supply. A continuous current electric transfer must be used for transferring power from the frame to the door.

Pushpad reads: "EMERGENCY EXIT ONLY — PUSH TO OPEN AND SOUND ALARM." Pushpad is only available in US32D finish with red silk-screened lettering.

The SS mortise lock device is furnished with both the signal switch device and the SS7500 mortise lock. The SS7500 mortise lock has the versatility and advantages of the 7500 lock with the addition of signalling functions to monitor latch bolt operation and the trim locking function. The SS7500 mortise lock is supplied standard with the SS mortise lock device.

To Order, Specify:
1. Prefix SS, example SS99L
2. Handing Required, LHR or RHR.

Electrical Ratings:
Up to 2.0 AMPS @ 24VDC

Popular SS Application
Unauthorized use of this opening will activate the local horn. The key switch permits inhibiting this system for authorized entry.
### 996L Trim

The new 996L Breakaway™ trim has become the standard lever trim offering on the 98L/99L series devices. The 996L trim blends two successful Von Duprin designs; the look of the traditional 992L lever trim and the security and durability of the Von Duprin Breakaway™ design. The Breakaway™ design is especially effective in areas where vandalism to door hardware is a problem. The design intent is to discourage costly repairs from becoming necessary. The Breakaway™ feature is not available on the NL (night-latch) or DT (dummy trim) versions.

### Optional Lever Trims – 992

<table>
<thead>
<tr>
<th>Trim Description</th>
<th>992L</th>
<th>992L-NL</th>
<th>992L-BE</th>
<th>992L-DT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escutcheon Plate Size</td>
<td>2¾&quot; x 10¾&quot; x ¾&quot; (70x273x21mm)</td>
<td>2¾&quot; x 10¾&quot; x ¾&quot; (70x273x21mm)</td>
<td>2¾&quot; x 10¾&quot; x ¾&quot; (70x273x21mm)</td>
<td>2¾&quot; x 10¾&quot; x ¾&quot; (70x273x21mm)</td>
</tr>
<tr>
<td>Pull Center to Center</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Projection</td>
<td>2¾&quot; (73mm)</td>
<td>2¾&quot; (73mm)</td>
<td>2¾&quot; (73mm)</td>
<td>2¾&quot; (73mm)</td>
</tr>
<tr>
<td>ANSI Function</td>
<td>08</td>
<td>09</td>
<td>—</td>
<td>02</td>
</tr>
<tr>
<td>Cylinder Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rim or Vertical Rod Device</td>
<td>Rim</td>
<td>Rim</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Mortise Lock Device</td>
<td>1¼&quot; Mortise</td>
<td>1¼&quot; Mortise</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

### 992L Trim

The 992L trim series provides the traditional Von Duprin escutcheon design. Special versions available for doors of over 2 ¼" (57mm) thicknesses. Additionally available in an RX and E-locking/unlocking version.

### Optional Lever Trims – 994

<table>
<thead>
<tr>
<th>Trim Description</th>
<th>994L</th>
<th>994L-NL</th>
<th>994L-BE</th>
<th>994L-DT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escutcheon Plate Size</td>
<td>2¾&quot; x 9¾&quot; x ¾&quot; (70x235x21mm)</td>
<td>2¾&quot; x 9¾&quot; x ¾&quot; (70x235x21mm)</td>
<td>2¾&quot; x 9¾&quot; x ¾&quot; (70x235x21mm)</td>
<td>2¾&quot; x 9¾&quot; x ¾&quot; (70x235x21mm)</td>
</tr>
<tr>
<td>Pull Center to Center</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Projection</td>
<td>2¾&quot; (73mm)</td>
<td>2¾&quot; (73mm)</td>
<td>2¾&quot; (73mm)</td>
<td>2¾&quot; (73mm)</td>
</tr>
<tr>
<td>ANSI Function</td>
<td>08</td>
<td>09</td>
<td>—</td>
<td>02</td>
</tr>
<tr>
<td>Cylinder Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rim or Vertical Rod Device</td>
<td>Rim</td>
<td>Rim</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Mortise Lock Device</td>
<td>1¼&quot; Mortise</td>
<td>1¼&quot; Mortise</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>
### Optional Lever Trims – 696/697

<table>
<thead>
<tr>
<th>Trim Description</th>
<th>696DT</th>
<th>697DT</th>
<th>696NL</th>
<th>697NL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dummy Trim</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pull when Dogged</td>
<td>1% x 13% x 3% (41x343x5mm)</td>
<td>1% x 13% x 3% (41x343x5mm)</td>
<td>1% x 13% x 3% (41x343x5mm)</td>
<td>1% x 13% x 3% (41x343x5mm)</td>
</tr>
<tr>
<td>Night Latch</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Key Retracts Latchbolt</td>
<td>2% (52mm)</td>
<td>3% (76mm)</td>
<td>2% (52mm)</td>
<td>3% (76mm)</td>
</tr>
<tr>
<td>ANSI Function</td>
<td>02</td>
<td>02</td>
<td>03</td>
<td>03</td>
</tr>
<tr>
<td>Cylinder Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rim or Vertical Rod Device</td>
<td>—</td>
<td>—</td>
<td>Rim</td>
<td>Rim</td>
</tr>
<tr>
<td>Mortise Lock Device</td>
<td>—</td>
<td>—</td>
<td>1% Mortise</td>
<td>1% Mortise</td>
</tr>
<tr>
<td>#425 SNB optional-HMD Req. WD w/o SLM Pkg.</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>#825 SNB Req. WD w/o SLM Pkg.</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>#425 SNB Req. w/ 499F</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

### Optional Lever Trims – 696/697

<table>
<thead>
<tr>
<th>Trim Description</th>
<th>696TP</th>
<th>697TP</th>
<th>696TP-BE</th>
<th>697TP-BE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thumbpiece Key Locks &amp; Unlocks</td>
<td></td>
<td></td>
<td>Thumbpiece - Blank Escutcheon Always Operable (No Cylinder)</td>
<td>Thumbpiece - Blank Escutcheon Always Operable (No Cylinder)</td>
</tr>
<tr>
<td>Thumbpiece Key Locks &amp; Unlocks</td>
<td></td>
<td></td>
<td>Thumbpiece - Blank Escutcheon Always Operable (No Cylinder)</td>
<td>Thumbpiece - Blank Escutcheon Always Operable (No Cylinder)</td>
</tr>
<tr>
<td>ANSI Function</td>
<td>05</td>
<td>05</td>
<td>05</td>
<td>05</td>
</tr>
<tr>
<td>Cylinder Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rim or Vertical Rod Device</td>
<td>Rim</td>
<td>Rim</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Mortise Lock Device</td>
<td>1% Mortise</td>
<td>1% Mortise</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>#425 SNB optional-HMD Req. WD w/o SLM Pkg.</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>#825 SNB Req. WD w/o SLM Pkg.</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>#425 SNB Req. w/ 499F</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

© 2004 Ingersoll-Rand. May be copied for use with specification submittal.
Vander Resistant Trim

VR910 & VR914 Series

Features:

- Stainless Steel construction, 11 gauge (0.120” thick)
- Thru-bolts and rugged mounting screws for maximum fastening strength.
- 10-24 screws supplied with VR910 & VR914 models.
- Built-in lock protector prevents vandalism to mortise latchbolt (available on certain models).
- Extra-tough stainless steel cylinder collar prevents pipe wrench or similar tool from damaging cylinder. Tapered design prevents side impacts from transferring directly to cylinder. Collar spins freely.
- Furnished with mounting screws for door thicknesses of 1 1/4” to 2 1/4”
- Finish: US32D
- VR910 grip coated in black plastisol for softer touch and resilience to temperature extremes. Grip designed for comfortable operation.
- VR914 grip in all stainless steel.
- 1 1/2” (38mm) clearance from grip to door
- 1 7/8” (48mm) total projection from door
- Consult IVES catalog for specification/ordering information.

Table:

<table>
<thead>
<tr>
<th>Model</th>
<th>For Use With</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>VR910DT &amp; VR914DT</td>
<td>98/99 Rim or Vert. Rod Device</td>
<td>5 1/4” (133mm) w x 11” (279mm) h</td>
</tr>
<tr>
<td>VR910NL &amp; VR914NL</td>
<td>98/99 Rim or Vert. Rod Device</td>
<td>5 1/4” (133mm) w x 11” (279mm) h</td>
</tr>
<tr>
<td>VR910M-DT &amp; VR914M-DT</td>
<td>9875/9975 Mortise Device</td>
<td>7 1/4” (184mm) w x 11” (279mm) h</td>
</tr>
<tr>
<td>VR910M-NL &amp; VR914M-NL</td>
<td>9875/9975 Mortise Device</td>
<td>7 1/4” (184mm) w x 11” (279mm) h</td>
</tr>
</tbody>
</table>
Nomenclature – How To Order

SD — Special Dogging - Panic Only
CD — Cylinder Dogging - Panic Only
CX — Chexit
E — Electric Locking (Rim or Mortise)
EL — Electric Latch Retraction
LX — Latch Bolt Monitoring
PL — Pullman Latch
PN — Pneumatic Latch Retraction
RX — Request to Exit
RX2 — Double Request to Exit
SS — Signal Switch

98 — Series 98-smooth
99 — Series 99-grooved

None — Rim Device
27 — Surface Mounted Vertical Rod Device
47 — Concealed Vertical Rod Device
47WDC — Concealed Vertical Rod Wood Door Device
48 — Concealed Vertical Rod Device
57 — Three Point Latch Device
75 — Mortise Lock Device

DT — Dummy Trim
ED — Exit Only
K — Knob (Classroom)
K-BE — Knob-Blank Escutcheon
K-DT — Knob-Dummy Trim
K-NL — Rigid Knob - Night Latch (Key retracts Latchbolt)
L — Lever (Classroom)
L-BE — Lever-Blank Escutcheon
L-DT — Lever-Dummy Trim
L-NL — Rigid Lever - Night Latch (Key retracts Latchbolt)
NL — Night Latch (Key retracts Latchbolt)
NL-OP — Night Latch Cylinder Assembly — Optional Pull
TL — Turn Lever
TL-BE — Turn Lever-Blank Escutcheon
TP — Thumbpiece
TP-BE — Thumbpiece-Blank Escutcheon
XX — Lever Style 06 standard
optional — 01, 02, 03, 05, 07, 12, 16, 17, 18

F — Fire Exit Device

LBR — Less Bottom Rod
2 — Double Cylinder (Rim & Mortise Only)
ALK — Standard Alarm Kit
ALK-EI — External Inhibit Alarm Kit
ALK-AR1 — Auto-Reset 1½ minute Alarm Kit
ALK-AR3 — Auto-Reset 3 minute Alarm Kit
ALK-AR6 — Auto-Reset 6 minute Alarm Kit

3' — 3' Device (2' 4" — 3' Door Size)
4' — 4' Device (2' 10" — 4' Door Size)

US32D — 98 ONLY

— HR — Handing — RHR or LHR

PDF created by Specworks®
E996L electrified Breakaway lever trim provides remote locking and unlocking capabilities while incorporating the patented Breakaway trim design.

The 24VDC solenoid can be energized from a distant controller, thus allowing access control of the opening. The control of stairwells in high-rise buildings is a common application for this trim.

When electrically unlocked the unit operates as a normal lever trim. When electrically locked, the lever feels locked, but when more than 35 pounds of torque pressure is applied, the Breakaway lever feature engages.

The E996L is provided standard in a fail safe (FS) condition, but can be field converted to a fail secure (FSE) where allowed. The trim can be ordered with a device, added to an existing 98/99 series device application, or a conversion kit can be added to an existing 996L Breakaway lever trim. On new construction applications, the E996L trim will require less door prep.

The E996L is available with a blank escutcheon (BE) function, or with a cylinder for night latch function.

The E996L electrified trim replaces the current “E” electric feature on 98/99 series rim devices. Consult factory for requirements.

To Order, Specify:
1. Use “E” prefix, example E996L.  
   When ordering with device specify trim series with “E” prefix, example 9927L-BE 3´ US26D E996.
2. Device type, R/V (rim/surface or concealed vertical rod) or M (mortise).
3. RHR is furnished standard if not specified.  
   Field reversible.
4. Lever style (06 lever is furnished standard).

## LEVER DESIGN OPTIONS

![#01](image1)  
![#02](image2)  
![#03](image3)  
![#05](image4)  
![#06](image5)  

![#07](image6)  
![#12](image7)  
![#16](image8)  
![#17](image9)  

![#18](image10)

**E996L ELECTRICAL WIRING**
- Power input for E996L is 24VDC
- Two wires on trim are non-polarized (18 AWG minimum)

**SPECIFICATIONS**
- Solenoid – Continuous Duty 24VDC
- Solenoid Draw – 0.22 amp

**POWER WIRE**
Power Wire Runs Through Exit Device Body

**POWER SUPPLY**
PS873 or PS861

**CONTROL SWITCH**
(normally closed)

24 VDC output

E996L Trim

Power Transfer (EPT2 shown)
Cylinders, Keys and Key Control

Cabinet Locks and Padlocks

CL-Series Cabinet Locks

<table>
<thead>
<tr>
<th>Application</th>
<th>Bolt</th>
<th>Complete Lock</th>
<th>Cylinder Only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Conventional Primus Primus Primus UL</td>
<td>Conventional Primus Primus UL</td>
</tr>
<tr>
<td>Door</td>
<td></td>
<td>CL1000PB CL1740PB CL1540PB</td>
<td>20-172 20-772 20-572</td>
</tr>
<tr>
<td></td>
<td>1&quot; (std)</td>
<td>CL1000PB CL1740PB CL1540PB</td>
<td>20-172 20-772 20-572</td>
</tr>
<tr>
<td></td>
<td>1(\frac{1}{2})&quot;</td>
<td>CL1740PB CL1540PB</td>
<td>20-172 20-772 20-572</td>
</tr>
<tr>
<td>Drawer</td>
<td></td>
<td>CL2000PB CL2740PB CL2540PB</td>
<td>20-174 20-774 20-574</td>
</tr>
<tr>
<td></td>
<td>1(\frac{1}{2})&quot; (std)</td>
<td>CL2000PB CL2740PB CL2540PB</td>
<td>20-174 20-774 20-574</td>
</tr>
<tr>
<td></td>
<td>1(\frac{3}{4})&quot;</td>
<td>CL2000PB CL2740PB CL2540PB</td>
<td>20-174 20-774 20-574</td>
</tr>
</tbody>
</table>

Available 606 and 626 finish.
Everest C123 keyway standard.

PL-Series Padlocks

<table>
<thead>
<tr>
<th>Padlock Series</th>
<th>Shackle Dimensions</th>
<th>Complete Padlock</th>
<th>Cylinder Only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>PL1000 1(\frac{1}{4})&quot; x 2(\frac{1}{4})&quot; x (\frac{3}{4})&quot;</td>
<td>9(\frac{1}{16})&quot;</td>
<td>1(\frac{1}{2})&quot;</td>
<td>3(\frac{1}{4})&quot;</td>
</tr>
<tr>
<td>PL2000 2&quot; x 2(\frac{1}{4})&quot; x (\frac{3}{4})&quot;</td>
<td>9(\frac{1}{16})&quot;</td>
<td>1(\frac{1}{2})&quot;</td>
<td>3(\frac{1}{4})&quot;</td>
</tr>
<tr>
<td>PL3000 2(\frac{1}{4})&quot; x 2(\frac{1}{4})&quot; x (\frac{3}{4})&quot;</td>
<td>9(\frac{1}{16})&quot;</td>
<td>1(\frac{1}{2})&quot;</td>
<td>3(\frac{1}{4})&quot;</td>
</tr>
</tbody>
</table>

Available 606 finish only.
Everest C123 keyway standard.
**Specifications**

**Handing:**
All D-Series lever locksets are non-handed.

**Door Thickness:**
1⅝” to 2⅜” (41mm–54mm) standard including Vandlgard® functions. 1¾” – 2” for function D85. See accessories (Page 11) for spacers required for 1⅜” doors.

**Backset:**
2¾” (70 mm) standard. 2⅜”, 3¼” and 5” (60 mm, 95 mm, 127 mm) optional.

**Faceplate:**
Brass, bronze or stainless steel. 1⅛” x 2¼” (29 mm x 57mm) square corner, beveled.

**Lock Chassis:**
Zinc plated for corrosion resistance.

**Latch Bolt:**
Steel, ½” (12mm) throw, deadlocking on keyed and exterior functions. ¾” (19 mm) throw anti-friction latch available for pairs of fire doors.

**Exposed Trim:**
Levers: Pressure cast zinc, plated to match finish symbols. Roses: Solid brass.

**Strike:**
ANSI curved lip strike 1¼” x 4¾” x 1¾” lip to center standard. Optional strikes, lip lengths and ANSI strike box available. See page 10.

**Cylinder & Keys:**
6-pin Everest C123 keyway standard with two patented nickel silver keys per lock.

**Keying Options:**
Interchangeable core and Primus® high security cylinders. Master keying, grand master keying and construction keying.

**Warranty:**
Seven-year limited for all functions including Vandlgard®.

**Door Preparation**

**Lever Designs**

**Certifications**

**ANSI**
Meets or exceeds A156.2 Series 4000, Grade 1 strength and operational requirements. Meets A117.1 Accessibility Code.

**Federal**

**California State Reference Code (CSFH)**
(Formerly Title 19, California State Fire Marshal Standard)
All levers with less than ½” (64mm) returns comply; levers return to within ½” of door face.

**MEA Certification**
All electrified locking (fail-safe, unlocked by switch or power failures) functions accepted for use in New York City by the City of New York, Department of Buildings (MEA 24-04-E).

All levers with less than ½” (64mm) returns comply with California Fire Safety Codes.

3/4” and 1/2” throw latch approved for Hurricane Resistance with Miami-Dade County, Florida and the Florida Building Commission.

**UL / cUL:**
All locks listed for A label single doors, 4’ x 8’.
Letter F and UL symbol
**D SERIES LEVERS**

**Lever Designs & Finishes**

**ATHENS**
Symbol: ATH (L-Series 07)
Material: Pressure cast zinc lever; wrought brass rose
Finishes: 605, 606, 612, 613, 619, 625, 626

**RHODES**
Symbol: RHO (L-Series 06)
Material: Pressure cast zinc lever; wrought brass rose
Finishes: 605, 606, 612, 613, 619, 625, 626

**TUBULAR** (L-Series 03)
Symbol: TLR
Material: Pressure cast zinc lever; wrought brass rose
Finishes: 605, 606, 612, 613, 619, 625, 626

**SPARTA**
Symbol: SPA (L-Series 17)
Material: Pressure cast zinc lever; wrought brass rose
Finishes: 605, 606, 612, 613, 619, 625, 626

**OMEGA**
Symbol: OME (L-Series Omega)
Material: Pressure cast zinc lever; wrought brass rose
Finishes: 605, 606, 612, 613, 619, 625, 626

---

- **Keyed functions available with Full Size Interchangeable Core options.**
- **Keyed functions available with Small Format Interchangeable Core options.**

**TACTILE WARNING**

*(KNURLING)*
Change symbol designation as follows:

- **8AT** for Athens
- **8RO** for Rhodes
- **8SP** for Sparta
- **8TR** for Tubular*

*Only available with Tubular lever.

Only outside lever is knurled unless otherwise specified.

Not available with Omega trim

---

*Extended Factory Lead Time*
Schlage D-Series keyed lever locks with Vandlgard provide vandal resistant technology. Designed for maximum accessibility, security and durability, Vandlgard sets the standard for door hardware in educational facilities and other applications subject to heavy traffic or abuse. The unique features of Vandlgard prevent damage to internal lock components caused by excessive force from persons kicking, hitting or standing on the lever to gain access. Vandlgard functions maintain total key system and architectural design compatibility with Schlage’s regular D-Series cylindrical locks.

Levers have virtually replaced knobs in the marketplace for handicap accessibility. The added grip and leverage has created an increased opportunity for abuse or vandalism. This abuse often renders locks inoperable. In some cases the security of the door is violated leaving computer and laboratory equipment susceptible to theft. While this type of abuse is commonly associated with junior and senior high schools, it also occurs in universities, office buildings, commercial buildings, and public buildings.

**Benefits & Features**

*Superb warranty.*
All Vandlgard functions have a 7-year warranty.

*Reduce lever wobble and play.*
Integrated spindle and spring cage greatly reduces lever sag and wobble.

*Resists vandalism.*
Free-wheeling lever eliminates the ability to stand or exert excessive force on the end of the lever.

*Ease of installation.*
Installs in under 2 minutes.

**D-Series Vandlgard levers comply with ADA requirements.**
Functions

ANSI A156.2 Series 4000 Grade 1

Non-Keyed Locks

SCHLAGE  ANSI

ND10S  F75  Passage Latch
Both levers always unlocked. Inside lever is always free for immediate egress.

ND12D  F89  Exit Lock
Outside lever always fixed. Inside lever always unlocked. Inside lever is always free for immediate egress.

ND12DEL  Electrically Locked (Fail Safe)
Outside lever continuously locked electrically. Unlocked by switch or power failure. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever always free for immediate exit. Inside lever is always free for immediate egress.

ND12DEU  Electrically Unlocked (Fail Secure)
Outside lever continuously locked until unlocked by electric current. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever always free for immediate exit. Inside lever is always free for immediate egress.

ND25D  Exit Lock
Blank plate outside. Inside lever always unlocked. Inside lever is always free for immediate egress.

ND40S  F76  Bath/Bedroom Privacy Lock
Push-button locking. Can be opened from outside with small screwdriver. Turning inside lever or closing door releases button. Inside lever is always free for immediate egress.

ND44S  Hospital Privacy Lock
Push-button locking. Unlocked from outside by turning emergency turn-button. Turning inside lever or closing door releases button. Inside lever is always free for immediate egress.

ND170  Single Dummy Trim
Dummy trim for one side of door. Used for door pull or as matching inactive trim. Inside lever is always free for immediate egress.

Keyed Locks

SCHLAGE  ANSI

ND50PD  F82  Entrance/Office Lock
Push-button locking. Push-button locks outside lever until unlocked with key or by turning inside lever. Inside lever is always free for immediate egress.

ND53PD  F109  Entrance Lock
Turn/push-button locking; pushing and turning button locks outside lever until unlocked by key or by turning inside lever. Inside lever is always free for immediate egress.

ND60PD  F88  Vestibule Lock
Latch retracted by key from outside when outside lever is locked by key in inside lever. Inside lever is always unlocked. Inside lever is always free for immediate egress.

ND66PD  F91  Store Lock
Key in either lever locks or unlocks both levers.

ND70PD  F84  Classroom Lock
Outside lever locked and unlocked by key. Inside lever always unlocked. Inside lever is always free for immediate egress.

ND73PD  F90  Corridor Lock
Locked or unlocked by key from outside. Push-button locking from inside. Turning inside lever or closing door releases button. When outside lever is locked by key it can only be unlocked by key. Inside lever is always unlocked. Inside lever is always free for immediate egress.

ND75PD  Classroom Security Lock
Key in either lever locks or unlocks outside lever. Inside lever is always unlocked. Inside lever is always free for immediate egress.

Safe School Locks

† Keyed functions available with 6-pin (PD/LD), SFIC(GD/BD), or FSIC(RD/JD) cylinder.

* Caution: Double cylinder locks on residences and any door in any structure which is used for egress are a life safety hazard in times of emergency and their use is not recommended. Installation should be in accordance with existing codes only.
Functions

ANSI A156.2 Series 4000 Grade 1

Keyed Locks

SCHLAGE   ANSI

ND80PD   F86  Storeroom Lock †
Outside lever fixed. Entrance by key only. Inside lever always unlocked. Inside lever is always free for immediate egress.

Electrically Locked (Fail Safe) †
Outside lever continuously locked electrically. Unlocked by key outside or by switch or power failure. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever always free for immediate exit. Inside lever is always free for immediate egress.

ND80PDEU  Electrically Unlocked (Fail Secure) †
Outside lever continuously disengaged until unlocked by key or electric current. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever always free for immediate exit. Inside lever is always free for immediate egress.

ND82PD   F87  Institution Lock † *
Both levers fixed. Entrance by key in either lever.

ND85PD  Faculty Restroom Lock **
Outside lever fixed. Entrance by key only. Push-button in inside lever activates visual “occupancy” indicator, allowing only emergency master key to operate. Turning inside lever or closing door releases visual occupancy indicator. Rotation of inside spinner-button provides lock-out feature by keeping indicator thrown. Inside lever is always free for immediate egress.

Safe School Locks
† Keyed functions available with 6-pin (PD/LD), SFIC(GD/BD), or FSIC(RD/JD) cylinders.

* Caution: Double cylinder locks on residences and any door in any structure which is used for egress are a life safety hazard in times of emergency and their use is not recommended. Installation should be in accordance with existing codes only.

** 85 function locks are not available in Full Size & Small Format Interchangeable Cores.

Vandlgard Functions

SCHLAGE   ANSI

ND91PD   F82  Entrance/Office Lock †
Push-button locking. Push-button disengages outside lever until unlocked with key or by turning inside lever. Vandlgard is designed to disengage outside spindle from latch when in locked condition. Inside lever is always free for immediate egress.

ND92PD   F109  Entrance Lock †
Turn/push-button locking; pushing and turning button disengages outside lever, requiring use of key until button is manually unlocked. Push-button locking; pushing button disengages outside lever until unlocked by key or by turning inside lever. Vandlgard is designed to disengage outside spindle from latch when in locked condition. Inside lever is always free for immediate egress.

ND93PD   F88  Vestibule Lock †
Latch retracted by key from outside when outside lever is disengaged by key in inside lever. Inside lever is always unlocked. Inside lever is always free for immediate egress.

ND94PD   F84  Classroom Lock †
Outside lever disengaged and unlocked by key. Inside lever always unlocked. Vandlgard is designed to disengage outside spindle from latch when in locked condition. Inside lever is always free for immediate egress.

ND95PD  Classroom Security Lock †
Key in either lever locks or unlocks outside lever. Inside lever is always unlocked. Inside lever is always free for immediate egress.

ND96PD   F86  Storeroom Lock †
Outside lever always disengaged. Entrance by key only. Inside lever always unlocked. Vandlgard is designed to disengage outside spindle from latch when in locked condition. Inside lever is always free for immediate egress.

ND96PDEL  Electrically Locked (Fail Safe) †
Outside lever continuously disengaged electrically. Unlocked by key outside or by switch or power failure. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever always free for immediate exit. Vandlgard is designed to disengage outside spindle from latch when in locked condition. Inside lever is always free for immediate egress.

ND96PDEU  Electrically Unlocked (Fail Secure) †
Outside lever continuously disengaged until unlocked by key or electric current. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever always free for immediate exit. Vandlgard is designed to disengage outside spindle from latch when in locked condition. Inside lever is always free for immediate egress.
**Typical Wiring Diagram for Electrified Locks**

**AC Power Source – EL or EU**

**AC Operation**

Rectifier

Plug

Switch (Not Furnished)

Transformer (Not Furnished)

24V AC

115V AC

Rectifier used on AC operation unit only.

.35A @ 24V (Current requirements per lock)

**DC Power Source – EL or EU**

**DC Operation**

Switch (Not Furnished)

24V DC

.15A @ 24V (Current requirements per lock)

**AC and DC Application**

Cut as close to plug as possible for DC operation.

Plug into solenoid for AC operation. Discard for DC operation.

**Accessories**

1-3/8” D-Series Lever Door Spacer*

XN12-012

*For installation on 1 Ch, “ doors, two (2) spacers are required. Specify finish.

**Door Handing**

All Schlage® locks are reversible. Hand information is necessary to ensure proper finish of latchbolt and strike for split-finish locks. Follow the diagram to determine the hand of the door. The outside is the secure side or the corridor side.

<table>
<thead>
<tr>
<th>LH</th>
<th>INSIDE</th>
<th>RH</th>
</tr>
</thead>
<tbody>
<tr>
<td>LRB</td>
<td>INSIDE</td>
<td>RRB</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Left Hand Reverse Bevel</th>
<th>Right Hand Reverse Bevel</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTSIDE</td>
<td>OUTSIDE</td>
</tr>
</tbody>
</table>
Portable Security • Brass Padlocks

FEATURES & SPECIFICATIONS
• Solid Brass Body Resists Corrosion For All Weather Performance
• Molybdenum Hardened Steel Shackle Offers Greater Cut Resistance
• Double Deadbolt Locking Mechanism Provides Extra Security
• Patented Interchangeable Shackle Design Allows for Easy Disassembly
• Standard Cylinder Features Include:
  — Schlage Conventional Key-In-Knob (KNK) Cylinder
  — 6-Pin Solid Brass Cylinder (pinned 5) Offers Increased Pick Resistance
  — Two Nickel Silver Cut Schlage Keys
  — Full Size Interchangeable Core

ASTM STANDARDS
• Meets or exceeds ASTM standards for standard steel shackle, shackle cutting and corrosion resistance.

<table>
<thead>
<tr>
<th>UPC</th>
<th>Part #</th>
<th>Width</th>
<th>Height</th>
<th>Depth</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>Cylinder Type</th>
<th>Case Pack</th>
<th>Master Pack</th>
</tr>
</thead>
<tbody>
<tr>
<td>720018-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KEYED DIFFERENT - KEY IN KNOB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>997573</td>
<td>KS13A2300</td>
<td>1 25/32&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>1/4&quot;</td>
<td>3/4&quot;</td>
<td>3/4&quot;</td>
<td>6.4mm</td>
<td>19mm</td>
<td>19mm</td>
<td>KNK</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>997559</td>
<td>KS13D2300</td>
<td>1 25/32&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>1/4&quot;</td>
<td>1 1/2&quot;</td>
<td>3/4&quot;</td>
<td>6.4mm</td>
<td>38mm</td>
<td>19mm</td>
<td>KNK</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>997542</td>
<td>KS13F2300</td>
<td>1 25/32&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>1/4&quot;</td>
<td>2&quot;</td>
<td>3/4&quot;</td>
<td>6.4mm</td>
<td>51mm</td>
<td>19mm</td>
<td>KNK</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>997528</td>
<td>KS13G2300</td>
<td>1 25/32&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>1/4&quot;</td>
<td>4&quot;</td>
<td>3/4&quot;</td>
<td>6.4mm</td>
<td>102mm</td>
<td>19mm</td>
<td>KNK</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>997429</td>
<td>KS23A2300</td>
<td>1 25/32&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>5/16&quot;</td>
<td>3/4&quot;</td>
<td>3/4&quot;</td>
<td>8mm</td>
<td>19mm</td>
<td>24mm</td>
<td>KNK</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>997412</td>
<td>KS23D2300</td>
<td>1 25/32&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>5/16&quot;</td>
<td>1 1/2&quot;</td>
<td>3/4&quot;</td>
<td>8mm</td>
<td>38mm</td>
<td>19mm</td>
<td>KNK</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>997405</td>
<td>KS23F2300</td>
<td>1 25/32&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>5/16&quot;</td>
<td>2&quot;</td>
<td>3/4&quot;</td>
<td>8mm</td>
<td>51mm</td>
<td>19mm</td>
<td>KNK</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>997399</td>
<td>KS23G2300</td>
<td>1 25/32&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>5/16&quot;</td>
<td>4&quot;</td>
<td>3/4&quot;</td>
<td>8mm</td>
<td>102mm</td>
<td>19mm</td>
<td>KNK</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>997306</td>
<td>KS43A2300</td>
<td>1 15/16&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>3/8&quot;</td>
<td>3/4&quot;</td>
<td>3/4&quot;</td>
<td>9.5mm</td>
<td>19mm</td>
<td>19mm</td>
<td>KNK</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>997290</td>
<td>KS43D2300</td>
<td>1 15/16&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>3/8&quot;</td>
<td>1 1/2&quot;</td>
<td>3/4&quot;</td>
<td>9.5mm</td>
<td>38mm</td>
<td>19mm</td>
<td>KNK</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>997283</td>
<td>KS43F2300</td>
<td>1 15/16&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>3/8&quot;</td>
<td>2&quot;</td>
<td>3/4&quot;</td>
<td>9.5mm</td>
<td>51mm</td>
<td>19mm</td>
<td>KNK</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>997276</td>
<td>KS43G2300</td>
<td>1 15/16&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>3/8&quot;</td>
<td>4&quot;</td>
<td>3/4&quot;</td>
<td>9.5mm</td>
<td>102mm</td>
<td>19mm</td>
<td>KNK</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>LESS CYLINDER - FULL SIZE INTERCHANGEABLE CORE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>999133</td>
<td>KS43A3200</td>
<td>1 15/16&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>3/8&quot;</td>
<td>3/4&quot;</td>
<td>3/4&quot;</td>
<td>9.5mm</td>
<td>19mm</td>
<td>19mm</td>
<td>IC</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>999140</td>
<td>KS43D3200</td>
<td>1 15/16&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>3/8&quot;</td>
<td>1 1/2&quot;</td>
<td>3/4&quot;</td>
<td>9.5mm</td>
<td>38mm</td>
<td>19mm</td>
<td>IC</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>999157</td>
<td>KS43F3200</td>
<td>1 15/16&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>3/8&quot;</td>
<td>2&quot;</td>
<td>3/4&quot;</td>
<td>9.5mm</td>
<td>51mm</td>
<td>19mm</td>
<td>IC</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>999164</td>
<td>KS43G3200</td>
<td>1 15/16&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>3/8&quot;</td>
<td>4&quot;</td>
<td>3/4&quot;</td>
<td>9.5mm</td>
<td>102mm</td>
<td>19mm</td>
<td>IC</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>LESS SHACKLE/LESS CYLINDER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>997870</td>
<td>KS13P2200</td>
<td>1 25/32&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>1/4&quot;</td>
<td>n/a</td>
<td>3/4&quot;</td>
<td>6.4mm</td>
<td>n/a</td>
<td>19mm</td>
<td>KNK</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>997856</td>
<td>KS23P2200</td>
<td>1 25/32&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>5/16&quot;</td>
<td>n/a</td>
<td>3/4&quot;</td>
<td>8mm</td>
<td>n/a</td>
<td>19mm</td>
<td>KNK</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>997825</td>
<td>KS43P2200</td>
<td>1 15/16&quot;</td>
<td>2 3/16&quot;</td>
<td>7/8&quot;</td>
<td>3/8&quot;</td>
<td>n/a</td>
<td>3/4&quot;</td>
<td>9.5mm</td>
<td>n/a</td>
<td>19mm</td>
<td>KNK</td>
<td>6</td>
<td>24</td>
</tr>
</tbody>
</table>

NOTE: 1) Padlocks ship without a shackle or cylinder. Driver and all other internal padlock parts are included. For cylinder and keying options, refer to Cylinders and Keys & Keying.
2) Full size interchangeable padlocks and cylinders ship separately.

Custom Engraving - Optional

KSxxxx XXX-000-xxx

CLR Assigned Number per Technical Services
Brass Padlock Stock or Make to Order Part number

NOTES: 1) A one time set up cost will be added to the first order under part number 50-020.
2) An engraving fee will be added to net product cost.
3) Custom engraving requires submission of completed “Custom Logo Request” form (see Forms) and scaleable logo line art in DXF format to TSSEC@irco.com.
4) Minimum order quantity is 6.
5) XKS-000-XXX part number is assigned by Technical Services and is keyed in the accessory field as part of the product part number.

Shackle Dimensions

Ingersoll Rand
Security Technologies
Architectural Door Trim

8200 Series Push Plates and 8300 Series Pull Plates

- Made from the finest architectural aluminum, brass, and stainless steel.
- For Push Plate sizes other than listed, contact our Customer Service Department or your local sales representative.
- All aluminum, brass, and stainless steel Push Plates meet ANSI A156.6 requirements for .050" thickness.
- Each Push Plate is packaged individually wrapped with mounting screws.
- For special mounting methods other than standard, see pages C11 - C13.

Push Plates Cut for Cylinder or Thumbturns

- All plates may be ordered with cutout for cylinder or thumbturn. Standard cutouts are positioned 2" from top of plate and centered on plates up to 4" wide or 2" from edge on plates over 4" wide. Specify hand of door when ordering cutout for plates wider than 4". On pull plates, if the pulls center-to-center dimension interferes with the cutout for the cylinder or thumbturn, please provide drawing of cutout location when ordering.
- Standard size for cylinder cutouts is 1-1/4" diameter and for thumbturn cutout is 3/8" diameter.
- When ordering, add suffix CFC for cut for cylinder, and CFT for cut for thumbturn to product number.

How to Order

8

Model:
- 200 Push Plate,
- 300 Pull Plate, less pull

Hole Spacing: (for Pull Plate only)
- 5 for 5-1/4"
- 6 for 6"
- 8 for 8"
- 0 for 10"

Finishes:

Size:
- 3 x 12, 3-1/2 x 15, 4 x 16, 6 x 16, 8 x 16

Special Options: (specify handing for plates over 4" wide)
- CFC Cylinder cutout
- CTC Thumbturn cutout

8200 Push Plate
8300 Pull Plate (less pull)

Available Sizes
- 3 x 12"
- 3.5 x 15"
- 4 x 16"
- 6 x 16"
- 8 x 16"
**Architectural Door Trim**

### 8300 Series Pull Plates

- Made from the finest architectural aluminum, brass and stainless steel.
- For Pull Plate sizes other than listed, contact our Customer Service Department or your local sales representative.
- All aluminum, brass, and stainless steel Pull Plates meet ANSI A156.6 requirements for .050” thickness.
- Each Pull Plate is packaged individually wrapped with mounting screws.
- Pulls are centered on plates up to 4” wide and offset 2” from edge of plates wider than 4”.
- For special mounting methods other than standard, see pages C11 - C13.

#### 8302 Pull Plate
- **8300 Plate**
  - 3-1/2” x 15”
  - 4” x 16”
  - 6” x 16”
- **8102 Pull**
  - 6” centers
  - 8” centers
  - 10” centers

#### 8303 and 8303EZ Pull Plate
- **8300 Plate**
  - 3-1/2” x 15”
  - 4” x 16”
  - 6” x 16”
- **8103 Pull**
  - 8” centers
  - 10” centers

#### 8305 Pull Plate
- **8300 Plate**
  - 3-1/2” x 15”
  - 4” x 16”
  - 6” x 16”
- **8105 Pull**
  - 6” centers
  - 8” centers
  - 10” centers

#### How to Order

**Pull Style:**
- 02 for 8102
- 03 for 8103
- 05 for 8105

**Pull Center to Center:**
- 6 for 6” (not available on 8303)
- 8 for 8”
- 0 for 10”

**Finishes:**

**Size:**
- 3-1/2” x 15”, 4” x 16”, 6” x 16”

**Special Options: (HAnching needed for 6” x 16”, LH or RH)**
- CFC Cylinder cutout
- CTC Thumbturn cutout

**Mounting:**
- Blank Standard
- F Concealed pull wood doors w/push plate (special. Not available 8303EZ.)
- G Concealed pull plate (Only available 8302, 8303 and 8303EZ)
- I Concealed pull wood door (not available 8305 and 8303EZ)
- J Back to back pull (not available 8305 and 8303EZ)
Architectural Door Trim

Mounting

- All mounting hardware is for standard 1-3/4" door.
- Consult Customer Service if other than standard.

Standard Mounting

- (2) 1/4-20 x 2-1/4" brass, oval head machine screws; plated to match.
- (2) No. 14 countersunk washers; plated to match

Type G
Concealed Pull Plate Mounting
Available only for 8302, 8303, 8311 and 8314 Pull Plates.

- (2) 1/4-20 x 5/8" steel flat head machine screws; zinc plated.

Pull mounts directly onto plate. Plate is attached to door by 6 screws.

Type F-Special
Wood Doors
Concealed Pull Mounting With Push Plate

- (2) 1/4-20 x 2-1/4" steel flat head machine screws; zinc plated.

Available only for 8102, 8103, 8105, 8111, 8113, 8114, 8302, 8303, 8305, 8311, 8313 and 8314. Plate on opposite side of door must be ordered separately.

Type H-Special
Reinforced Hollow Metal Door
Concealed Pull Mounting
Available only for 8102 and 8103 Pulls.

- (2) Steel screw sleeves; zinc plated.
- (2) 1/4-20 x 1-1/4" steel countersunk trim head machine screw; zinc plated.
Architectural Door Trim

Mounting

- All mounting hardware is for standard 1-3/4" door.
- Consult Customer Service if other than standard.

**Type I**
Wood Doors
Concealed Pull Mounting
Available only for 8102 and 8103 Pulls.
- (2) 10 x 1-1/2" No. 10 steel countersunk trim head sheet metal screws; zinc plated.

**Type J**
Back to Back Pull Mounting
Available only for 8102, 8103, 8302 and 8303 Pulls.
- (2) Steel screw sleeves; zinc plated.
- (2) 1/4-20 x 2-3/4" No. 10 steel countersunk trim head machine screws; zinc plated.
Pulls furnished in pairs (PR) unless single (SGL) specified.

**Type K**
Back to Back Pull Mounting
Available only for 8121-5 Pulls.
- (4) Steel screw sleeve nuts; steel zinc plated.
- (8) No. 8-32 x 1" brass oval head machine screws; plated to match.
Pulls furnished in pairs (PR).

**Type L**
Reinforced Hollow Metal Door
Available only for 8103EZ and 8190 Pulls.
- (2) 1/4-20 x 1-1/4" steel countersunk trim head machine screws with (4) set screws for maximum anchoring force
- (2) Steel screw sleeves; zinc plated.
Coordinators - Bar Coordinators and Filler Bars

COR Series Bar Coordinators

- The COR Series Coordinators are designed for use on pairs of doors when one door needs to close before the other.
- All COR units function easily. The active door lever, located nearest to the active stop, holds the active door open until the trigger mechanism is released by the closing of the inactive leaf.
- All COR units are equipped with an override feature which allows the active door to close under extreme pressure.
- All COR units are compatible with Flush Bolts.
- The COR Series is available in five sizes for variable door opening widths.
- The COR Series does not cover the entire length of the stop, so a filler bar can be provided to maintain architecturally clean lines.
- COR Series Coordinator Channels and fillers are made of aluminum and are normally furnished in a US28 finish. Also available in US26D, and 315AN (Black).
- Meets ANSI/BHMA A156.3, Type 21A.
- UL Listed for installation on labeled frame.
- Optional Filler Bars: FL20, FL32 and FL44, available to maintain clean line.
- Optional Mounting Brackets available: MB1, MB2, MB1F, MB2F, MB3F, MB1V, MB2V, and MB3V for other stop applied hardware.

Dimensions: 1-5/8" Wide x 5/8" Deep x Ordered Length

<table>
<thead>
<tr>
<th>Coordinator Number</th>
<th>Length of Channel</th>
<th>For Opening Widths</th>
<th>Common Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>COR32</td>
<td>32&quot;</td>
<td>34&quot; - 52&quot;</td>
<td>Pair of 20&quot; Doors</td>
</tr>
<tr>
<td>COR42</td>
<td>42&quot;</td>
<td>52&quot; - 72&quot;</td>
<td>Pair of 26&quot; Doors</td>
</tr>
<tr>
<td>COR52</td>
<td>52&quot;</td>
<td>62&quot; - 92&quot;</td>
<td>Pair of 30&quot; Doors</td>
</tr>
<tr>
<td>COR60</td>
<td>60&quot;</td>
<td>70&quot; - 108&quot;</td>
<td>Pair of 36&quot; Doors</td>
</tr>
<tr>
<td>COR72</td>
<td>72&quot;</td>
<td>84&quot; - 132&quot;</td>
<td>Pair of 40&quot; Doors</td>
</tr>
</tbody>
</table>

For Openings Where Doors Are Same Size

For Openings Where Doors Are Unequal Size

The coordinator length should equal the active door width plus approximately 1/2 the inactive door width. The coordinator must be 6" longer than the active door width and shorter than the overall frame opening between stops.

FL Series Filler Bars

- The FL Filler Bars are available in three sizes for variable frame openings.
- FL Filler Bars are made of aluminum and are normally furnished in a US28 finish. Also available in US26D and 315AN (Black).
- FL Filler Bars are field sized to frame opening.

Dimensions: 1-5/8" Wide x 5/8" Deep x Ordered Length

<table>
<thead>
<tr>
<th>Filler Bar Number</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL20</td>
<td>20&quot;</td>
</tr>
<tr>
<td>FL32</td>
<td>32&quot;</td>
</tr>
<tr>
<td>FL44</td>
<td>44&quot;</td>
</tr>
</tbody>
</table>

Dimensions: 1-5/8" Wide x 5/8" Deep x Ordered Length
Coordinators - Mounting Brackets

Mounting Brackets

**MB1 and MB2**
- Allows stop mounted hardware to be properly installed without damaging the COR coordinator, such as a parallel arm closer or a non-fire-rated surface vertical rod strike.
- Stop mounted hardware will need to be lowered to compensate for the height of the coordinator and mounting bracket.
- MB mounting brackets are made of aluminum and normally furnished in a USP finish. Powder Coated Finishes: SP28 and SPBLK.

**MB1F, MB2F and MB3F**
- Allows stop mounted hardware to be properly installed without damaging the COR coordinator. Example: strike for fire-rated surface vertical rod exit device.
- Stop mounted hardware will need to be lowered to compensate for the height of the coordinator and mounting bracket.
- MBF mounting brackets are made of 3/8" thick steel and normally furnished in a USP finish. Powder Coated Finishes: SP28 and SPBLK.

**MB1V, MB2V and MB3V (not shown)**
Same as MB1F, MB2F and MB3F with factory preparation for the Von Duprin 8827-F soffit latch.

<table>
<thead>
<tr>
<th>Product</th>
<th>Jamb Depth</th>
<th>Stop Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB1</td>
<td>4-3/4&quot; Min.</td>
<td>Over 2-1/2&quot;</td>
</tr>
<tr>
<td>MB2</td>
<td>4-3/4&quot; Min.</td>
<td>Up to 2-1/2&quot;</td>
</tr>
</tbody>
</table>

**Dimensions:**
- MB1: 4" Wide x 3" Deep x 15/16" Tall
- MB2: 4" Wide x 3-1/4" Deep x 1-5/8" Tall

<table>
<thead>
<tr>
<th>Product</th>
<th>Jamb Depth</th>
<th>Stop Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB1F</td>
<td>5&quot; Min.</td>
<td>1-1/2&quot; to 2-1/4&quot;</td>
</tr>
<tr>
<td>MB2F</td>
<td>5-7/8&quot; Min.</td>
<td>2-3/8&quot; to 3-1/4&quot;</td>
</tr>
<tr>
<td>MB3F</td>
<td>6-7/8&quot; Min.</td>
<td>3-3/8&quot; and Wider</td>
</tr>
</tbody>
</table>

**Dimensions:**
- MB1F: 4" Wide x 3" Deep x 1-5/8" Tall
- MB2F: 4" Wide x 4" Deep x 1-5/8" Tall
- MB3F: 4" Wide x 3-1/2" Deep x 1" Tall
## Coordinators

### Special Factory Preparation for Use with Vertical Rod Exit Devices

- Coordinators may need to be prepared at the factory for use with some surface and concealed vertical rod exit devices. (See Chart below)
- If exit device not listed in chart, the information shown on the illustration will be needed.

**1. Exit Device Manufacturer and Model No.**
**2. Active Net Door Size, “X”**
**3. Inactive Net Door Size, “Y”**
**4. Exit Device Backset, “U”**
**5. Stop Width, “W”**
**6. Stop Thickness if other than 5/8”, “V”**

<table>
<thead>
<tr>
<th>Exit Device Manufacturer</th>
<th>Exit Device Number</th>
<th>Device Backset</th>
<th>Maximum Active Door</th>
<th>Coordinator Size Needed</th>
<th>Coordinator Cutout Type</th>
<th>Mounting Bracket Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Von Duprin</td>
<td>5547-F</td>
<td>2-3/8&quot;</td>
<td>33&quot; 43&quot; 51&quot; 63&quot;</td>
<td>42&quot; 52&quot; 60&quot; 72&quot;</td>
<td>A</td>
<td>None</td>
</tr>
<tr>
<td>Von Duprin</td>
<td>8827-F</td>
<td>2-3/4&quot;</td>
<td>33&quot; 43&quot; 51&quot; 63&quot;</td>
<td>42&quot; 52&quot; 60&quot; 72&quot;</td>
<td>B</td>
<td>MB1V, MB2V or MB3V</td>
</tr>
<tr>
<td>Von Duprin</td>
<td>8847-F</td>
<td>2-3/8&quot;</td>
<td>33&quot; 43&quot; 51&quot; 63&quot;</td>
<td>42&quot; 52&quot; 60&quot; 72&quot;</td>
<td>C</td>
<td>None</td>
</tr>
<tr>
<td>Von Duprin</td>
<td>33/3547</td>
<td>2-3/4&quot;</td>
<td>33&quot; 43&quot; 51&quot; 64&quot;</td>
<td>42&quot; 52&quot; 60&quot; 72&quot;</td>
<td>D</td>
<td>None</td>
</tr>
<tr>
<td>Von Duprin</td>
<td>33/3548</td>
<td>2-3/4&quot;</td>
<td>33&quot; 43&quot; 51&quot; 64&quot;</td>
<td>42&quot; 52&quot; 60&quot; 72&quot;</td>
<td>D</td>
<td>None</td>
</tr>
<tr>
<td>Von Duprin</td>
<td>33/3547WDC</td>
<td>1-5/16&quot;</td>
<td>34&quot; 44&quot; 52&quot; 65&quot;</td>
<td>42&quot; 52&quot; 60&quot; 72&quot;</td>
<td>E</td>
<td>None</td>
</tr>
<tr>
<td>Monarch</td>
<td>17-C</td>
<td>2-3/4&quot;</td>
<td>33&quot; 43&quot; 51&quot; 63&quot;</td>
<td>42&quot; 52&quot; 60&quot; 72&quot;</td>
<td>F</td>
<td>None</td>
</tr>
<tr>
<td>Monarch</td>
<td>17-C-WDC</td>
<td>2-13/16&quot;</td>
<td>33&quot; 43&quot; 51&quot; 63&quot;</td>
<td>42&quot; 52&quot; 60&quot; 72&quot;</td>
<td>G</td>
<td>None</td>
</tr>
</tbody>
</table>
Ordering Guide for Bar Coordinators

How to Order COR and Accessories

<table>
<thead>
<tr>
<th>COR</th>
<th>US28</th>
<th>FL20</th>
<th>D</th>
<th>36&quot;</th>
<th>2-MB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>32, 42, 52, 60, 72</td>
<td>US28, US26D, 315AN (Black)</td>
<td>FL20, FL32, FL44</td>
<td>A, B, C, D, E, F, G</td>
<td>STOP THICKNESS</td>
<td></td>
</tr>
</tbody>
</table>

To determine the size COR you need:

1. Start with the active door size (X).
2. Next consider the overall frame opening between stops (F).
3. Preferably, the coordinator would equal the active door width (X) + approximately 1/2 inactive door width (Y). Keep in mind the coordinator must be 6" longer than the active door width (X) and less than the overall frame opening between stop (F).

Examples:

- Pair of 30" Doors, 5/8" Stops
  Active Door Size, X = 30"
  Overall Frame Opening between Stops, F = 58-3/4"
  Recommended Coordinator: COR42

- Pair of 36" Doors, 5/8" Stops
  Active Door Size, X = 36"
  Overall Frame Opening between Stops, F = 70-3/4"
  Recommended Coordinator: COR52

- 36" Active Door, 18" Inactive door, 5/8" Stops
  Active Door Size, X = 36"
  Overall Frame Opening between Stops, F = 52-3/4"
  Recommended Coordinator: COR42

- 48" Active Door, 24" Inactive Door, 5/8" Stops
  Active Door Size, X = 48"
  Overall Frame Opening between Stops, F = 94-3/4"
  Recommended Coordinator: COR60
Astragal/Meeting Stile Gasketing

Solid Metal Astragal Seals

Steel Security Astragal

Furnished with #12 x 1 1/4" SMS. Can replace required metal astragal on wood or metal doors. UL. Max gap between doors = 1/8". Astragal must overlap gap and inactive door min. of 3/4".
The 4040 SUPER SMOOTHEE® is a heavy duty, double lever arm closer designed for institutional and other high traffic applications, and has passed 10,000,000 cycles in independent testing. The wide choice of options, installation accessories and ease of installation offer maximum versatility.

UL and ULC listed for self-closing doors without hold-open. Tested and certified under ANSI Standard A156.4, grade one.

► Standard 4040 series closer shipped with regular arm (non-hold-open), standard non-metallic cover, and self reaming and tapping screws. See 4040-6 for options.
► Non-sized cylinder is adjustable for interior doors to 5'0” and exterior doors to 4'0”.
► Closer mounts hinge side, top jamb, and parallel arm on either right or left swinging doors.
► Closers to meet ADA requirements. See 4040-8.
► Standard or custom powder coat finish.
► Optional plated finish on cover, arm, and fasteners.
► SRI primer for installations in corrosive conditions.
► Fast Accurate Spring Tension adjust dial. **NEW**!
Hinge (Pull) Side Mounting

Maximum Opening
Templating allows up to 120°.

Hold-open points 85° up to 120° with hold-open arm.

butt hinges should not exceed 5" (127 mm) in width.

auxiliary stop is recommended at hold-open point or where a door cannot swing beyond 120°.

reveal should not exceed 3/4" (19 mm) for regular arm or hold-open arm.

top rail less than 3 3/4" (95 mm) requires plate, 4040-18. plate requires 2" (51 mm) minimum.

clearance of 2 3/8" (60 mm) behind door required for 90° installation.

delay action add suffix “DA” to selected cylinder (eg. 4041 DA). delays closing from 120° to 70°. delay time adjustable up to 1 minute.

bull nose trim requires soffit shoe, 4040-65.

corner bracket available for doors where top jamb or parallel arm mounting can not be used.

4040-16 allows 110° opening. Projects 5" (127 mm) from stop, 12 13/16" (325 mm) from frame.

4040-17 allows 100° opening with certain auxiliary door holders (consult factory). Projects 6 3/8" (162 mm) from stop, 13 11/16" (348 mm) from frame.

Options
► Delayed action cylinder.
► Hold-open arm.
► Metal cover.
► Bracket mount.

Special Templates
Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.
TOP JAMB (PUSH SIDE) MOUNTING

MAXIMUM OPENING
Templating allows up to 120°.

Hold-open points 85° up to 120° with hold-open arm.

- **Butt Hinges** should not exceed 5” (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where the door cannot swing 120°.
- **Reveal** of 2 9/16” (65 mm) allows 120° opening for REGULAR ARM or standard HOLD-OPEN ARM. 4 13/16” (122 mm) allows up to 120° opening with LONG ARM where standard rod and shoe is replaced with optional LONG ROD AND SHOE 4040-79LR. Use H-LONG ARM with LONG HEAD AND TUBE, 4040-78HL for hold-open. 8” (203 mm) allows up to 120° opening with EXTRA LONG ARM where standard rod and shoe is replaced with optional EXTRA LONG ROD AND SHOE, 4040-79ELR.
- **Top Rail** requires 1 1/4” (32 mm) minimum. 2 1/4” (57 mm) minimum with closer on PLATE, 4040-18TJ. 3” (76 mm) minimum with closer on PLATE, 4040-18G.
- **Head Frame** less than 3 1/2” (89 mm) requires PLATE, 4040-18TJ. With flush ceiling, use PLATE, 4040-18G. Either plate requires 1 3/4” (44 mm) minimum.
- **Delay Action** Add suffix “DA” to selected cylinder (eg. 4041 DA). Delays closing from 120° to 80°. Delay time adjustable up to 1 minute.

Options
- Delayed action cylinder.
- Long arm, extra long arm, hold-open arm, long hold-open arm.
- Metal cover.

Special Templates
Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.
PARALLEL ARM (PUSH SIDE) MOUNTING
Optional mounting requires PA SHOE, 4040-62PA for REGULAR or HOLD-OPEN arms. Add prefix “P” to closer description (eg. P4041). P4041 closer includes 4040-201 FIFTH HOLE SPACER to support PA SHOE.

MAXIMUM OPENING
180° opening/hold-open points with all except CUSH arms.
110° opening/hold-open with CUSH arms.

Designer Series Cover

Options
- Delay action cylinder.
- Hold-open, EDA, H-EDA, CUSH, H-CUSH, SPRING CUSH, or SPRING H-CUSH arm.
- Metal cover.

Special Templates
Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

4040 REGULAR or HOLD-OPEN MOUNT
- Butt Hinges should not exceed 5” (127 mm) in width.
- Auxiliary Stop is recommended at hold-open point, where the door cannot swing 180°, or where CUSH-N-STOP® arm is not used.
- Clearance for 4040-62PA shoe is 4” (102 mm) from door face. EDA or CUSH shoe projects 5 1/2” (140 mm) from door face.
- Top Rail less than 5 1/2” (140 mm) measured from the stop requires PLATE, 4040-18PA. Plate requires 2” (51 mm) minimum from the stop.
- Head Frame flush or single rabatted requires PA SHOE ADAPTER, 4040-418.
- Stop Width minimum 1” (25 mm).
- Blade Stop clearance requires 1/2” (13mm) BLADE STOP SPACER, 4040-61.
- Delay Action Add suffix “DA” to selected cylinder (eg. P4041 DA). Delays time adjustable up to 1 minute.
Mounting details are the same as 4040 REGULAR or HOLD-OPEN except as listed below. 4040 closers ordered with EDA or CUSH arms include 4040-201 FIFTH HOLE SPACER to support the shoe.

MAXIMUM OPENING
EDA template allows 180°. Hold-open point up to maximum opening. CUSH arms can be templated for opening/hold-open point at:

- 85°:
  - A = 9 1/8” (232 mm)
  - B = 7 15/16” (202 mm)

- 90°:
  - A = 8 3/8” (213 mm)
  - B = 7 3/16” (183 mm)

- 100°:
  - A = 7 1/4” (184 mm)
  - B = 6 1/16” (154 mm)

- or 110°:
  - A = 6 1/4” (159 mm)
  - B = 5 1/16” (129 mm)

Spring Cush dead stop points are approximately 5˚ less than templated stop point.

- Clearance for 4040-62EDA or CUSH shoe is 5 1/2” (140 mm) from door face.
- Head Frame flush or rabetted requires CUSH FLUSH PANEL ADAPTER, 4040-419.
- EDA or CUSH ARM requires SHOE SUPPORT, 4040-30 for fifth screw anchorage where reveal is less than 3 1/16” (78 mm).
- Delay Action Add suffix “DA” to selected cylinder (eg. 4041 DA). Delays closing from maximum opening to:
  - 115˚ with 180˚ template.
  - 95˚ with 110˚ template.
  - 85˚ with 100˚ template.
  - 75˚ with 90˚ template.
  - Delay time adjustable up to one minute.
LCN 4040 SERIES

COVERS

COVER, 4040-72
Standard, non-handed non-metallic cover.

METAL COVER, 4040-72MC
Optional, handed cover. Required for plated finishes.

DESIGNER METAL COVER, 4040-72DS1
Optional, non-handed designer series metal cover.

ARMS

REGULAR ARM, 4040-3077
Standard, non-handed arm mounts pull side or top jamb with shallow reveal. P4041 closer includes PA SHOE, 4040-62PA required for parallel arm mounting.

AUXILIARY SHOE, 4040-62A, allows parallel arm mounting with Glynn-Johnson overhead holder/stop when substituted for the -62 PA. Special template required

LONG ARM, 4040-3077L
Optional non-handed arm includes LONG ROD AND SHOE, 4040-79LR for top jamb mount with typical reveal.

EXTRA LONG ARM, 4040-3077ELR
Optional non-handed arm includes EXTRA LONG ROD AND SHOE, 4040-79ELR for top jamb mount with deep reveal.

HOLD-OPEN ARM, 4040-3049
Optional, non-handed arm mounts pull side or top jamb with shallow reveal, hold-open adjustable shoe. P4041 closer includes 4040-62PA shoe required for parallel arm mounting.

LONG HOLD-OPEN ARM, 4040-3049L
Optional non-handed arm includes LONG HEAD AND TUBE, 4040-3048L for top jamb mount with typical reveal.

EXTRA DUTY (EDA) ARM, 4040-3077EDA
Optional, non-handed parallel arm features forged, solid steel main and forearm for potentially abusive installations. Optional THICK HUB SHOE, 4040-62G for blade stop clearance. Optional FLUSH TRANSOM SHOE, 4040-145 for single rabbedt installations. Optional shoes require special templating.

H-EDA ARM, 4040-3049EDA
Optional handed arm provides hold-open function, adjustable at the shoe.

CUSH-N-STOP (CUSH) ARM, 4040-3077CNS
Optional, non-handed parallel arm features solid forged steel main arm and forearm with stop in soffit shoe.

H-CUSH ARM, 4040-3049CNS
Provides hold-open function with templated stop/hold-open points. Handle controls hold-open function.

SPRING CUSH ARM, 4040-3077SC
Optional, non-handed parallel arm for abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe.

SPRING H-CUSH ARM, 4040-3049SC
Optional, non-handed parallel arm for abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe. Handle controls hold-open function.
INSTALLATION ACCESSORIES

PLATE, 4040-18/18DS1
Required for hinge side mount where top rail is less than 3 3/4” (95 mm).
Plate requires minimum 2” (51 mm) minimum top rail.

PLATE, 4040-18TJ/18TJDS1
Centers top jamb mounted closer vertically on head frame
where face is less than 3 1/2” (89 mm).
Plate requires 1 3/4” (44 mm) minimum head frame.

PLATE, 4040-18G/18GDS1
Locates top jamb mounted closer flush with top of head frame
face in flush ceiling condition.
Plate requires 1 3/4” (44 mm) minimum head frame.

PLATE, 4040-18PA/18PADS1
Required for parallel arm mounting where top rail is less than
5 1/2” (140 mm), measured from the stop.
Plate requires 2” (51 mm) minimum top rail.

BRACKET, 4040-16
For doors where top jamb or parallel arm mounting cannot be
used, consult factory.

BRACKET, 4040-17
Designed to lower closer for clearance of certain auxiliary
holders (consult factory).

CUSH SHOE SUPPORT, 4040-30 provides anchorage for
fifth screw used with CUSH arms, where reveal is less than 3
1/16” (78 mm).

BLADE STOP SPACER, 4040-61 required to lower parallel
arm shoe to clear 1/2” (13 mm) blade stop.

SOFFIT SHOE, 4040-65 adapts hinge side shoe to rounded or
bull nose trim.

PA SHOE ADAPTER, 4040-418 provides horizontal mounting
surface for parallel arm shoe on single rabatted or flush frame.

CUSH FLUSH PANEL ADAPTER, 4040-419 provides
horizontal mounting surface for CUSH shoe on single rabatted
or flush frame.

AUXILIARY SHOE, 4040-62A requires a top rail of 7” (179
mm). Optional shoe replaces -62PA for parallel arm mounting
of regular arm with Glynn-Johnson overhead holder/stop.
Special template required.
## HOW-TO-ORDER
### 4040 SERIES CLOSERS

1. **SELECT FINISH**
   - Standard Powder Coat
   - Aluminum, Statuary, Light Bronze, Tan, Brass, Black, Dark Bronze
   - Custom Powder Coat
   - Plated Finish US
   - (optional metal cover will be furnished)
   - SRI primer

   *Closer will be shipped with:*
   - **STANDARD CYLINDER**
   - **STANDARD COVER**
   - **REGULAR ARM** (without PA shoe), and
   - **SELF-REAMING and TAPPING SCREWS** (new), unless options listed below are selected.

### CLOSER OPTIONS

#### CYLINDER
- PA Mount (add prefix "P" to cylinder for 4040-62PA shoe required with regular or hold-open arm)
- Delayed Action (add suffix “DA” to cylinder)

#### COVER
- Metal (specify right or left hand)
- Designer series metal (non-handed)

#### ARM
- Regular w/62A
- Long
- Extra Long
- Hold-Open
- Long Hold-Open
- EDA (optional -62G or -145)
- H-EDA (specify right or left hand, optional -62G or -145)
- Cush-N-Stop
- H-Cush-N-Stop
- Spring Cush
- Spring H-Cush

### OPTIONAL SCREW PACKS
- TB* w/Self-Reaming and Tapping Screws(SRTS) complete w/cylinder SRTS
- TB* w/SRTS
- TORX SRTS
- TORX Thu Bolt w/SRTS
- TB* & Machine Screws
- TB*, Wood & Machine Screws
- TORX Machine Screws
- TB* & TORX machine screws

*Specify door thickness if other than 1 3/4”.

### SPECIAL TEMPLATE
- **ST-**

### INSTALLATION ACCESSORIES
- Plate, 4040-18/18DS1
- Plate, 4040-18TJ/18TJDS1
- Plate, 4040-18G/18GDS1
- Plate, 4040-18PA/18PADS1
- CUSH Shoe Support, 4040-30
- Blade Stop Spacer, 4040-61
- Auxiliary Shoe, 4040-62A
- Soffit Shoe, 4040-65
- PA Shoe Adapter, 4040-418
- CUSH Flush Panel Adapter, 4040-419

---

### ORDERING INFORMATION

#### TABLE OF SIZES

| 4041 cylinder is adjustable from size 1 through size 6 and is shipped set to size 3. Closing power of 4040 series closers may be adjusted 50%. Indicates recommended range of door width for closer size. |
| EXTERIOR (and VESTIBULE) DOOR WIDTH |
| 24” | 30” | 36” | 42” | 48” |
| 610mm | 762mm | 914mm | 1067mm | 1219mm |
| *4041 | | | | |
| Minimum Door Width |

| INTERIOR DOOR WIDTH |
| 24” | 34” | 38” | 48” | 54” | 60” |
| 610mm | 864mm | 965mm | 1219mm | 1372mm | 1524mm |
| *4041 | | | | | |
| Minimum Door Width |

#### REDUCED OPENING FORCE 4040 CLOSERS

*CAUTION!* Any manual door closer, including those certified by BHMA to conform to ANSI Standard A156.4, that is selected, installed and adjusted based on ADA or other reduced opening force requirements may not provide sufficient power to reliably close and latch a door.

Refer to POWER OPERATORS section for information on systems that meet reduced opening force requirements without effecting closing power.

<table>
<thead>
<tr>
<th>DOOR WIDTH</th>
<th>36”</th>
<th>42”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.5* lbs.</td>
<td>4041</td>
<td>4041</td>
<td>4041</td>
</tr>
<tr>
<td>5.0* lbs.</td>
<td>4041</td>
<td>4041</td>
<td>4041</td>
</tr>
</tbody>
</table>

*Maximum opening force*
100 Series Concealed Overhead Door Holders/Stops

100 Series Heavy-Duty

Glynn-Johnson offers a complete line of overhead door holders and stops, accommodating virtually all openings with solutions for even the most complex door control problems. These concealed holders and stops provide the most attractive and reliable heavy-duty door control available.

Glynn-Johnson 100 series holders and stops provide the most reliable and versatile concealed overhead door control. They are designed for installation on virtually all types of doors mounted on conventional type butt hinges, pivots, continuous hinges, swing clear hinges and numerous other specialty hinges. When used in conjunction with many surface-applied door closers, 100 series holders and stops provide the most effective control for entrance doors and vestibule doors of all types, as well as heavy or often used interior doors. Templates provided allow for variable mounting positions, ranging from 85° - 110° of opening.

Five Models:
• 100H Series Hold-Open Model
• 100HP Series Internal Hold-Open Model
• 100F Series Friction Hold-Open Model
• 100S Series Stop-Only Model
• 100SE Series Special Stop-Only Model

Six Sizes:
• Each model comes in six sizes.
• Simple
• Standardized

Three Options:
• ADJ—Adjustable Jamb Bracket
• CJ—Jamb Bracket for use with LCN5030 Closer
• SOC—Pin-in-Socket Security Screw Package

Unmatched Convenience:
• Non-handed
• Improved Compatibility with Door Closers
• Single/Double-Acting Doors
• Interior/Exterior Applications
• Reduced Door Prep
• Durable
• Improved Corrosion Resistance
• Function Conversion Kits are Available

Materials and Finishes:
In Heavy Gauge Brass or 300 Series Stainless Steel, these models offer the broadest range of finishes in the industry, complementing any design and offering the highest resistance to corrosion. Available in the following finishes:

<table>
<thead>
<tr>
<th>Finishes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>US3</td>
<td>Polished Brass</td>
</tr>
<tr>
<td>US4</td>
<td>Satin Brass</td>
</tr>
<tr>
<td>US10</td>
<td>Satin Bronze</td>
</tr>
<tr>
<td>US10B</td>
<td>Oil Rubbed Bronze</td>
</tr>
<tr>
<td>US32</td>
<td>Polished Stainless Steel</td>
</tr>
<tr>
<td>US32D</td>
<td>Satin Stainless Steel</td>
</tr>
<tr>
<td>SP4</td>
<td>Powder Coat Brass</td>
</tr>
<tr>
<td>SP10</td>
<td>Powder Coat Bronze</td>
</tr>
<tr>
<td>SP28</td>
<td>Powder Coat Aluminum</td>
</tr>
<tr>
<td>SP313</td>
<td>Powder Coat Dark Bronze</td>
</tr>
<tr>
<td>SPBLK</td>
<td>Powder Coat Black</td>
</tr>
</tbody>
</table>

Models

These models provide a wide range of optional features, and are ideal for use on entrance and vestibule doors, large doors, doors opened frequently, or doors subject to abuse. These models are also furnished with an offset-style jamb bracket.

Designed for heavy-duty applications, 100 series models will provide long-lasting protection to doors, frames, hinges, related hardware and surrounding walls or obstructions.

100H Series Hold-Open

(Suffix H) The Hold-Open function should be used where it is desired to hold a door open at a predetermined position for short or long periods of time, permitting an unobstructed traffic flow through the opening.

These models are both selective and adjustable, featuring the most reliable Hold-Open mechanism available. They feature a control knob which protrudes from the face of the door and turns the Hold-Open function on or off. Set in the inactive position, the unit acts as a stop and shock absorber. The tension on the Hold-Open mechanism can be adjusted using an allen wrench to offset air currents or other exterior conditions. The Hold-Open tension adjustment is located in the bottom of the track in the top of the door.

100HP Series Internal Hold-Open

These models provide a Hold-Open unit with the Hold-Open mechanism built into the channel, thus reducing the door prep. The 100HP have a preset Hold-Open force that is not adjustable. The Hold-Open feature is not selectable in these units, so the doors are always held open.
**100F Series Friction Hold-Open**

(Suffix F) Friction Hold-Open models provide an alternative holding method, ideal for heavy patient room doors, closet doors or similar applications where multiple Hold-Open positions are desired. The friction tension is adjusted using an allen wrench and an open end wrench. The friction tension adjustment is located on the top of the slider in the channel.

**100S Series Stop-Only**

(Suffix S) When the Hold-Open function is not required, the Stop-Only function provides the same effective door control minus the Hold-Open feature. The Stop-Only model may be used on fire doors.

**100SE Series Special Stop-Only**

(Suffix SE) When Stop-Only models are used in conjunction with single point Hold-Open electronic door closers, they may be ordered without the shock-absorbing mechanism. Used as an auxiliary stop with these closers, they will prolong the life of the closer. The stop location is adjusted using an allen wrench on the stop block located in the channel.

*Note: Caution should be used when using this option in other applications, as the elimination of the shock-absorbing spring can put added stress on door and frame if used improperly.*

**Application Information**

**UL Classification**

The 100 series Stop-Only models are classified by Underwriters Laboratories (UL) as Miscellaneous Fire Door Accessories. This classification applies to use on either Hollow Metal Fire Doors or Wood Fire Doors. Where Wood Door manufacturer’s listing allows for the cutout required for installation, concealed overhead stops may be used on those wood fire doors. These units may be used on doors of any rating. As a reminder, the Miscellaneous Fire Door Accessories (GVUX) section is defined by UL as: “Miscellaneous fire door accessories are intended in the individual Listings. The accessories have been investigated to determine that when installed in accordance with the manufacturer’s instructions, the accessories do not adversely affect the fire rating of the fire door and/or fire door frames.”

**Dead Stop Templating:**

If a wall or similar obstruction is in place at 110° or less opening angle (i.e. doors that open back-to-back), Dead Stop Templating should be used. This includes all Hold-Open, Friction and Stop-Only models, except when the “SE” Option is used. The Dead Stop position is reached when the shock-absorbing spring is fully compressed, the initial degree of opening will be 5° to 7° less than the Dead Stop opening.

*Example: If the holder is templated to 100° Dead Stop, the door will hold open somewhere between 93° and 95° but no further than 100°.*

*Note: Do not use dead-stop templating on the 100SE Series since there is no shock-absorbing spring.*

**Environmental Considerations:**

Environmental factors should always be considered when specifying overhead holders and stops. Doors that are positioned on a building’s exterior or subject to corrosive conditions should be equipped with a holder constructed primarily of stainless steel or brass materials. For interior applications, steel is acceptable, though brass substrates generally provide a more attractive architectural-grade finish.

**Function Conversion Kits**

- **FK100F**—Converts a 100H or 100S unit into a 100F unit. To order specify FK100F.
- **FK100H**—Converts a 100F or 100S unit into a 100H unit. To order specify FK100H.
- No kit is needed to convert a 100H or 100F unit into a 100S unit.

**Options**

**Suffix ADJ (Adjustable Jamb Bracket):**

An additional option on the 100 series is the adjustable jamb bracket, which allows the degree of Hold-Open or Stop angle to be adjusted after installation. Suffix “ADJ” is available in all functions, but only in sizes 3, 4, 5 & 6. ADJ jamb bracket requires additional frame prep. The ADJ option cannot be added to an existing unit, it must be factory ordered.

**Suffix CJ (Closer Jamb Bracket):**

Provides a special jamb bracket needed for 100 series units used with LCN5030 closers. These special jamb brackets are handed, so handing will need to be specified when ordering the “CJ” option, CJLH for a left hand door and CJRH for a right hand door. The CJ option cannot be added to an existing unit, it must be factory ordered.

**Suffix SOC (Pin-in-Socket Security Screw Package):**

A screw package with pin-in-socket screws for mounting the jamb bracket to the frame is provided instead of the standard screw package.
100 Series Concealed Overhead Door Holders/Stops

The template information on this page is for reference only and is not intended to serve as an installation template. For complete dimensional information, refer to Glynn-Johnson template book.

100 Series Sizing Chart

<table>
<thead>
<tr>
<th>BUTTS/OFFSET PIVOTS</th>
<th>CENTER HUNG</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE</td>
<td>DOOR OPENING</td>
</tr>
<tr>
<td>1</td>
<td>18”-23”</td>
</tr>
<tr>
<td>2</td>
<td>23-1/16”-27”</td>
</tr>
<tr>
<td>3</td>
<td>27-1/16”-33”</td>
</tr>
<tr>
<td>4</td>
<td>33-1/16”-39”</td>
</tr>
<tr>
<td>5</td>
<td>39-1/16”-45”</td>
</tr>
<tr>
<td>6</td>
<td>45-1/16”-54”</td>
</tr>
</tbody>
</table>

Note: This chart illustrates the most common types of hinging and door opening sizes. For unusual door details, contact Glynn-Johnson for availability.

*These sizes are not available for use with offset pivots. Also not available with the ADJ option.

BHMA/ANSI, A156.8 & FED. Spec. Cross Reference

<table>
<thead>
<tr>
<th>G-J Model</th>
<th>BHMA*</th>
<th>FED. Spec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>101-106 H</td>
<td>C01511</td>
<td>1160</td>
</tr>
<tr>
<td>101-106 S</td>
<td>C01541</td>
<td>----</td>
</tr>
<tr>
<td>101-106 F</td>
<td>C01531</td>
<td>----</td>
</tr>
</tbody>
</table>

* First numeral (0) designates optional material.

To specify:
Brass material, change 0 to 1 (i.e. C11511)
Stainless Steel material, change 0 to 5 (i.e. C51511)

BHMA

All 100 series models are designed for heavy-duty applications and far exceed BHMA cycle test and force test requirements for Grade 1 holders and stops.
How to Order

Overhead Series:

Size (Door Opening Using Butts or Offset Pivots):

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(18”–23&quot;)</td>
</tr>
<tr>
<td>2</td>
<td>(23-1/16&quot;–27&quot;)</td>
</tr>
<tr>
<td>3</td>
<td>(27-1/16&quot;–33&quot;)</td>
</tr>
<tr>
<td>4</td>
<td>(33-1/16&quot;–39&quot;)</td>
</tr>
<tr>
<td>5</td>
<td>(39-1/16&quot;–45&quot;)</td>
</tr>
<tr>
<td>6</td>
<td>(45-1/16&quot;–54&quot;)</td>
</tr>
</tbody>
</table>

Function:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>Hold-Open</td>
</tr>
<tr>
<td>HP</td>
<td>Internal Hold-Open</td>
</tr>
<tr>
<td>F</td>
<td>Friction Hold-Open</td>
</tr>
<tr>
<td>S</td>
<td>Stop-Only</td>
</tr>
<tr>
<td>SE</td>
<td>Special Stop-Only</td>
</tr>
</tbody>
</table>

Finishes:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>US3</td>
<td>Polished Brass</td>
</tr>
<tr>
<td>US4</td>
<td>Satin Brass</td>
</tr>
<tr>
<td>US10</td>
<td>Satin Bronze</td>
</tr>
<tr>
<td>US10B</td>
<td>Oil Rubbed Bronze</td>
</tr>
<tr>
<td>US32</td>
<td>Polished Stainless Steel</td>
</tr>
<tr>
<td>US32D</td>
<td>Satin Stainless Steel</td>
</tr>
<tr>
<td>SP4</td>
<td>Powder Coat Brass</td>
</tr>
<tr>
<td>SP10</td>
<td>Powder Coat Bronze</td>
</tr>
<tr>
<td>SP28</td>
<td>Powder Coat Aluminum</td>
</tr>
<tr>
<td>SP313</td>
<td>Powder Coat Dark Bronze</td>
</tr>
<tr>
<td>SPBLK</td>
<td>Powder Coat Black</td>
</tr>
</tbody>
</table>

Options:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJ</td>
<td>Adjustable Jamb Bracket</td>
</tr>
<tr>
<td>CJLH</td>
<td>Special Jamb Bracket for LCN 5030 Closer, LH Door</td>
</tr>
<tr>
<td>CJRH</td>
<td>Special Jamb Bracket for LCN 5030 Closer, RH Door</td>
</tr>
<tr>
<td>SOC</td>
<td>Pin-in-Socket Security Screws</td>
</tr>
</tbody>
</table>
Architectural Door Trim

Series 8400 Door Protection Plates
.050" Thickness

Features:
• Door Protection Plates are fabricated from the finest architectural aluminum, brass, and stainless steel, or 1/8" thick clear acrylic plastic or black or brown high impact polyethylene.
• All aluminum, brass, bronze and stainless steel Door Protection Plates meet ANSI A156.6 requirements for .050" thickness.
• Optional beveling—For beveling of top and two sides of plates suffix with B3E, and for beveling of four sides suffix with B4E. Plastic plates are beveled on all four sides as standard.
• Each plate is packaged carefully wrapped in strong kraft paper with #6 x 5/8" oval head, undercut sheet metal screws plated to match, for easy installation on hollow metal, laminate, or wood doors. All plates are packaged in heavy duty corrugated cardboard; larger plates are enclosed in a wooden frame.

Mop Plates
• Protect the bottom of the pull side of door subject to cleaning and mopping procedures.
• Size Ranges: 4" to 6" high, 22" to 48" wide

Kick Plates
• Protect the bottom of the push side of doors subject to scuffing from foot traffic.
• Recommended for all doors subject to normal use (especially doors using a closer).
• Size Ranges: 8" to 24" high, 22" to 48" wide

Stretcher Plates
• Protect doors at specific areas where consistent contact is made by stretchers, service carts or other equipment.
• Usually applied to push side of doors.
• Specify “B4E” Option for beveled edges.
• Size Ranges: 6" to 8" high, 22" to 48" wide

Armor Plates
• Protect lower half of doors from abuse by hard carts, trucks and rough usage.
• Usually applied to push side of single doors and both sides of double acting doors.
• Size Ranges: 26" to 48" high, 22" to 48" wide

How to Order

Finish
8400 - x -

Height:
4" up to 48" in 1/2" increments
(For brass kick plates over 24", check with customer service.)

Width:
22" up to 48" in 1/2" increments

Options: (Only for metal plates)
B3E for Bevel Top and 2 Edges
B4E for Bevel 4 Edges
CS for Counter Sink Holes
ES for Extra row of Screws
Floor Stops

**FS18S**
**FS18L**

**Features:**
- Security Door Stops designed for use in high vandalism areas.
- Molded from flame resistant, resilient material around a heavy-duty stud.
- Once grouted in concrete, leaves no exposed fasteners to be tampered with or removed.
- Ideal for jail or security cell areas where floor mounted stops are required.
- FS18L also ideal for concrete wall applications.
- Finish: Black.

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Stop Height</th>
<th>Stop Diameter</th>
<th>Stud Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS18S</td>
<td>1-1/2&quot;</td>
<td>2&quot;</td>
<td>2-1/2&quot;</td>
</tr>
<tr>
<td>FS18L</td>
<td>3-1/2&quot;</td>
<td>2&quot;</td>
<td>2-1/2&quot;</td>
</tr>
</tbody>
</table>

**FS434**

**Features:**
- Burnished wrought steel.
- Soft, resilient gray rubber.
- For undercut doors up to 1-1/2".
- Packed with screws and plastic anchors.

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Overall Height</th>
<th>Base Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS434</td>
<td>2-5/8&quot;</td>
<td>1-1/2&quot; W x 2-3/4&quot; L</td>
</tr>
</tbody>
</table>
Floor Door Stop & Automatic Holder

FS40
FS41
FS42
FS43

Features:
- Automatic door holders ideal for heavy-traffic situations that require a simple, fool-proof, Hold-Open device.
- Forged from brass.
- Unit is activated automatically when door is opened. A firm pull on door releases the mechanism.
- Strikes accommodate different door to floor clearances.
- Model numbers are determined by strike/door-to-floor clearances.
- Holder position on door is adjustable.
- Universal screw pack allows for installation in all types of door construction.
- Meets ANSI/BHMA 156.16, L11301.

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Door to Floor Clearance</th>
<th>Holder Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS40</td>
<td>1/2” or less</td>
<td>3” Wide x 3-11/16” High</td>
</tr>
<tr>
<td>FS41</td>
<td>9/16” to 1-1/16”</td>
<td>3” Wide x 3-11/16” High</td>
</tr>
<tr>
<td>FS42</td>
<td>1-1/8” to 1-9/16”</td>
<td>3” Wide x 3-11/16” High</td>
</tr>
<tr>
<td>FS43</td>
<td>1-5/8” to 2-1/16”</td>
<td>3” Wide x 3-11/16” High</td>
</tr>
</tbody>
</table>

Optional Strike Details
## Wall Bumpers

**WS401 CVX & WS402 CVX**

**WS401 CCV & WS402 CCV**

**Features:**
- Constructed in heavy-duty cast brass or aluminum base.
- Special retainer cup makes rubber tamper resistant.
- The WS401CVX unit is designed with a convex rubber bumper, packed with wood screw and plastic anchor.
- The WS401CCV unit is designed with a concave rubber bumper which avoids damage to locks with projecting buttons, packed with wood screw and plastic anchor.
- The WS402CVX unit is designed with a convex rubber bumper packed with screw and drywall anchor.
- The WS402CCV unit is designed with a concave rubber bumper which avoids damage to locks with projecting buttons and is packed with screw and drywall anchor.
- WS401CCV & WS402CCV meets ANSI/BHMA 156.16 L12251 for brass and L32251 for aluminum.

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Mounting Hardware</th>
<th>Base Diameter</th>
<th>Base Thickness</th>
<th>Overall Projection</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS401CVX</td>
<td>Wood screw, plastic anchor</td>
<td>2-1/2”</td>
<td>3/8”</td>
<td>1”</td>
</tr>
<tr>
<td>WS401CCV</td>
<td>Wood screw, plastic anchor</td>
<td>2-1/2”</td>
<td>3/8”</td>
<td>1”</td>
</tr>
<tr>
<td>WS402CVX</td>
<td>Screw, Drywall Anchor</td>
<td>2-1/2”</td>
<td>3/8”</td>
<td>1”</td>
</tr>
<tr>
<td>WS402CCV</td>
<td>Screw, Drywall Anchor</td>
<td>2-1/2”</td>
<td>3/8”</td>
<td>1”</td>
</tr>
</tbody>
</table>

**WS404CVX**

**Features:**
- Constructed in cast brass.
- Compact size.
- Totally concealed mounting discourages vandalism or tampering.
- Unit furnished with grey convex rubber bumper.
- Packed with sheet metal screw, rawl plug and brad.

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Base Diameter</th>
<th>Overall Projection</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS404CVX</td>
<td>1”</td>
<td>17/32”</td>
</tr>
</tbody>
</table>
Automatic Wall Holders

**WS40**

**Features:**
- Constructed of sturdy cast brass, or aluminum.
- Holder is mounted on wall and strike is mounted on door.
- Roller on holder rides up seats itself on strike, with a heavy duty bumper pad deadening the sound and shock.
- Universal screw pack accommodates all types wall construction.
- Meets ANSI/BHMA 156.16, L11291.

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Base Height</th>
<th>Base Width</th>
<th>Base Projection</th>
<th>Engaged Projection</th>
<th>Strike Height</th>
<th>Strike Width</th>
<th>Strike Projection</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS40</td>
<td>2'</td>
<td>2-1/2'</td>
<td>2-1/4'</td>
<td>3-1/2'</td>
<td>2-1/16'</td>
<td>3/4'</td>
<td>2'</td>
</tr>
</tbody>
</table>

**WS45**

**WS45X**

**Features:**
- Constructed of cast brass, bronze or aluminum.
- Spring loaded roller rides up the face of the strike, seating itself on the strike, holding the door firmly in the open position.
- A heavy rubber pad cushions the shock and absorbs the sound.
- With unit mounted on door and the strike on wall, vertical adjustment is available on body.
- The strike is adjustable 45 degrees left or right, both adjustments easily accomplished at time of installation or at a later date.
- WS45 strike is furnished with 3 countersunk mounting holes.
- WS45X strike is furnished with a threaded stud and expansion shield for masonry type mounting.
- Meets ANSI/BHMA 156.16, L11291.

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Base Height</th>
<th>Base Width</th>
<th>Base Projection</th>
<th>Engaged Projection</th>
<th>Strike Diameter</th>
<th>Strike Projection</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS45</td>
<td>3-11/16'</td>
<td>3'</td>
<td>2'</td>
<td>3-7/16'</td>
<td>2-3/8'</td>
<td>3'</td>
</tr>
<tr>
<td>WS45X</td>
<td>3-11/16'</td>
<td>3'</td>
<td>2'</td>
<td>3-7/16'</td>
<td>2-3/8'</td>
<td>3'</td>
</tr>
</tbody>
</table>
Floor Stops – Dome

FS436 Dome Stop

Features:
• For doors without threshold.
• Heavy-Duty Cast Dome Stops constructed of brass, bronze or aluminum.
• Gray, non-marring rubber bumper.
• Packed with wood screw and plastic anchor, specify Tampin (TPN) or lead expansion shield (LS), if required.
• Meets ANSI/BHMA 156.6, L12141 for brass or bronze and L32141 for aluminum.

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Overall Height</th>
<th>Base Height</th>
<th>Base Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS436</td>
<td>1”</td>
<td>3/16”</td>
<td>1-3/4” x 2” Oval</td>
</tr>
</tbody>
</table>

R435 Riser

Features:
• Extruded aluminum, mill finish.
• For conversion of FS436 Dome Stop to carpet installation.
• Packed with wood screws, lead shield and stud. Specify Tampin (TPN) if required.
• Available in 1/4”, 3/8”, 1/2”, 5/8”, 3/4” and 1" height.

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>R435</td>
<td>1” x 1-3/8” Oval</td>
</tr>
</tbody>
</table>

How to Order:

FS ___ - ___ - ___ - ___

Model:
436 Dome Stop Only
435 Riser Only
436 x 435 Dome Stop & Riser

Riser Size:
Blank No riser
1/4 for 1/4”
3/8 for 3/8”
1/2 for 1/2”
5/8 for 5/8”
3/4 for 3/4”
1 for 1”

Finishes:

Mounting:
Blank Standard
TPN Tampin
LS Lead Expansion Shield
Self Adhesive Seals

**5050B** Brown
**5050C** Charcoal
**5050W** White
**5050T** Tan
**5050CL** Clear

Available in 36”, 48”, 84”, 96” and 108” lengths.

**5025B** Brown
**5025C** Charcoal
**5025W** White
**5025T** Tan


**5060B** Brown
**5060CL** Clear


### Neoprene Gasketing

<table>
<thead>
<tr>
<th>Width</th>
<th>Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>361</td>
<td>3/8” x 3/16”</td>
</tr>
<tr>
<td>362</td>
<td>1/2” x 1/4”</td>
</tr>
<tr>
<td>363</td>
<td>3/8” x 1/8”</td>
</tr>
</tbody>
</table>

### “FATT”

**Fast Attach Two-Way Tape**

Fast attach two way tape provides an easy and effective alternative to gasketing installation. A 1/2” wide 2-way tape is applied to the metal housing insuring a quick and easy installation. Then for security, 3 tek-type self drilling screws are used to further secure each piece of material to the frame stop. A no problem installation with no holes to drill.

To order add suffix “FATT” to product number. See price list for products available with this feature.

FATT IS NOT CLASSIFIED FOR USE ON FIRE DOORS.
SILICONE PLUS - Specially formulated to withstand greater temperature extremes while providing maximum protection against air infiltration. Silicone Plus gasket material is tan.
With 700 Series:
* No break in seal
* Head not drilled
* Side sections are furnished with slotted holes for adjustment
* Comes with self drilling #8 (Tek type) screws.
* Bracket or closer and/or hold open device to be attached to frame through weatherstrip section.
* May be cut to fit narrow frame stops.

Specify stop width for cutting.

Illustrations are shown at 70%.

See page 59 for our Premium Grade Allseal® Seals for use with parallel arm closers.
Security Astragal

112N 112NDKB

Max. 1 1/2"

1 3/4"

1/2" 5/8"

neoprene

23/32"

5/32"

96" MAXIMUM HEIGHT

detail 1/2 size

145PA 145PB 145PBKB

Spring loaded protection for pairs of outswinging doors up to 96" in height. Pile insert for weather protection, sturdy aluminum for pry bar protection.

Glass Door Astragal Seals

Our glass door seal consists of translucent PVC channel and nylon brush for an attractive solution to a difficult problem.
ADA COMPLIANT BUMPER SEAL THRESHOLDS

All drawings are actual size except as noted.

896 .64 lbs./ft.
896DKB .64 lbs./ft.

950 .50 lbs./ft.
950DKB .50 lbs./ft.

Excellent for use with Automatic Door Bottom

SLIP RESISTANT SURFACE

All thresholds are available with a slip resistant, non-skid surface. Specify “SIA” finish.

Bumper Seal

Bumper seal required to provide a seal against the door and increase the weather resistance of the threshold.

Vinyl (“V”) added unless other material is specified. Neoprene (“N”), Pile (“P”), Silicone (“S”).

**Pile insert not available

1/2” added to thresholds under 61”
1” added to thresholds over 61”
Stainless Steel Saddle Thresholds

Other widths and heights available upon request

Typical Wall .120

413SS 1.65 lbs./ft. RCE Available
4" T 1/4"

513SS 2.07 lbs./ft. RCE Available
5" T 1/4"

412SS 1.65 lbs./ft. RCE Available
4" T 1/2"

512SS 2.07 lbs./ft. RCE Available
5" T 2/1"
Interlocking Rubber Ramps

Ramp Slope = 1:12

Supplied with beveled ends - (end slope = 1:2). Specify if straight cut is required. Rubber ramps sections may be combined with aluminum ramp components for higher rises, or with 6" flat aluminum interlocking threshold #957 (page T18) for various offset conditions. Black silicone adhesive available to secure ramps without fasteners.

Specify RR5007BL, each tube will secure 2 ramps

12" wide x 36" long (6 square feet.)

Illustrations shown at 50%

Slope = 1:12

*Available with slip resistant surface
  - Specify “SIA” Finish

E-mail: ngpinfo@ngpinc.com     www.ngp.com
Return Closed Ends for Ramps

Return closed ends provide an attractive finished appearance to ramps. They are available in several lengths and can be trimmed to accommodate any size ramp assembly. RCE's are also available with slip resistant surface. Specify “SIA” finish.

Slip Resistant Surface
Available with abrasive surface for better traction and slip resistance. Specify “SIA” finish.

- mill finish aluminum
- DKB - dark bronze finish

RCE-9
RCE-9DKB
RCE-15
RCE-15DKB
RCE-21
RCE-21DKB
RCE-30 (includes RCE-21 + 12” extension)
RCE-30DKB (includes RCE-21 + 12” extension)
Ramps Required for Compliance with either
* Americans with Disabilities Act Accessibility Guidelines (ADAAG) - 1998
* ICC/ANSI A117.1-1998 Accessible and Usable Buildings or Facilities

Requires:
* Maximum Threshold Height = 1/2"
* Thresholds above 1/4" must be beveled with a slope no greater than 1:2
* Height changes over 1/2" requires use of a ramp with slope not steeper than 1:12
* The rise for any ramp run shall be 30 inches maximum

When installed as part of interlocking ramp assembly.
Ramps

Available with slip resistant surface
Specify “SIA” Finish

Diamond Tread Plate

* 1/8" thick bright-finish aluminum
* Edges beveled unless otherwise specified
* Provided undrilled, unless a custom drilling detail is provided
* #10 x 1 1/2 wood screws are supplied as standard
* Minimum width 2"
* Great for use as cover plate for expansion joint, custom ramps, bulkhead saddle, or custom threshold.
* Welding not recommended. Bar or custom supports may be shipped loose.
* This item is made to order and is non-returnable and non-cancelable once fabricated.
Door Silencers

**SR64**

**Features:**
- For use on metal frames featuring pneumatic design that, once installed, forms an air pocket to absorb shock and reduce noise of door closing.
- Tamper-proof once installed on the frame.
- Proper installation also eliminates door rattle and provides constant tension for door latches or locks.
- Packed in bags of 100. Grey also available in bulk pack of 2500.
- Each bag has an installation tool included.
- Meets ANSI/BHMA 156.16, L03011.
- Finish: grey is standard. Black optional.

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Diameter</th>
<th>Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR64</td>
<td>1/2&quot;</td>
<td>1/8&quot;</td>
</tr>
</tbody>
</table>

**SR65**

**Features:**
- For use on wood frames, also feature pneumatic design to cushion shock and absorb noise.
- To prevent removal, a small brad should be driven into stop strip and through stem of silencer, as shown in the detail.
- Packed in bags of 100.
- Meets ANSI/BHMA 156.16, L03021.
- Finish: grey.

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Height</th>
<th>Width</th>
<th>Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR64</td>
<td>3/4&quot;</td>
<td>3/8&quot;</td>
<td>1/8&quot;</td>
</tr>
</tbody>
</table>

**SR66**

**Features:**
- Self Adhesive Rubber Silencers.
- Economical installation requires no drilling of frames.
- Packed in sheets of 100.
- Finishes: brown, grey, white.

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Diameter</th>
<th>Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR66</td>
<td>1/2&quot;</td>
<td>1/8&quot;</td>
</tr>
</tbody>
</table>
Lock Guards

LG10 thru LG12

**LG10**
- Ideally suited for use with rose or escutcheon 2-3/4” wide or less.
- For use with Type 86 Mortise and Type 161 Cylinder Locks (ANSI 156.13 Series 1000 and ANSI 156.2 Series 4000).
- No exposed fasteners on face of unit.
- Unique design provides maximum security, virtually eliminating the opening between door and frame at the latch point.
- Available in 13 Gauge Stainless Steel or 12 Gauge Steel.
- Finishes: Stainless Steel—US32D, Steel—USP

**Dimensions:**
9-1/2” Tall x 2-1/2” Wide

**LG11**
- Designed for use on aluminum doors with latch-type locks or doors equipped with electric strikes.
- Unit is Handed - Specify left or right hand when ordering.
- No exposed fasteners on face of unit.
- Unique design provides maximum security, virtually eliminating the opening between door and frame at latch point.
- Available in 13 Gauge Stainless Steel or 12 Gauge Steel.
- Finishes: Stainless Steel—US32D, Steel—SP313 (Dark Bronze)

**Dimensions:**
9-1/2” Tall x 3” Wide

**LG12**
- Narrow design unit for use on rose or escutcheon 3-1/2” or less.
- For use with Type 86 Mortise and Type 161 Cylinder Locks (ANSI 156.13 Series 1000 and ANSI 156.2 Series 4000).
- No exposed fasteners on face of unit.
- Unique design provides maximum security, virtually eliminating the opening between door and frame at the latch point.
- Available in 13 Gauge Stainless Steel or 12 Gauge Steel.
- Finishes: Stainless Steel—US32D, Steel—USP

**Dimensions:**
9-1/2” Tall x 1-1/2” Wide