SECTION 08 71 00
FINISH HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Finish hardware items required for swinging doors indicated on schedules and/or shown on drawings including hinges, lock or latch sets, dead locks, cylinders, bolts, exit devices, push/pull units, closers and miscellaneous door and access control devices, protection plates, and other miscellaneous hardware.

1.02. RELATED SECTIONS

1. Section 06 40 00 - Architectural Woodwork
2. Section 08 11 00 - Metal Doors and Frames
3. Section 08 14 00 - Wood Doors
4. Section 08 41 00 – Entrances and Storefronts
5. Division 28 00 00 – Electronic Safety and Security
6. Section 28 05 13 -Conductors and Cables for Electronic Safety and Security
7. Section 28 13 00- Access Control

1.03 REFERENCES

A. American National Standards Institute **(ANSI):**
   1. ANSI A156 Series
   2. ANSI A115W Wood Door Hardware Standards; Hardware Preparation
   3. ANSI A115 Specifications for Steel Door and Frame Preparation for Hardware
   4. ANSI A117.1 Accessible and Usable Buildings and Facilities
   5. ANSI A250.6 Hardware on Steel Doors (Reinforcement - Applications)

B. Door and Hardware Institute **(DHI)**
   1. Sequence and format for hardware schedule, keying system, and nomenclature.
   2. Recommended locations for Architectural Hardware for Standard Steel Doors and Frames – 1990
   3. Basic Architectural Hardware – 1985

C. Builders Hardware Manufacturing Association **(BHMA)**
   1. BHMA Product Standards, latest edition
   2. ANSI/BHMA A156.18 – Standard for materials and Finishes

D. National Fire Protection Association **(NFPA)**
   1. NFPA 80 Fire Doors and Windows
   2. NFPA 101 Life Safety Codes

E. Americans with Disabilities Act Accessibility Guidelines **(ADAAG)**

1.04 SUBMITTALS

A. General Requirements:
   1. Submit detailed finished hardware schedule in accordance with Section 01300
   2. Before ordering any materials, prepare and submit shop drawings of all hardware materials on complete hardware schedule to Project Consultant for review.
   3. At the completion of review, make corrections as directed and resubmit the corrected schedule for final approval and one (1) final copy hand delivered to FIU Key Control office W3-100.
   4. Approval of schedule will not relieve Contractor of the responsibility for furnishing all necessary hardware, including the responsibility for furnishing correct quantities.
   5. After hardware schedule has been approved, furnish templates required by manufacturing contractors for making proper provisions in their work for accurate fitting, finishing hardware setting.
   6. Furnish templates in ample time to facilitate progress of work.
   7. Door numbers and hardware groups are not to be changed.

B. Schedules:
   1. Schedules are to be formatted in a “Vertical format” as per (DHI) “Document Sequence”
   2. Schedule shall be complete, including type, manufacturer’s name and number, and finish of each item required.
   3. Electrical Hardware and Access Control must also be included with operation description for openings.

C. Product Data:
   1. Product data sheets or catalog cuts are required with schedule submission.

D. Templates:
   1. Furnish templates required for fabrication of Hollow Metal frames, aluminum and glass doors, or other related to hardware.

E. Certification:
   1. Subject notarized certification indicating that hardware furnished for labeled doors have attached label as per NFPA 80

F. Wiring Diagrams:
   1. All electrical hardware and electronic hardware provided must include diagrams, riser, and point to point information.

1.05 Quality Assurance

A. Supplier Qualifications:
   1. Hardware supplier shall be engaged regularly in contract hardware work and be staffed to expedite work. The firm shall have been furnishing hardware on similar projects in the vicinity for not less than five (5) years. At owners, request supplier must send qualified representative to the job site to entangle any mishaps. The supplier must have, in its employ, an Architectural Hardware Consultant (AHC) as certified by (DHI).

B. Installer Qualifications:

1. Installers must have a minimum (5) five years experience of installing commercial grade hardware. Prior installation installer must attend a pre-installation class with hardware manufactures.

C. Make occasional inspections and verify that items are properly used, installed, and in correct location. Report improper application of hardware to Owner.

D. Ensure the provision, proper coordination and functioning of finish hardware required for all openings, whether or not hereinafter listed in the detailed schedule, including proper type of strike plates, length of spindle, hand, backset and bevel of locks, hand and degree opening for closers, length of kick plates, length of rods and flush bolts, type of door stop and other functions or mechanism to meet the requirements of the project.

E. Once building has been acquired by the owner, and has operated for (6) six months. Installer must return to adjust any or all hardware for proper operation.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Send duplicate lists of hardware in each shipment to the contractor. Ensure original list accompanies shipment. Hardware Vendor: pay shipping and delivery charges.

B. Coordinate delivery of hardware to respective shops of subcontractors as required. Ensure timely delivery of hardware components.

C. Hardware: sorted and delivered to jobsite marked to correspond with item numbers of vendor's approved schedule and be specific as to exact opening and other locations for which items are packaged. Each door opening: receive separate item number of hardware schedule.

D. Check all shipments to insure proper accessories and templates.

E. Deliver hardware only after detailed schedule, and samples have been approved.

F. Provide secure lock-up for hardware delivered to the project. Control handling and installation of hardware items which are not immediately replaceable so that the completion of the work will not be delayed by hardware losses.

G. Protection:
1. Leave protective coatings when at all possible.

1.07 WARRANTY

A. All hardware and installation must provide warranty against defects and workmanship; refer to Division 1 for proper clarifications.

B. Mechanical Locks and Electronic Access Locks: Warranted in writing by the manufacturer against failure due to defective materials and workmanship, for a period of five (5) years commencing from the Date of installation

C. Other Electronic Hardware (Power supplies, EL/RX/LX switches, etc.): Warranted for one (1) year from Date of Purchase.

D. Overhead Door Closers: Warranted in writing by the manufacturer against failure due to defective materials and workmanship, for a period of ten (10) years commencing on the Date of

Final Completion and Acceptance, and in the event of failure, the manufacturer is to promptly repair or replace the defective with no additional cost to the Owner.

PART 2 PRODUCTS

2.01 MANUFACTURER'S

A. Manufacturer's Acceptable

HAGER
McKINNEY
BOMMER
STANLEY
FALCON LOCK CO.
VON-DUPRIN
SCHLAGE ELECTRONICS
LCN
GYLNN JOHNSON
H.B. IVES CO.
PEMKO
NATIONAL GUARD
REESE
ZERO

2.01 MATERIALS AND FABRICATION

A. Material: Use manufacture's standard metal alloy as specified and by ANSI A156 series standards. Stainless Steel material and finish 630 (US32D) when provided by manufacture for said products listed; 626 (US26D) may also be an alternative.

B. Fasteners: Provide hardware manufacture to conform to published templates, generally prepared for machine screw installation. Do not provide hardware, which has been prepared for self-tapping sheet metal screws, except, as specifically indicated.

C. Furnish screws for installation, with each hardware item. Provide Phillips flat-head screws except as otherwise indicated. Finish exposed (exposed under any condition) screws to match hardware finish or, if exposed in surfaces of other work to match finish of such other work, including "prepare for paint" in surfaces to receive painted finish.

D. Provide thru-bolts (sex bolts) for high traffic and heavy-duty use areas for doors not prepared for machine screws (staving, extra plating) for closers, panic and fire exit devices, stops and holders.

E. Tools and Maintenance Instructions for Maintenance: Furnish a complete set of specialized tools and maintenance instructions as needed for owner's continued adjustments, maintenance, and removal and replacement of finish hardware. Return all unused material to owner, (Key Control).

2.02 HINGES AND BUTTS

A. Domestic manufacture equal to Hager, Ives, Stanley, McKinney, and Bommer.

B. Quantity: Use 1.5 pair three (3) hinges for each door leaf up to and including 7'-6" in height doors over 7'-6' add an additional 0.5 pair one (1) hinge and 0.5 pair one (1) hinge for each door leaf 40 inches to 48 inches in width.

C. Ensure all doors equipped with closers are furnished with ball bearing (BB) hinges.

D. Size, Type and Finish: Provide the following unless otherwise noted in the hardware group.
   1. Exterior Doors with Closers: BB1199 4-1/2 inches x 4-1/2 inches with Non Removable Pins (NRP) BHMA 630 satin stainless steel finish.
   2. Interior Doors: BB1279- 4-1/2 inches x 4-1/2 inches BHMA 652 steel satin chromium finish.

   3. Interior Doors with Closers: BB1279 4-1/2 inches x 4-1/2 inches BHMA 652 steel satin Chromium finish for door leaf up to and including 36 inches wide.

2.03 LOCKS AND LATCHSETS

A. All Locksets: Falcon Lock Company. **No Substitutions Allowed**.
   1. All locks to be "MA" series, SN design. and or D111 deadbolt.
   2. Provide Falcon Restricted "M" or "Q" keyway for **all** cylinders. "T" keyway for Biscayne Campus.

B. Lock Trim, Latch Face and Strike Finish: BHMA 626 stainless steel chromium plated satin finish.

C. Functions as designated in hardware sets.

D. Provide all mechanical, electrical, custodial storage and any area deemed to be hazardous to the visually impaired, with door levers having tactile warning; manufacturers standard eight (8), applied to the exterior lever.

E. Provide plastic strike boxes at all interior and exterior frames, and all double doors inactive leaf.

2.04 KEYS AND KEYING

A. All cylinders to be shipped "0" bitted. No keys or cylinders will be delivered to or any authorization letters issued for receiving shipments other then to Owner, FIU.

B. All locks are delivered less cylinder to contractor. Contractor to provide temporary construction cylinders.

C. Ensure all locks and cylinders are **Falcon Lock standard cylinder 7-pin "M" or "Q" Restricted Keyway**. "**T" Restricted keyway for Biscayne Campus.**

D. Ensure that at no time, the General Contractor or sub-contractor has possession of the permanent keys.

E. Upon completion of the Project, the Owner will Install all cylinders and collect all construction keys and temporary cylinders, construction cylinders are to be provided and installed by contractor.

F. Provide three (3) change keys per lock.

2.05 CLOSING DEVICES

A. All hydraulic door closers (including those having electric releases) furnished by one (1) Manufacturer and guaranteed for ten (10) years.

B. All Closers:
   1. LCN 4041XP EDA Series having non-ferrous covers, forged steel arms separate valves for Adjusting backcheck, closing and latching cycles and adjustable spring to provide sizes One (1) through six (6).
   2. Provide parallel arm mount on all doors opening into corridors or other public spaces and mounted to permit 180 degrees door swing wherever wall conditions permit.

   3. Provide with non-hold open arms unless otherwise indicated.

C. Door Closer Cylinders:
   1. Only high strength cast iron construction to provide low wear operating capabilities of internal parts throughout the life of the installation.
   2. Tested to ANSI/BHMA A 156.4 test requirements by a BHMA certified testing laboratory.
   3. Provide a written certification showing successful completion of a minimum of 10,000,000 cycles.

D. Door Closers:
   1. Utilize temperature stable fluid capable of withstanding temperature ranges of 120 degrees Fahrenheit to minus 30 degrees Fahrenheit, without requiring seasonal adjustment of closer speed to properly close the door.
   2. Closers for Fire-Rated Doors: Provide with temperature stabilizing fluid that complies with the standards UBC 7-2 (1997) and UL10C.
   3. Incorporate tamper resistant non-critical screw valves of V-slot design to reduce possible clogging from particles within the closer.
   4. Have separate and independent screw valve adjustments for latch speed, general speed, and hydraulic back check.
   5. Properly locate so as to effectively slow the swing of the door at a minimum of 10 degrees in advance of the dead stop location to protect the doorframe and hardware from damage.
   6. Pressure Relief Valves (PRV) are not acceptable.

E. Ensure all components are powder coated including the cylinder and have passed a 100 hour salt spray test.

F. Provide all accessories necessary for proper operation of doors including drop plates. Provide Spring Cush arms where auxiliary stops not feasible.

G. Door closers shall be thru-bolted

2.06 PANIC AND FIRE EXIT DEVICES

A. Devices:
   1. Von Duprin 98/99 and 33A/35A Series.
   2. Ensure devices are listed under “Panic Hardware” in accident equipment list of Underwriters Laboratories.
   3. All labeled doors with “Fire Exit Hardware” must have labels attached and be under strict provisions of Underwriters Laboratories.

B. Exit Devices: Tested to ANSI/BHMA A 156.3 test requirements by a BHMA certified testing laboratory. Provide a written certification showing successful completion of a minimum of 1,000,000 cycles.

C. Surface Strikes: Roller type and come complete with a plate underneath to prevent movement. Provide with a dead-latching feature to prevent latch bolt tampering.

D. Provide Von Duprin 98L/99L,33A-L/35A-L, key retracted latch bolt and 996L-R-17 or 360L-17 trim with number 425 sex bolts, as noted in the hardware groups.

E. Exit Devices or Panic Devices on an entry to access a building equipped with AD exterior trim and an RX-LC switch in device for Access Control System also provide controllers, readers, power transfers, interface board and power supply for each and every door except for exit only doors; only Von Duprin is to be used.

2.07 PUSH, PULL, KICK, MOP, AND ARMOR PLATES

A. Push Plates: Ives 8 inches x 16 inches, US32D Finish.

B. Pull Plates: Ives 8305-0 4 inches x 16 inches, US32D Finish.

C. Kickplates: Provide on push side of doors with closers, but not on closer/holder doors unless scheduled otherwise. 10 inches high, 0.050 thick, bevelled on all exposed edges and sized per below:
   1. Single Doors: 2 inches LDW (less door width).
   2. Pairs of Doors: 1 inches LDW (less door width).

D. Mop plates: 6 inches high, 0.050 thick beveled on all exposed edges and sized per below:
   1. Single Doors: 2 inches LDW (less door width).
   2. Pairs of Doors: 1 inches LDW (less door width).

E. Armourplates: 34 inches in height, 0.050 thick, bevelled on all exposed edges and sized per below:
   1. Single Doors: 2 inches LDW (less door width).
   2. Pairs of Doors: 1 inches LDW (less door width).

E. Finishes: Stainless steel, BHMA 630.

F. Provide stainless steel screws.

G. Coordinate with ADA and other accessibility code requirements.

2.08 EXTENSION FLUSH BOLTS AND AUTOMATIC FLUSH BOLTS

A. Provide extension flush bolts as manufactured by H.B. Ives, Model FB458, UL Listed, 12 inches. US26D finish. Doors over 7’-6” provide 18 inches.

C. Provide automatic flush bolts as manufactured by H.B. Ives, Model FB30 or FB40, UL Listed, US32D finish use appropriate model for door type and undercut,

D. Provide H.B. Ives, Model DP1, dust proof strike and DP2 plate with screws and lead shields.

2.09 WALL AND FLOOR DOOR STOPS

A. Provide H.B. Ives, WS406 wall stop in US32D Finish, where doors in an open position parallel a masonry wall.

B. Provide H.B. Ives, WS407 wall stop in US32D Finish, where doors in an open position parallel a metal stud board wall.

D. Provide H.B. Ives, 443,444,447,448 B26D for heavy duty door stops when wall exceeds more than 8 inches form a 90-110 degree open door.

2.10 WEATHERSTRIPS, SWEEPS, DRIP CAPS, AND THRESHOLDS

A. Rigid Jamb and Head Weatherstrip: Aluminum mill finish, neoprene bulb insert, stainless steel screws. UL10C Listed. Manufacturers: Pemko 290A, Reese 815A, National Guard 160A, Zero International 328A.

B. Door Bottom Sweeps: Clear anodized aluminum finish, neoprene insert, stainless steel screws. Manufacturers: Pemko 315CN, National Guard 200NA, Reese 323A, Zero International 39A.

C. Door Top Rain Drip:
   1. Provide only when doors are exposed to rain.
   2. Clear anodized aluminum finish, neoprene insert, stainless steel screws.
   3. Manufacturers: Pemko 346C, National Guard 16A, Reese 201A, Zero International.

D. Saddle Threshold and Threshold Stop Strip (Two-Piece Assembly): Aluminum threshold with mill finish, neoprene bulb insert stainless steel screws. Manufacturers: Pemko 271A threshold and 290A threshold stop, National Guard 513 threshold and 700E stop, Reese 5405A threshold and 854A threshold stop, Zero International 544A.

E. Saddle Threshold (Interior Use): Aluminum mill finish, stainless steel screws. Manufacturers: Pemko 151A, National Guard 413, Reese 263A, Zero International 544A.

F. Carpet/Special Purpose Threshold: Aluminum mill finish. Manufacturers: Pemko 2364A, National Guard 404, Reese S562A, Zero International 1684A.

G. Latching Panic Exit Saddles: Aluminum mill finish. Manufacturers: Pemko 2005A, National Guard 896A. Reese S250, Zero 65.

2.11 SOUNDPROOFING

A. Automatic Door Bottoms: Surface mounted, clear anodized aluminum, stainless steel screws. Manufacturers: Zero International 369A. with Z49 Mounting for cleaning

B. Head and Jamb Sound Seals: Clear anodized aluminum, stainless steel screws. Manufacturers: Zero International 328AA.

2.12 ACCESSORIES

A. Surface Mounted Overhead Door Holder/Stop: Provide Glynn-Johnson 70H/S Series Extra Heavy Duty Hold Open/Stop Model, US26D Finish.

B. Electromagnetic Door Holders:

1. Surface Wall Mounted Magnets:
   a. Provide LCN Type SEM Model 7850 standard profile recesses wall mount, 120 Volt, aluminum finish.
   b. Provide through bolted mounting for holder armature to door with sex bolts and mounting plate.

2. Door Closer/Holder: Provide LCN Model 4040 SE Series surface mounted closer/holder without detector.

C. Coordinator:
1. Provide units as manufactured by H.B. Ives, Model COR with filler bar as required.
2. US28 (Aluminum) finish.

D. Astragal: Clear anodized aluminum finish, stainless steel screws. Manufacturers: Pemko 357C, National Guard 139A, Reese 183C.

E. Door Hasp: Provide 6 inch long, galvanized, thru-bolted.

F. Dutch Door Bolt: Provide H.B. Ives model number 054MB, US26D finish.

G. Door Silencers: H.B. Ives number SR64.

1. Provide three (3) rubber silencers per single door.
2. Provide two (2) rubber silencers per pair of doors.

H. One-Way Door Viewers: Provide H.B. Ives Model Number 698.

I. Padlocks: Provide Falcon Lock 955 w/ 2 inch clearance.

J. Miscellaneous Locks and Cylinders: Provide approved Falcon cylinders and keyways for entrance doors, gate locks and electrical switches.

2.13 ELECTRIFIED HARDWARE PRODUCTS

A. Electronic Locks and Access Control:
1. Manufacture is **Schlage Electronics**. **No Substitutions Allowed.**
   All products must be AD series trim with RX-LC switch equipped exit devices.
   All entry doors; Wood, Metal, or Aluminum, must be equipped with Access Control and hardwired with all power supplies and controllers and must be permanently installed in a Teli-com Closet for later networking. Doors and Frames with AD300 must be factory prepared for Von Duprin EPT-10 Power Transfer and Wire Raceway.

B. Mortise Locks AD300-MS – MSK SPA-LDFA7-626

C. Von Duprin Exit Trims:AD300-993--70-MSK-SPA-LDFA7-626

D. Power supply: Provide correct power supply required from manufacture to ensure proper installation. Von Duprin PS914 900-4RL power supply. Supply 900-FA Fire Alarm relay were required by Code. **ALL ACCESS CONTROL POWER SUPPLIES AND OR CONTROL PANELS MUST BE TIED TO THE EMERGENCY GENERATOR ELECTRICAL CIRCUIT.**

E. Power transfers: Von Duprin EPT-10, lockset, or, exit device.

F. Use the SMR-20 card reader at Storefront openings

G. ALL AD LOCKSETS AND CARD READERS TO BE SUPPLIED AND INSTALLED BY SECURITY INTEGRATION DIVISION 28.

General Contractor shall subcontract a licensed (State of Fl, Miami Dade Co.) Security integration contractor. Whom shall furnish; install a full integrated system. Including but not limited to wiring, card lock, termination & programming. For any questions regarding the integration related information & details contact Key Control or FIU.

PART 3 - EXECUTION

3.01 INSPECTION

A. Examine openings scheduled to receive hardware. Repair openings requiring corrective work prior to installation of hardware.

3.02 INSTALLATION

A. **No hardware is to be installed until the hardware manufacturers have provided a pre-installation class. This is to insure proper installation of the specified products.**

B. Apply and install all hardware under provisions of the Finish Hardware Schedule. Exercise care not to mar or damage adjacent Work.

C. Install hardware under provisions of manufacturer's installation instructions; unless otherwise indicated.

D. Contractor:

1. Provide a secure lock-up for hardware delivered to the project but not yet installed.

2. Control the handling and installation of hardware items that are not immediately replaceable, so that the completion of the Work will not be delayed by hardware losses both before and after installation.

E. Placement of Hardware: Install hardware at following heights and locations (unless otherwise indicated, heights are shown from finish floor to center line of item)

1. Hinges: Standard Placement

2. Cylindrical Lockset: 36 inches

3. Deadlock/Deadlatch: 48 inches maximum

4. Push Plate: 48 inches

5. Pull Plate: 42 inches

6. Panic Bar: 36 inches

7. Kick Plate: 1/4 inch from door bottom

C. Closer: Per manufacturer's template to give maximum degree of opening. Mount closers on room side of door. All door closers shall be thru-bolted

D. Stops and Holders:

1. Wall: On block wall or stud wall where knob or pull hits.

2. Overhead Door Holder: Per template.

3. Door Holder: 2 inches from lead edge of door.

3.03 ADJUSTING AND CLEANING

A. Contractor: Adjust all hardware under strict provisions of manufacturers' instructions. Prior to turning project over to Owner, clean and make final adjustments to the finish hardware. Once building has operated for six (6) months, contractor must return for adjustments on finished hardware.

3.04 PROTECTION

A. Contractor: Protect all hardware, as it is stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Leave protective coating when possible and remove at owner's request.

3.05 DESCRIPTION OF HARDWARE GROUP NUMBERS

A. The following schedule is to be used as a general guide. Special or unusual conditions not covered will have hardware of similar type and quality to meet job conditions. Supply hardware to meet project requirements and produce complete project.

Manufacturer Index:

FAL = Falcon Lock
IVE = H.B. Ives
LCN = LCN Closers
SCE = Schlage Electronics
STC = Stanley
TRI = Trimco
VON = Von Duprin
ZER = Zero International

Hardware Group No. 01 EXTERIOR ELECTRIC RM
Provide each PR door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
8	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
1	EA	MULLION	9954	689	VON
1	EA	FIRE EXIT HARDWARE	98EO-F	626	VON
1	EA	FIRE EXIT HARDWARE	98L-NL-F 996L 17 KNURLED	626	VON
1	EA	RIM CYLINDER	951 7PIN	626	FAL
1	EA	MORTISE CYLINDER	987 1 3/8 STRAIGHT CAM 7PIN	626	FAL
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	RAIN DRIP	142A	AL	ZER
2	EA	DOOR BOTTOM	321AA	AL	ZER
1	EA	THRESHOLD	566A MSLA-10 .125 OR + THICK WALL ONLY	AL	ZER

HURRICANE COMPLIANT OPENING

Hardware Group No. 02 EXTERIOR GENERATOR
Provide each PR door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
8	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
2	EA	SURFACE BOLT	SB360T-12	603	IVE
1	EA	DORMITORY LOCK	MA641 8SN	626	FAL
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	RAIN DRIP	142A	AL	ZER
2	EA	DOOR BOTTOM	321AA	AL	ZER
1	EA	THRESHOLD	566A MSLA-10 .125 OR + THICK WALL ONLY	AL	ZER
1			Z ASTRAGAL BY DOOR SUPPLIER		

HURRICANE COMPLIANT OPENING
ALLOW FOR BOTTOM SURFACE BOLT AND DOOR BOTTOM

Hardware Group No. 03 EXTERIOR ELECTRIC RM
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
1	EA	FIRE EXIT HARDWARE	98L-NL-F 996L 17 KNURLED	626	VON
1	EA	RIM CYLINDER	951 7PIN	626	FAL
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	DOOR BOTTOM	321AA	AL	ZER
1	EA	THRESHOLD	566A MSLA-10 .125 OR + THICK WALL ONLY	AL	ZER

HURRICANE COMPLIANT OPENING

Hardware Group No. 04 ELECTRIC ROOM RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	MA581 8SN	626	FAL
1	EA	SURFACE CLOSER	4040XP CUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 05 ELECTRIC ROOM RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	MA581 8SN	626	FAL
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 06 STORAGE, JANITOR.NON- RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	MA581 SN	626	FAL
1	EA	SURFACE CLOSER	4040XP CUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 07 STORAGE, JANITOR.NON- RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	MA581 SN	626	FAL
1	EA	SURFACE CLOSER	4040XP CUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 08 STORAGE, JANITOR.NON- RATED

Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	MA581 SN	626	FAL
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 09 STORAGE, JANITOR.NON- RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1HW 5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	MA581 SN	626	FAL
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 10 STORAGE, JANITOR.NON- RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	MA581 SN	626	FAL
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 11 STORAGE, JANITOR.NON- RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1HW 5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	MA581 SN	626	FAL
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 12 STORAGE, JANITOR.- RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	MA581 SN	626	FAL
1	EA	SURFACE CLOSER	4040XP CUSH	689	LCN

1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 13 STORAGE, JANITOR.- RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
3	EA	HINGE	5BB1HW 5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	MA581 SN	626	FAL
1	EA	SURFACE CLOSER	4040XP CUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 14 ACCESS CONTROL FIRE RATED 3' 6"
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
3	EA	HINGE	5BB1HW 5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	LOCK CYLINDER	7PIN A23171 X AD TAILPIECE 23779820	626	FAL
1	EA	ELECTRONIC LOCK	AD-300-MS-70-MSK-SPA-LDFA7 (BY SEC. 28)	626	SCE
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 15 ACCESS CONTROL FIRE RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	LOCK CYLINDER	7PIN A23171 X AD TAILPIECE 23779820	626	FAL
1	EA	ELECTRONIC LOCK	AD-300-MS-70-MSK-SPA-LDFA7 (BY SEC. 28)	626	SCE
1	EA	SURFACE CLOSER	4040XP CUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 16 ACCESS CONTROL NON- RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON

1	EA	LOCK CYLINDER	7PIN A23171 X AD TAILPIECE 23779820	626	FAL
1	EA	ELECTRONIC LOCK	AD-300-MS-70-MSK-SPA-LDFA7 (BY SEC. 28)	626	SCE
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	DOME STOP	FS436	626	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 17 ACCESS CONTROL RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	LOCK CYLINDER	7PIN A23171 X AD TAILPIECE 23779820	626	FAL
1	EA	ELECTRONIC LOCK	AD-300-MS-70-MSK-SPA-LDFA7 (BY SEC. 28)	626	SCE
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	DOME STOP	FS436	626	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 18 ACCESS CONTROL NON- RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	LOCK CYLINDER	7PIN A23171 X AD TAILPIECE 23779820	626	FAL
1	EA	ELECTRONIC LOCK	AD-300-MS-70-MSK-SPA-LDFA7 (BY SEC. 28)	626	SCE
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 19 ACCESS CONTROL NON- RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	LOCK CYLINDER	7PIN A23171 X AD TAILPIECE 23779820	626	FAL
1	EA	ELECTRONIC LOCK	AD-300-MS-70-MSK-SPA-LDFA7 (BY SEC. 28)	626	SCE
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
1	EA	THRESHOLD	PER SILL DETAIL		

3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 20 ACCESS CONTROL NON- RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1HW 5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	LOCK CYLINDER	7PIN A23171 X AD TAILPIECE 23779820	626	FAL
1	EA	ELECTRONIC LOCK	AD-300-MS-70-MSK-SPA-LDFA7 (BY SEC. 28)	626	SCE
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 21 EXTERIOR-MECHANICAL, ELECTRICAL
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
1	EA	DORMITORY LOCK	MA641 8SN	626	FAL
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	RAIN DRIP	142A	AL	ZER
1	EA	DOOR BOTTOM	321AA	AL	ZER
1	EA	THRESHOLD	566A MSLA-10 .125 OR + THICK WALL ONLY	AL	ZER

HURRICANE COMPLIANT OPENING

Hardware Group No. 22 CARD ACCESS-HOLLOW METAL RATED SGL EXIT 3070
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	FIRE EXIT HARDWARE	RX-LC98EO-F	626	VON
1	EA	ELECTRONIC EXIT TRIM	AD-300-993R-70-MSK-SPA-LDFA7 (BY SEC. 28)	626	SCE
1	EA	LOCK CYLINDER	7PIN A23171 X AD TAILPIECE 23779820	626	FAL
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	RAIN DRIP	142A	AL	ZER
1	EA	THRESHOLD	65A MSLA-10	AL	ZER

HURRICANE COMPLIANT OPENING

AD TRIM NEEDS TO BE SET TO FAILSAFE OVER 4 STORY OR LOCAL HEIGHT LIMIT FOR STAIRWELLS

Hardware Group No. 23 CARD ACCESS-HOLLOW METAL NON- RATED SGL EXIT 3080
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	PANIC HARDWARE	HH-RX-LC98EO	626	VON
1	EA	ELECTRONIC EXIT TRIM	AD-300-993R-70-MSK-SPA-LDFA7 (BY SEC. 28)	626	SCE
1	EA	LOCK CYLINDER	7PIN A23171 X AD TAILPIECE 23779820	626	FAL
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS443	626	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	THRESHOLD	65A MSLA-10	AL	ZER

HURRICANE COMPLIANT OPENING

AD TRIM NEEDS TO BE SET TO FAILSAFE OVER 4 STORY OR LOCAL HEIGHT LIMIT FOR STAIRWELLS

Hardware Group No. 24 FIRE RATED EXIT DEVICE NO LOCKING
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	FIRE EXIT HARDWARE	98L-BE-F 996L-BE 17	626	VON
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 25 CARD ACCESS-HOLLOW METAL RATED SGL EXIT 3080
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	FIRE EXIT HARDWARE	RX-LC98EO-F	626	VON
1	EA	ELECTRONIC EXIT TRIM	AD-300-993R-70-MSK-SPA-LDFA7 (BY SEC. 28)	626	SCE
1	EA	LOCK CYLINDER	7PIN A23171 X AD TAILPIECE 23779820	626	FAL
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS443	626	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	THRESHOLD	65A MSLA-10	AL	ZER

HURRICANE COMPLIANT OPENING
F DEVICE LATCHES EVERY TIME FOR SECURITY

AD TRIM NEEDS TO BE SET TO FAILSAFE OVER 4 STORY OR LOCAL HEIGHT LIMIT FOR STAIRWELLS

Hardware Group No. 26 CARD ACCESS-STOREFRONT WITH OPERATOR
Provide each PR door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
8	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
2	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	PANIC HARDWARE	RX-EL9847EO	626	VON
1	EA	PANIC HARDWARE	RX-EL9847NL-OP	626	VON
1	EA	RIM CYLINDER	951 7PIN	626	FAL
2		CUSTOM PULLS	PULLS BY DOOR MANUFACTURER		
1	EA	AUTO OPERATOR	MAGIC FORCE PAIR DRS SURFACE MOUNT	689	STC
2	EA	FLOOR STOP	FS444	626	IVE
1	EA	THRESHOLD	654A	AL	ZER
1	EA	POWER SUPPLY	PS914 900-4RL	GRY	SCE
1	SET	WIRING DIAGRAMS	AS REQUIRED		
			WEATHERSTRIP BY FRAME MANUFACTURER		
1	EA	ACTUATOR PACKAGE	AS REQUIRED		STC
1	EA	CARD READER	SMR20 (BY SECTION 28)	BLK	SCE

HURRICANE COMPLIANT OPENING
DOOR PULLS TO BE THRU-BOLTED
1.) During business hours both outside and inside actuators are active (button pushed and doors open).

2.) After hours (time zones end), inside button always active 24/7. However outside button is inactive. Card has to be swiped in order to activate outside button. Once button is pushed door hardware will retract simultaneously with door opening. If button is not pushed after card is swiped door can just be pulled open.

Hardware Group No. 27 CARD ACCESS-STOREFRONT
Provide each PR door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
8	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
2	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	PANIC HARDWARE	RX-EL9847EO	626	VON
1	EA	PANIC HARDWARE	RX-EL9847NL-OP	626	VON
1	EA	RIM CYLINDER	951 7PIN	626	FAL
2		CUSTOM PULLS	PULLS BY DOOR MANUFACTURER		
2	EA	SURFACE CLOSER	4040XP	689	LCN
2	EA	MOUNTING PLATE	4040-18TJ	689	LCN
2	EA	FLOOR STOP	FS444	626	IVE
1	EA	THRESHOLD	654A	AL	ZER
1	EA	POWER SUPPLY	PS914 900-4RL	GRY	SCE
1	SET	WIRING DIAGRAMS	AS REQUIRED		
			WEATHERSTRIP BY FRAME MANUFACTURER		

1	EA	CARD READER	SMR20 (BY SECTION 28)	BLK	SCE

HURRICANE COMPLIANT OPENING
DOOR PULLS TO BE THRU-BOLTED

Hardware Group No. 28 STOREFRONT NO CARD ACCESS
Provide each PR door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
8	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	PANIC HARDWARE	9847EO	626	VON
1	EA	PANIC HARDWARE	9847NL-OP	626	VON
1	EA	RIM CYLINDER	951 7PIN	626	FAL
2		CUSTOM PULLS	PULLS BY DOOR MANUFACTURER		
2	EA	SURFACE CLOSER	4040XP	689	LCN
2	EA	MOUNTING PLATE	4040-18TJ	689	LCN
2	EA	FLOOR STOP	FS444	626	IVE
1	EA	THRESHOLD	654A	AL	ZER
			WEATHERSTRIP BY FRAME MANUFACTURER		

HURRICANE COMPLIANT OPENING
DOOR PULLS TO BE THRU-BOLTED

Hardware Group No. 29 STOREFRONT VESTIBULE
Provide each PR door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
8	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
2		CUSTOM PULLS	PULL/PUSH BARS BY DOOR MANUFACTURER		
2	EA	SURFACE CLOSER	4040XP	689	LCN
2	EA	MOUNTING PLATE	4040-18TJ	689	LCN
2	EA	FLOOR STOP	FS444	626	IVE
			WEATHERSTRIP BY FRAME MANUFACTURER		

DOOR PULLS TO BE THRU-BOLTED

Hardware Group No. 30 CARD ACCESS-STOREFRONT WITH OPERATOR
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	PANIC HARDWARE	RX-EL9847NL-OP	626	VON
1	EA	RIM CYLINDER	951 7PIN	626	FAL
1		CUSTOM PULLS	PULLS BY DOOR MANUFACTURER		
1	EA	AUTO OPERATOR	MAGIC FORCE SGL DR SURFACE MOUNT	689	STC
1	EA	FLOOR STOP	FS444	626	IVE
1	EA	THRESHOLD	654A	AL	ZER
1	EA	POWER SUPPLY	PS914 900-4RL	GRY	SCE
1	SET	WIRING DIAGRAMS	AS REQUIRED (BY SEC.28)		

1			WEATHERSTRIP BY FRAME MANUFACTURER		
1	EA	ACTUATOR PACKAGE	AS REQUIRED		STC
1	EA	CARD READER	SMR20 (BY SECTION 28)	BLK	SCE

HURRICANE COMPLIANT OPENING
DOOR PULLS TO BE THRU-BOLTED
1.) During business hours both outside and inside actuators are active (button pushed and doors open).

2.) After hours (time zones end), inside button always active 24/7. However outside button is inactive. Card has to be swiped in order to activate outside button. Once button is pushed door hardware will retract simultaneously with door opening. If button is not pushed after card is swiped door can just be pulled open.

Hardware Group No. 31 CORRIDOR
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	MA561 SN	626	FAL
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 32 LAB
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	MA561 SN	626	FAL
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 33 LAB
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	MA561 SN	626	FAL
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 34 LAB
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	MA561 SN	626	FAL
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	MOUNTING PLATE	4040-18	689	LCN
1	EA	OVERHEAD HOLDER	450H	630	GLY
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 35 CARD ACCESS-STOREFRONT
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	PANIC HARDWARE	RX-EL9847NL-OP	626	VON
1	EA	RIM CYLINDER	951 7PIN	626	FAL
1		CUSTOM PULLS	PULLS BY DOOR MANUFACTURER		
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	MOUNTING PLATE	4040-18TJ	689	LCN
1	EA	WALL STOP	WS443	626	IVE
1	EA	THRESHOLD	654A	AL	ZER
1	EA	POWER SUPPLY	PS914 900-4RL	GRY	SCE
1	SET	WIRING DIAGRAMS	AS REQUIRED (BY SEC.28)		
			WEATHERSTRIP BY FRAME MANUFACTURER		
1	EA	CARD READER	SMR20 (BY SECTION 28)	BLK	SCE

HURRICANE COMPLIANT OPENING
DOOR PULLS TO BE THRU-BOLTED

Hardware Group No. 36 IN-SWING EXTERIOR MECH
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
3	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
1	EA	CLASSROOM LOCK	MA431 SN	626	FAL
1	EA	ELECTROMAGNETIC LOCK	M450P-ATS/LED (BY SEC 28)	628	SCE
1	EA	ELECTROMAGNETIC LOCK	TJ490 BRACKET (BY SEC. 28)	628	SCE
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	WALL STOP	WS407CVX	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	RAIN DRIP	11	AL	ZER
1	EA	RAIN DRIP	142A	AL	ZER
1	EA	THRESHOLD	65A MSLA-10	AL	ZER
1	EA	POWER SUPPLY	PS902 900-FA (BY SEC. 28)		SCE

2	EA	CARD READER	SMR20 (BY SECTION 28)	BLK	SCE

HURRICANE COMPLIANT OPENING
NEED TO ADD SCAN IR AND EMERGENCY SWITCH IF EGESS REQUIRED

Hardware Group No. 37 SINGLE RESTROOM
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PRIVACY SET	MA301 SN	626	FAL
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 38 GANG BATHROOM
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	DEADLOCK	D111P7	626	FAL
1	EA	PUSH PLATE	8200 8" X 16" CFC	630	IVE
1	EA	PULL PLATE	8305-0 4" X 16"	630	IVE
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	MOP PLATE	8400 6" X 1" LDW	630	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 39 OFFICE, NON FIRE RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	MA561 SN	626	FAL
1	EA	WALL STOP	WS407CVX	630	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 40 OFFICE, NON FIRE RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	MA561 SN	626	FAL
1	EA	DOME STOP	FS436	626	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 41

Provide each DE door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
8	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
2		CUSTOM PULLS	PUSH BARS BY DOOR MANUFACTURER		
2	EA	SURFACE CLOSER	4040XP EDA	689	LCN
2	EA	MOUNTING PLATE	4040-18PA	689	LCN
2	EA	FLOOR STOP	FS441	626	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
1			WEATHERSTRIP BY FRAME MANUFACTURER		

Hardware Group No. 42
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
1	EA	MORTISE CYLINDER	987 1 3/8 AR CAM 7PIN	626	FAL
1			BALANCE OF HARDWARE BY DOOR SUPPLIER		

Hardware Group No. 43
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
1	EA	MORTISE CYLINDER	987 1 3/8 STRAIGHT CAM 7PIN	626	FAL
1	EA	ELECTROMAGNETIC LOCK	HDB420 BRACKET (BY SEC. 28)	628	SCE
1	EA	ELECTROMAGNETIC LOCK	M420P (BY SEC.28)	628	SCE
1	EA	FLOOR STOP	FS441	626	IVE
1	EA	POWER SUPPLY	PS902 900-FA (BY SEC. 28)		SCE
1			BALANCE OF HARDWARE BY DOOR SUPPLIER		
1	EA	PUSHBUTTON	621AL EX-DA (BY SEC.28)	630	SCE
1	EA	SCANNER	SCAN II-W	WHT	SCE
1	EA	CARD READER	SMR20 (BY SECTION 28)	BLK	SCE

Hardware Group No. 44
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
2	EA	MORTISE CYLINDER	987 1 3/8 AR CAM 7PIN	626	FAL
1	EA	FLOOR STOP	FS441	626	IVE
1			BALANCE OF HARDWARE BY DOOR SUPPLIER		

HURRICANE COMPLIANT OPENING

Hardware Group No. 45 EXTERIOR-MECHANICAL, ACCESS CONTROL
Provide each PR door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
8	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE

1	EA	POWER TRANSFER	EPT-10	689	VON
2	EA	SURFACE BOLT	SB360T-12	603	IVE
1	EA	ELECTRONIC LOCK	AD-300-MS-70-MSK-SPA-LDFA7 (BY SEC. 28)	626	SCE
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	RAIN DRIP	142A	AL	ZER
1	EA	DOOR BOTTOM	321AA	AL	ZER
1	EA	THRESHOLD	566A MSLA-10 .125 OR + THICK WALL ONLY	AL	ZER

HURRICANE COMPLIANT OPENING
ALLOW FOR BOTTOM SURFACE BOLT AND DOOR BOTTOM

Hardware Group No. 46 UNEQUAL LEAF ACCESS CONTOL
Provide each PR door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
8	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	MANUAL FLUSH BOLT	FB457-12" (BOTTOM)	626	IVE
1	EA	MANUAL FLUSH BOLT	FB457-36" (TOP)	626	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	LOCK CYLINDER	7PIN A23171 X AD TAILPIECE 23779820	626	FAL
1	EA	ELECTRONIC LOCK	AD-300-MS-70-MSK-SPA-LDFA7 (BY SEC. 28)	626	SCE
1	EA	SURFACE CLOSER	4040XP	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW	630	IVE
1	EA	DOME STOP	FS436	626	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
2	EA	SILENCER	SR64	GRY	IVE

CLOSER ACTIVE LEAF

Hardware Group No. 47 UNEQUAL LEAF ACCESS CONTOL
Provide each PR door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
8	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	SET	AUTO FLUSH BOLT	FB41P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	LOCK CYLINDER	7PIN A23171 X AD TAILPIECE 23779820	626	FAL
1	EA	ELECTRONIC LOCK	AD-300-MS-70-MSK-SPA-LDFA7 (BY SEC. 28)	626	SCE
1	EA	COORDINATOR	COR X FL	628	IVE
1	EA	SURFACE CLOSER	4021 ST2303 12" DR	689	LCN
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	MOUNTING PLATE	4020-18	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW	630	IVE
1	EA	DOME STOP	FS436	626	IVE

1	EA	WALL STOP	WS407CVX	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	THRESHOLD	PER SILL DETAIL		
2	EA	SILENCER	SR64	GRY	IVE

CLOSER ACTIVE LEAF

Hardware Group No. 48 UNEQUAL LEAF ACCESS CONTROL EXIT DOOR
Provide each PR door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
8	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	SET	AUTO FLUSH BOLT	FB41P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	PANIC HARDWARE	RX-LC9875 MORTISE	626	VON
1	EA	ELECTRONIC EXIT TRIM	AD-300-993M-70-MSK-SPA-LDFA7(BY SEC28)	626	SCE
1	EA	LOCK CYLINDER	7PIN A23171 X AD TAILPIECE 23779820	626	FAL
1	EA	COORDINATOR	COR X FL X 2/MB (UNEQUAL PR)	628	IVE
1	EA	SURFACE CLOSER	4021 ST2303 12" DR	689	LCN
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	MOUNTING PLATE	4020-18	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW	630	IVE
2	EA	DOME STOP	FS436	626	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	THRESHOLD	PER SILL DETAIL		
2	EA	SILENCER	SR64	GRY	IVE

VERIFY IF EXIT NEEDED

Hardware Group No. 49 STORAGE INTERIOR PAIR NON-RATED
Provide each PR door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
8	EA	HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
1	EA	MANUAL FLUSH BOLT	FB457-12" (BOTTOM)	626	IVE
1	EA	MANUAL FLUSH BOLT	FB457-36" (TOP)	626	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	STOREROOM LOCK	MA581 SN	626	FAL
2	EA	SURFACE CLOSER	4040XP EDA	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW	630	IVE
2	EA	WALL STOP	WS407CVX	630	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
2	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 50 LARGE CLASSROOM, STAIR FIRE RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	FIRE EXIT HARDWARE	RX-LC98EO-F	626	VON

1	EA	ELECTRONIC EXIT TRIM	AD-300-993R-70-MSK-SPA-LDFA7 (BY SEC. 28)	626	SCE
1	EA	LOCK CYLINDER	7PIN A23171 X AD TAILPIECE 23779820	626	FAL
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 51 LARGE CLASSROOM, STAIR FIRE RATED
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	FIRE EXIT HARDWARE	RX-LC98EO-F	626	VON
1	EA	ELECTRONIC EXIT TRIM	AD-300-993R-70-MSK-SPA-LDFA7 (BY SEC. 28)	626	SCE
1	EA	LOCK CYLINDER	7PIN A23171 X AD TAILPIECE 23779820	626	FAL
1	EA	SURFACE CLOSER	4040XP CUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	THRESHOLD	PER SILL DETAIL		
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 52 INTERIOR PAIR NON-RATED ACCESS CONTROL UNEQUAL LEAF
Provide each PR door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
6	EA	HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	MANUAL FLUSH BOLT	FB457-12" (BOTTOM)	626	IVE
1	EA	MANUAL FLUSH BOLT	FB457-36" (TOP)	626	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	LOCK CYLINDER	7PIN A23171 X AD TAILPIECE 23779820	626	FAL
1	EA	ELECTRONIC LOCK	AD-300-MS-70-MSK-SPA-LDFA7 (BY SEC. 28)	626	SCE
2	EA	SURFACE CLOSER	4040XP	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW	630	IVE
1	EA	DOME STOP	FS436	626	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
1	EA	THRESHOLD	PER SILL DETAIL		
2	EA	SILENCER	SR64	GRY	IVE
1			Z ASTRAGAL BY DOOR SUPPLIER		

MANUAL FLUSH BOLT

Hardware Group No. 53 EXTERIOR ROOF LOCKED BOTH SIDES
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE

1	EA	STORE DOOR LOCK	MA371 SN	626	FAL
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	RAIN DRIP	142A	AL	ZER
1	EA	THRESHOLD	65A MSLA-10	AL	ZER

HURRICANE COMPLIANT OPENING

Hardware Group No. 54
Provide each SGL door(s) with the following:

Quantity	Description	Model Number	Finish	Mfr
1		ALL HARDWARE BY DOOR MANUFACTURER		

VERIFY IF DOORS WILL ACCEPT LOCK CYLINDER

Hardware Group No. 55 ROOF STAIR
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
1	EA	DORMITORY LOCK	MA571 SN	626	FAL
1	EA	ELECTROMAGNETIC LOCK	M450P-ATS/LED (BY SEC 28)	628	SCE
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CVX	630	IVE
1	SET	SEALS	328AA	AL	ZER
1	EA	RAIN DRIP	142A	AL	ZER
1	EA	THRESHOLD	566A MSLA-10 .125 OR + THICK WALL ONLY	AL	ZER
1	EA	POWER SUPPLY	PS902 900-FA (BY SEC. 28)		SCE
2	EA	CARD READER	SMR20 (BY SECTION 28)	BLK	SCE

Hardware Group No. 56 EXTERIOR-ROOF
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
3	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
1	EA	DORMITORY LOCK	MA641 8SN	626	FAL
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	SET	SEALS	328AA	AL	ZER
1	EA	RAIN DRIP	142A	AL	ZER
2	EA	DOOR BOTTOM	321AA	AL	ZER
1	EA	THRESHOLD	566A MSLA-10 .125 OR + THICK WALL ONLY	AL	ZER

HURRICANE COMPLIANT OPENING

Hardware Group No. 57 EXTERIOR-ROOF
Provide each SGL door(s) with the following:

Quantity		Description	Model Number	Finish	Mfr
4	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
1	EA	DORMITORY LOCK	MA641 8SN	626	FAL
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	SET	SEALS	328AA	AL	ZER
1	EA	RAIN DRIP	142A	AL	ZER
2	EA	DOOR BOTTOM	321AA	AL	ZER
1	EA	THRESHOLD	566A MSLA-10 .125 OR + THICK WALL ONLY	AL	ZER

HURRICANE COMPLIANT OPENING

END OF SECTION

Catalog Cuts

for

FLORIDA INTERNATIONAL UNIVERSITY- A/E SERVICES DEPT

Sorted by Manufacturer

Prepared By
BILL WHITCOMB AHC/CDC
IR SECURITY TECHNOLOGIES
111 D BENT ARROW DR

JUPITER FL 33458
Phone561-747-3029 Fax 1-866-256-7342

Created 10/11/2012

Catalog Cut Summary

Mfr	Description	Item Id	Catalog Number	Cut
FAL	RIM CYLINDER		951	FAL_CYL_MortiseRim
FAL	MORTISE CYLINDER		987	FAL_CYL_MortiseRim
FAL	7-PIN SERIES CYL AD TAILPIECE		A23171	FAL_CYL_Cylindrical
FAL	CLASSRM DEADBOLT		D111P7	FAL_0031
FAL	PASSAGE SET		MA101 SN	FAL_MA
FAL	PRIVACY LOCK		MA301 SN	FAL_MA
FAL	CLASSROOM LOCK		MA561P7 SN	FAL_MA
FAL	STOREROOM LOCK		MA581P7 8SN SN	FAL_MA
FAL	STOREROOM LOCK		MA581P7 SN	FAL_MA
FAL	DORMITORY LOCK		MA641P7 8SN SN	FAL_MA
GLY	OH STOP		450S	GLY_0006
GLY	OH STOP		90S	GLY_0003
IVE	HINGE		5BB1 4.5 X 4.5	IVE_0250
IVE	HINGE		5BB1 4.5 X 4.5 NRP	IVE_0250
IVE	HINGE		5BB1 4.5 X 4.5 NRP	IVE_0250
IVE	HW HINGE		5BB1HW 4.5 X 4.5 NRP	IVE_0251
IVE	DOOR PULL, 1" ROUND		8103EZ 10" O	IVE_0086-IVE_0121-IVE_5002
IVE	PUSH PLATE		8200 4"X16"	IVE_0127
IVE	KICK PLATE		8400 10" X 2" LDW	IVE_0223
IVE	KICK PLATE		8400 10" X 2" LDW	IVE_0223
IVE	COORDINATOR		COR X FL	IVE_0101
IVE	DUST PROOF STRIKE		DP2	IVE_0098
IVE	AUTO FLUSH BOLT		FB31P	IVE_0090
IVE	AUTO FLUSH BOLT		FB41P	IVE_0091
IVE	MANUAL FLUSH BOLT		FB457	IVE_0096
IVE	MANUAL FLUSH BOLT		FB458	IVE_0097
IVE	FLOOR STOP		FS436	IVE_0227
IVE	FLOOR STOP		FS441	IVE_0132
IVE	FLOOR STOP		FS444	IVE_0133
IVE	SURFACE BOLT		SB360 T 12"	IVE_0153
IVE	SILENCER		SR64-1	IVE_0148
IVE	WALL STOP		WS407CVX	IVE_0141
IVE	WALL STOP		WS443	IVE_0144
LCN	SURFACE CLOSER		4040XP	LCN_4040XP
LCN	SURFACE CLOSER		4040XP EDA	LCN_4040XP
SCE	ELECT CLASSROOM/STOREROOM LOCK		AD-300-993R-70-MSK-SPA-626-LDFA7 AS LLL	SCE_0078-SCE_0124-SCE_0124-SCE_0124

Mfr	Description	Item Id	Catalog Number	Cut
SCE	ELECT CLASSROOM/STORE ROOM LOCK		AD-300-993S-70-MSK-SPA-626-LDFA7 AS LLLRX	SCE_0078-SCE_0124-SCE_0124-SCE_0124-SCE_0124
SCE	ELECT CLASSROOM/STORE ROOM LOCK		AD-300-MS-70-MSK-8SP-626-LDFA7 4B	SCE_0078
SCE	ELECT CLASSROOM/STORE ROOM LOCK		AD-300-MS-70-MSK-SPA-626-LDFA7 4B	SCE_0078
SCE	ELECT DUMMY TRIM LOCK		AD-993DT--SPA-626-PD	SCE_0124
SCE	POWER SUPPLY		PS902	SCE_0087
SCE	CARD READER		SMR20	SCE_0011
VON	ELEC PANIC HARDWARE		LX-LC-XP-98-EO	VON_9899_006-VON_9899_041-VON_9899_007-VON_SEC_017
VON	POWER SUPPLY		PS914 900-2RS-FA	VON_0111
VON	ELEC PANIC HARDWARE		RX-EL-9847-EO	VON_9899_022-VON_9899_041-VON_9899_023-VON_SEC_017
VON	ELEC PANIC HARDWARE		RX-EL-9847-NL-OP	VON_9899_022-VON_9899_041-VON_9899_023-VON_SEC_017
VON	ELEC FIRE EXIT HARDWARE		RX-LC-98-EO-F	VON_9899_008-VON_9899_041-VON_9899_009-VON_SEC_017
VON	ELEC FIRE EXIT HARDWARE		RX-LC-98-EO-F-SNB	VON_9899_008-VON_9899_041-VON_9899_009-VON_SEC_017-VON_AUX_008-VON_AUX_009
ZER	RAIN DRIP		142A	ZER_0076
ZER	SEALS		188S	ZER_0080
ZER	SEALS		328AA 1/36" 2/84"	ZER_0070
ZER	DOOR BOTTOM		367AA	ZER_0067
ZER	THRESHOLD		566A 36" MSLA-10	ZER_0058
ZER	THRESHOLD		65A 36" MSLA-10	ZER_0058

D100 Heavy Duty Deadlocks 1" Bolt Projection

Door Thickness: 1-3/8" to 1-3/4". Up to 2-1/4" door thickness also available.

Backsets: 2-3/8" - 2-3/4" adjustable deadbolt.

Attachment: Locks are solidly attached to the door by 1/4" heat-treated steel bolts. These bolts pass through a steel plate (D111, D121 and D141) or the inner cylinder housing (D131) and thread directly into the back of the outer cylinder housing.

A permanent cap is inserted over the inside cylinder (D131) making the bolts nearly impossible to remove.

Handing: Non-handed. May be used on right hand or left hand doors swinging in or out.

Cylinders: Furnished with solid brass plug and housing, drilled with 6-pin chambers, pinned in 5 unless otherwise specified. Also available with 7-pin cylinders. Available with 6 or 7-pin interchangeable cores. Furnished with two (2) nickel silver keys standard.

Keyways: "C" keyway standard on conventional cylinders. "A" keyway standard on I/C core cylinders. Also available with some optional keyways.

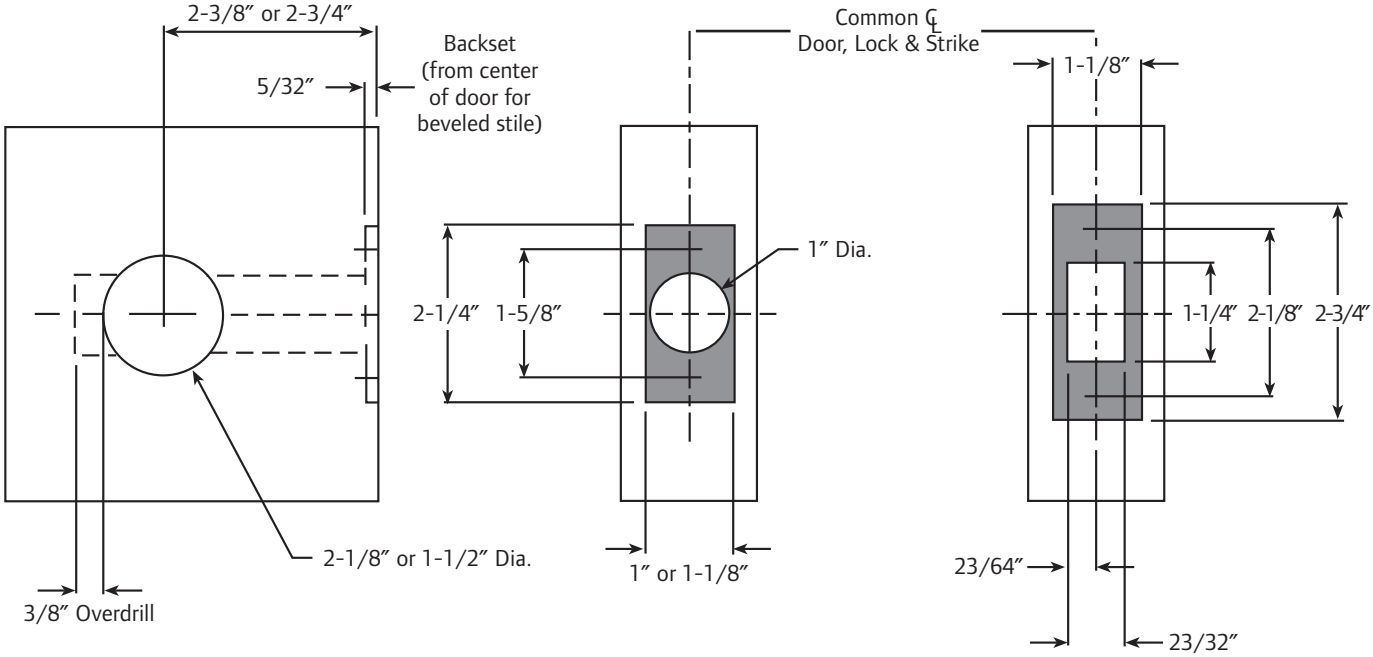
Exposed Trim: Wrought brass or bronze reinforced with steel insert.

Deadbolts: Deadbolt locks are furnished with deadbolts which have a full 1" projection. Housed within the deadbolt is a free-turning, 1/4" thick, hardened steel, saw-resistant roller. Furnished standard with 2-3/8"- 2-3/4" adjustable backset and 1-1/8" x 2-1/4" faceplate. Optional 1" x 2-1/4" faceplate. Consult Options and Accessories section for other optional faceplates. D100 bolt is high strength steel.

Strikes: 2-3/4" x 1-1/8" lipless strike standard. ANSI 4-7/8" x 1-1/4" lipless, 2-1/4" full lip strikes, a 2-3/4" x 1-1/8" T-strike or a security strike are available. Consult Options and Accessories section.

Screws: Furnished with wood/machine screws for use on wood or metal doors or frames.

ANSI/BHMA Standard: A156.5, 2001, Grade 1.

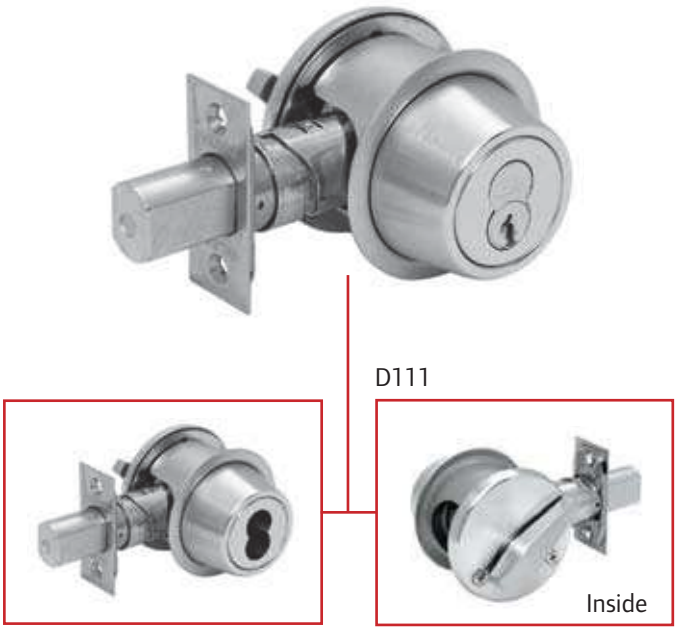


ELEVATION **DOOR EDGE** **STANDARD STRIKE**

Classroom Deadlock (Schoolhouse Safety)

Deadbolt thrown or retracted by key from outside. Inside turn will only retract bolt. Bolt automatically deadlocks when fully thrown.

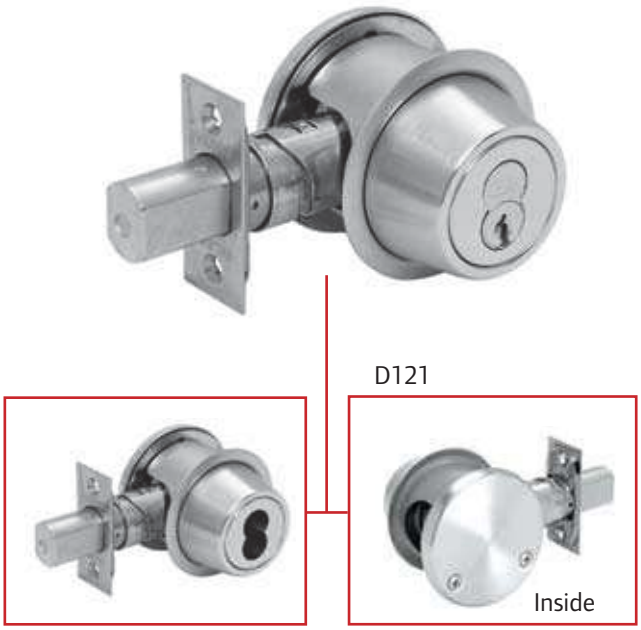
ANSI/BHMA E01711



Single Cylinder Deadlock

Deadbolt thrown or retracted by key only. Blank plate inside. Bolt automatically deadlocks when fully thrown.

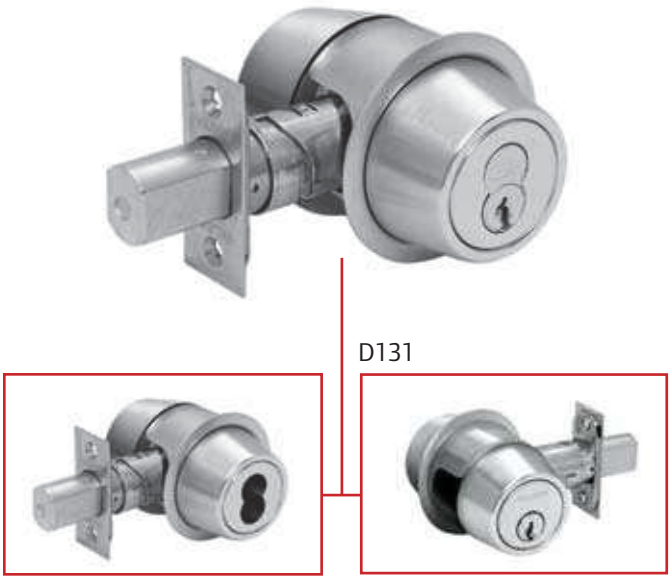
ANSI/BHMA E01611



Double Cylinder Deadlock

Deadbolt thrown or retracted by key from either side. Bolt automatically deadlocks when fully thrown.

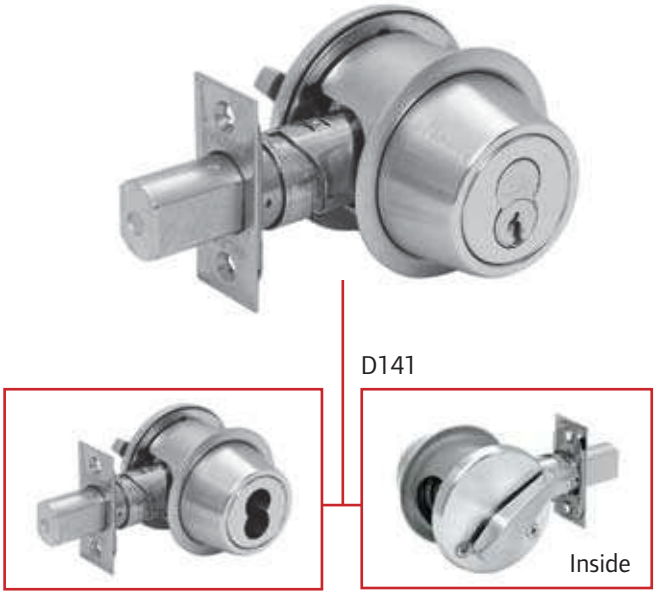
ANSI/BHMA E01411



Single Cylinder Deadlock with Turn

Deadbolt thrown or retracted by key or by turn. Bolt automatically deadlocks when fully thrown.

ANSI/BHMA E01511



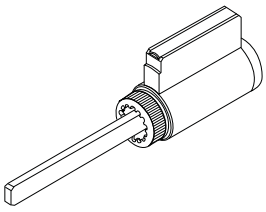
Key-in-Knob and Lever Cylinders

Regular Function Knobs and Levers Lockset	Pins	Cylinder
B all other functions	5-pin	A23155-02
B all other functions	6-pin	A23165-02
B611	5-pin	A23151-06
B611	6-pin	A23161-06
T all other functions	5-pin	A23151-05
T all other functions	6-pin	A23161-05
T all other functions	7-pin	A23171-05
T381 Inside	5-pin	A23151-06
T381 Inside	6-pin	A23161-06
T381 Inside	7-pin	A23171-06
T571	5-pin	A23151-07
T571	6-pin	A23161-07
T571	7-pin	A23171-07
W all other functions	6-pin	Q330-154
W561	6-pin	Q330-155
W all other functions (Schlage C)	6-pin	Q330-152
W561	6-pin	Q330-153
X 561 -E and T designs	5-pin	A23151-00
X 561 -E and T designs	6-pin	A23161-00
X 411, 501, 511, 521, 581-E and T designs	5-pin	A23152-00
X 411, 501, 511, 521, 581-E and T designs	6-pin	A23162-00
X 411, 501, 511, 521, 581-H designs	5-pin	A23152-02
X 411, 501, 511, 521, 581-H designs	6-pin	A23162-02
X 411, 501, 511, 521, 581-H designs	7-pin	A23172-02
X 561-H designs	5-pin	A23151-02
X 561-H designs	6-pin	A23161-02
X 571-E and T designs	5-pin	A23151-02
X 571-E and T designs	6-pin	A23161-02
X 571-H designs	5-pin	A23151-03
X 571-H designs	6-pin	A23161-03
X 571-H designs	7-pin	A23171-02
X561-H designs	7-pin	A23171-01
Y all functions	5-pin	A23155-00
Y all functions	6-pin	A23165-00

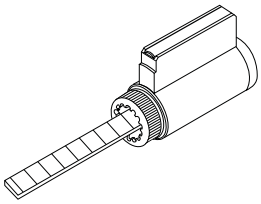
Auxiliary Lock Cylinders

Deadlock Lazy Tailpieces Lockset	Pins	Cylinder
D411, 421, 811, 821	5-pin	A14889-03
D411, 421, 811, 821	6-pin	A14921-03
D411, 421	7-pin	A14943-03
D431, 831	5-pin	A14897-00
D431, 831	6-pin	A14929-00
D431	7-pin	A14945-00
D441, 841	5-pin	A14889-00
D441, 841	6-pin	A14921-00
D441	7-pin	A14943-00
Padlock	5-pin	A23151-01
Padlock	6-pin	A23161-01
Padlock	7-pin	A23171-00

"H" Series Cylinder Function	Pins	Cylinder
H 511 knobs	5-pin	A30040-00
H 511 knobs	6-pin	A30040-01
H all other functions and designs	5-pin	A30028-00
H all other functions and designs	6-pin	A30028-01



Specify keyway.
Specify finishes: 606, 626



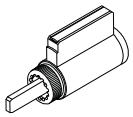
Note: Specify finish: 606, 626

Sliding Door Cylinder

For use in Adams Rite 4024 and 4026 cylinder pulls typically used in patio doors.

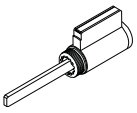
950 Specify 5, 6, or 7-pin

STANDARD CYLINDERS
COMPETITOR KEYWAYS

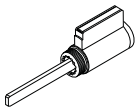


T381 Inside

T Series	Cylinders
Corbin 60 O-bitted	A23167-011
Corbin 60 KD	A23167-11D
Corbin Russwin L4 O-bitted	A23174-011
Corbin Russwin L4 KA4	A23174-11A
Russwin D1 O-bitted	A23168-011
Russwin D1 KD	A23168-11D
Sargent LA O-bitted	A23166-011
Sargent LA KD	A23166-11D
Schlage C O-bitted	A23160-011
Schlage C KA4	A23160-11A
Schlage C KD	A23160-11D
Schlage E O-bitted	A23159-011
Yale 8 Para O-bitted	A23169-011
Yale 8 Para KD	A23169-11D
Arrow O-bitted	A23170-012
Arrow KA	A23170-12A
Arrow KD	A23170-12D
Corbin 60 O-bitted	A23167-012
Corbin 60 KD	A23167-12D
Corbin Russwin L4 O-bitted	A23174-012
Russwin D1 O-bitted	A23168-012
Russwin D1 KD	A23168-12D
Sargent LA O-bitted	A23166-012
Sargent LA KD	A23166-12D
Schlage C O-bitted	A23160-012
Schlage C KA4	A23160-12A
Schlage C KD	A23160-12D
Schlage E O-bitted	A23159-012
Yale 8 Para O-bitted	A23169-012
Yale 8 Para KD	A23169-12D



T571

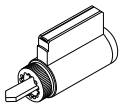


T Series
All other functions

T Series (continued)	Cylinders
Corbin 60 O-bitted	A23167-000
Corbin 60 KD	A23167-0KD
Corbin Russwin L4 O-bitted	A23174-000
Russwin D1 O-bitted	A23168-000
Russwin D1 KD	A23168-0KD
Sargent LA O-bitted	A23166-000
Sargent LA KD	A23166-0KD
Schlage C O-bitted	A23160-000
Schlage C KA4	A23160-0KA
Schlage C KD	A23160-0KD
Schlage E O-bitted	A23159-000
Yale 8 Para O-bitted	A23169-000
Yale 8 Para KD	A23169-0KD

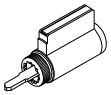
561
Elite and Troy

X Series	Cylinders
Corbin 60 O-bitted	A23167-001
Corbin 60 KD	A23167-1KD
Corbin Russwin L4 O-bitted	A23174-001
Russwin D1 O-bitted	A23168-001
Russwin D1 KD	A23168-1KD
Sargent LA O-bitted	A23166-001
Sargent LA KD	A23166-1KD
Schlage C O-bitted	A23160-001
Schlage C KA4	A23160-1KA
Schlage C KD	A23160-1KD
Schlage E O-bitted	A23159-001
Yale 8 Para O-bitted	A23169-001
Yale 8 Para KD	A23169-1KD

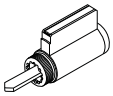


411, 501, 511, 521, 581
Elite and Troy

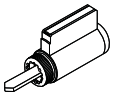
X Series (continued)	Cylinders
Corbin 60 O-bitted	A23167-005
Corbin 60 KD	A23167-5KD
Corbin Russwin L4 O-bitted	A23174-005
Russwin D1 O-bitted	A23168-005
Russwin D1 KD	A23168-5KD
Sargent LA O-bitted	A23166-005
Sargent LA KD	A23166-5KD
Schlage C O-bitted	A23160-005
Schlage C KA4	A23160-5KA
Schlage C KD	A23160-5KD
Schlage E O-bitted	A23159-005
Yale 8 Para O-bitted	A23169-005
Yale 8 Para KD	A23169-5KD



X411, 501, 511, 521, 581 Hana



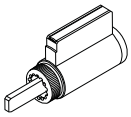
X571
Elite and Troy
X561 Hana



X571 Hana

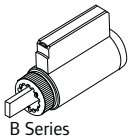
X Series (continued)	Cylinders
Corbin 60 O-bitted	A23167-006
Corbin 60 KD	A23167-6KD
Corbin Russwin L4 O-bitted	A23174-006
Russwin D1 O-bitted	A23168-006
Russwin D1 KD	A23168-6KD
Sargent LA O-bitted	A23166-006
Sargent LA KD	A23166-6KD
Schlage C O-bitted	A23160-006
Schlage C KA4	A23160-6KA
Schlage C KD	A23160-6KD
Schlage E O-bitted	A23159-006
Yale 8 Para O-bitted	A23169-006
Yale 8 Para KD	A23169-6KD
Corbin 60 O-bitted	A23167-003
Corbin 60 KD	A23167-3KD
Corbin Russwin L4 O-bitted	A23174-003
Russwin D1 O-bitted	A23168-003
Russwin D1 KD	A23168-3KD
Sargent LA O-bitted	A23166-003
Sargent LA KD	A23166-3KD
Schlage C O-bitted	A23160-003
Schlage C KA4	A23160-3KA
Schlage C KD	A23160-3KD
Schlage E O-bitted	A23159-003
Yale 8 Para O-bitted	A23169-003
Yale 8 Para KD	A23169-3KD
Corbin 60 O-bitted	A23167-004
Corbin 60 KD	A23167-4KD
Corbin Russwin L4 O-bitted	A23174-004
Russwin D1 O-bitted	A23168-004
Russwin D1 KD	A23168-4KD
Sargent LA O-bitted	A23166-004
Sargent LA KD	A23166-4KD
Schlage C O-bitted	A23160-004
Schlage C KA4	A23160-4KA
Schlage C KD	A23160-4KD
Schlage E O-bitted	A23159-004
Yale 8 Para O-bitted	A23169-004
Yale 8 Para KD	A23169-4KD

STANDARD CYLINDERS
COMPETITOR KEYWAYS (CONTINUED)



B611

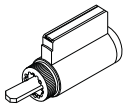
B Series	Cylinders
Corbin 60 O-bitted	A23167-011
Corbin 60 KD	A23167-11D
Corbin Russwin L4 O-bitted	A23174-011
Russwin D1 O-bitted	A23168-011
Russwin D1 KD	A23168-11D
Sargent LA O-bitted	A23166-011
Sargent LA KD	A23166-11D
Schlage C O-bitted	A23160-011
Schlage C KA4	A23160-11A
Schlage C KD	A23160-11D
Schlage E O-bitted	A23159-011
Yale 8 Para O-bitted	A23169-011
Yale 8 Para KD	A23169-11D



B Series
All other functions

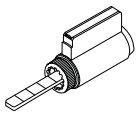
B Series	Cylinders
Corbin 60 O-bitted	A23167-013
Corbin 60 KD	A23167-13D
Corbin Russwin L4 O-bitted	A23174-013
Russwin D1 O-bitted	A23168-013
Russwin D1 KD	A23168-13D
Sargent LA O-bitted	A23166-013
Sargent LA KD	A23166-13D
Schlage C O-bitted	A23160-013
Schlage C KA4	A23160-13A
Schlage C KD	A23160-13D
Schlage E O-bitted	A23159-013
Yale 8 Para O-bitted	A23169-013
Yale 8 Para KD	A23169-13D

Specify cylinder number, keyway and finish when ordering.

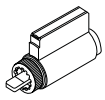


Y Series
All Functions and Designs

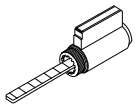
Y Series	Cylinders
Corbin 60 O-bitted	A23167-008
Corbin 60 KD	A23167-8KD
Corbin Russwin L4 O-bitted	A23174-008
Russwin D1 O-bitted	A23168-008
Russwin D1 KD	A23168-8KD
Sargent LA O-bitted	A23166-008
Sargent LA KD	A23166-8KD
Schlage C O-bitted	A23160-008
Schlage C KA4	A23160-8KA
Schlage C KD	A23160-8KD
Schlage E O-bitted	A23159-008
Yale 8 Para O-bitted	A23169-008
Yale 8 Para KD	A23169-8KD



D411, 421, 811, 821

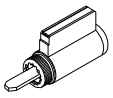


D431, 831

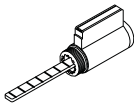


D441, 841

D Series	Cylinders
Corbin Russwin L4 O-bitted	A23274-003
Russwin D1 O-Bitted	A23268-003
Russwin D1 KD	A23268-3KD
Schlage C O-bitted	A23260-003
Schlage C KA4	A23260-3KA
Schlage C KD	A23260-3KD
Schlage E O-bitted	A23259-003
Yale 8 Para KD	A23269-3KD
Corbin Russwin L4 O-bitted	A23274-002
Russwin D1 O-bitted	A23268-002
Schlage C O-bitted	A23260-002
Schlage C KA4	A23260-2KA
Schlage C KD	A23260-2KD
Schlage E O-bitted	A23259-002
Corbin Russwin L4 O-bitted	A23274-001
Russwin D1 O-bitted	A23268-001
Russwin D1KD	A23268-1KD
Schlage C O-bitted	A23260-001
Schlage C KA4	A23260-1KA
Schlage C KD	A23260-1KD
Schlage E O-bitted	A23259-001
Yale 8 Para KD	A23269-1KD

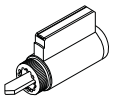


H 511
All Knobs



H Series Deadbolt

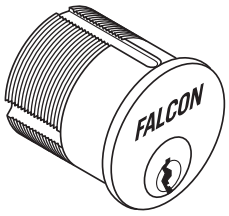
H Series	Cylinders
Corbin 60 O-bitted	A23167-007
Corbin 60 KD	A23167-7KD
Corbin Russwin L4 O-bitted	A23174-007
Russwin D1 O-bitted	A23168-007
Russwin D1 KD	A23168-7KD
Sargent LA O-bitted	A23166-007
Sargent LA KD	A23166-7KD
Schlage C O-bitted	A23160-007
Schlage C KA4	A23160-7KA
Schlage C KD	A23160-7KD
Schlage E O-bitted	A23159-007
Yale 8 Para O-bitted	A23169-007
Yale 8 Para KD	A23169-7KD
Corbin 60 O-bitted	A23167-010
Corbin 60 KD	A23167-10D
Corbin Russwin L4 O-bitted	A23174-010
Russwin D1 O-bitted	A23168-010
Russwin D1 KD	A23168-10D
Sargent LA O-bitted	A23166-010
Sargent LA KD	A23166-10D
Schlage C O-bitted	A23160-010
Schlage C KA4	A23160-10A
Schlage C KD	A23160-10D
Schlage E O-bitted	A23159-010
Yale 8 Para O-bitted	A23169-010
Yale 8 Para KD	A23169-10D



Padlocks

Padlocks	Cylinders
Corbin 60 O-bitted	A23167-002
Corbin 60 KD	A23167-2KD
Corbin Russwin L4 O-bitted	A23174-002
Russwin D1 O-bitted	A23168-002
Russwin D1 KD	A23168-2KD
Sargent LA O-bitted	A23166-002
Sargent LA KD	A23166-2KD
Schlage C O-bitted	A23160-002
Schlage C KA4	A23160-2KA
Schlage C KD	A23160-2KD
Schlage E O-bitted	A23159-002
Yale 8 Yale Para O-bitted	A23169-002
Yale 8 Yale Para KD	A23169-2KD

Mortise, Rim and Cam Lock for Standard Cylinders



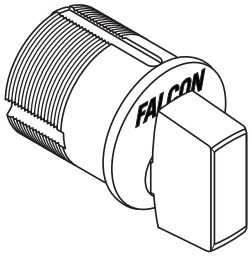
Note: Specify finish: 605, 606, 612, 613, 626, 629, 630

Mortise Cylinder

900 Series cylinders are furnished with #4 straight cam and 250 Series with #1 cloverleaf cam unless otherwise specified.

See table for product numbers.

See pages 24-25 for optional cams and 26-27 for collars.



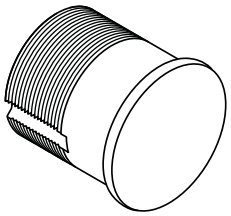
Note: Specify finish: 605, 606, 612, 613, 626, 629, 630

Thumbturn Cylinder

Furnished with #4 straight cam except 970 Series furnished with #1 cloverleaf cam unless otherwise specified.

See table for product numbers.

See pages 24-25 for optional cams and 26-27 for collars.

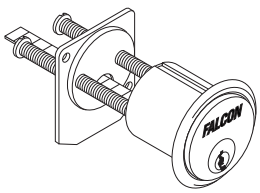


Note: Specify finish: 605, 606, 612, 613, 625, 626

Dummy Cylinder

Used to plug hole in door where lock remains but cylinder operation is no longer needed.

984D 1″
985D 1-1/8″



Note: Specify finish: 605, 606, 612, 613, 626, 629, 630

Rim Cylinder

Horizontal tailpiece standard. May be changed to vertical orientation in the field. Furnished with collar, back plate and 12-24 break off screws.

951 Specify 5, 6 or 7-pin

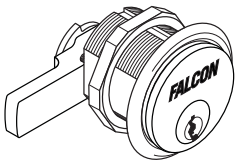
Specify cylinder number, keyway and finish when ordering.

Keyed Mortise Cylinders

Catalog Number	Length	Pins	Application
985	1-1/8″	5 or 6	Generic
986	1-1/4″	5 or 6	Generic
987	1-3/8″	6 or 7	Generic
988	1-1/2″	6 or 7	Generic
990	1-3/4″	6 or 7	Generic
992	2″	6 or 7	Generic
250	1-1/8″	6	M451 hotel function
251	1-1/4″	6	M451 hotel function
252	1-3/8″	6	M451 hotel function
253	1-3/8″	7	M451 hotel function

Thumbturn Mortise Cylinders

Catalog Number	Length	Pins	Application
985T	1-1/8″	—	Generic
986T	1-1/4″	—	Generic
973	1-1/8″	—	M911 Classroom Thumbturn, RH (CCW)
974	1-1/8″	—	M911 Classroom Thumbturn, LH (CW)

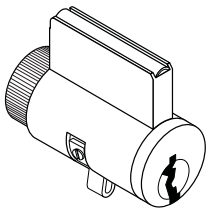


Note: Specify finish: 605, 606, 612, 613, 626, 629, 630

Cam Lock - Heavy Cam

Includes stop washers for rigid and lazy cam operation. Field reversible for RH or LH doors by positioning of stop screw on back of housing. Requires 1-3/16″ cylinder hole and fits doors up to 1-1/8″ thick.

945 Specify 5 or 6-pin



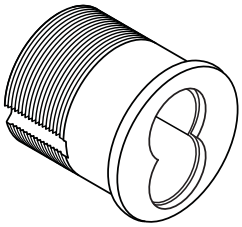
Note: Specify finish: 606, 626

Mailbox Cylinder

U.S. Postal regulations prohibit master keying of mailbox locks. Mailboxes must be ordered specifically for Falcon cylinders from the mailbox manufacturer.

954 Specify 5, 6 or 7-pin

Mortise, Rim and Cam Lock for Standard Cylinders



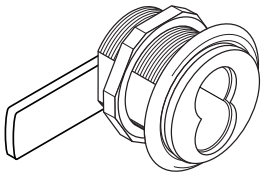
Note: Specify finishes: 605, 606, 612, 613, 626, 629, 630

Mortise Cylinder Housing

Standard housings furnished with #5 straight cam and hotel function housings furnished with #10 cloverleaf cam. See table for product numbers.

See pages 24-25 for optional cams and pages 26-27 for collars.

Catalog Number	Length	Pins	Application
C987	1-3/8″	6 or 7	Generic
C988	1-1/2″	6 or 7	Generic
C990	1-3/4″	6 or 7	Generic
C992	2″	6 or 7	Generic
C997	1-3/8″	6 or 7	Unassembled, less cam
C262	1-5/8″	6 or 7	M451 Hotel function RH
C265	1-5/8″	6 or 7	M451 Hotel function LH

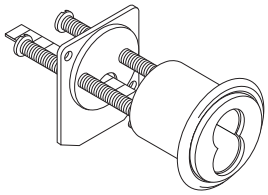


Note: Specify finishes: 605, 606, 612, 613, 626, 629, 630

Cam Lock

Key removable in locked position only. Cam rotates 360° and can be installed for right or left hand operation. Requires 1-3/16″ cylinder hole and fits doors up 1-3/8″ thick.

C943 Specify 6 or 7-pin



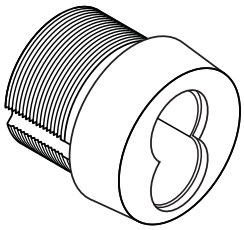
Note: Specify finishes: 605, 606, 612, 613, 626, 629, 630

Rim Cylinder Housing

Horizontal tailpiece standard.

May be changed to vertical orientation in the field. Furnished with collar, back plate and 12-24 break-off screws.

C953 Specify 6 or 7-pin

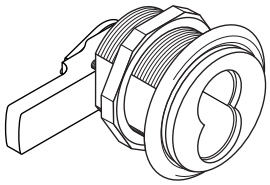


Note: Specify finishes: 605, 606, 612, 613, 625, 626

Adams Rite Tapered Head Mortise Cylinder Housing

Designed for proper fit without collars on narrow stile aluminum doors. Furnished with #8 Adams Rite cam.

C977 Specify 6 or 7-pin



Note: Specify finishes: 605, 606, 612, 613, 626, 629, 630

Cam Lock - Heavy Cam

Includes stop washers for rigid and lazy cam operation. Field reversible for RH or LH doors by positioning of stop screw on back of housing. Requires 1-3/16″ cylinder hole and fits doors up to 1-1/8″ thick.

C945 Specify 6 or 7-pin

How to Order

Less Core

Specify catalog number and finish. Example: C987 626

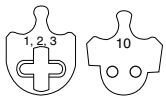
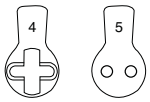
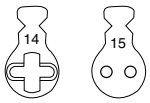
Complete with Core

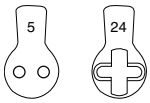
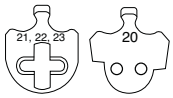
Add Keyway, "WIC" and keying instructions. Example: C987 WIC A* 626 AA12

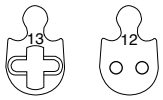
* "A" keyway standard. Falcon reserves the right to assign the keyway for new key systems.

MORTISE CYLINDERS
CAMS

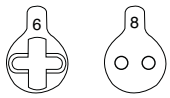
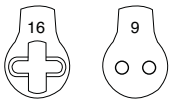
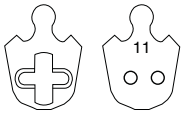
Each part number indicates a package of 10 cams

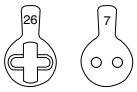
Falcon	Lock	Reference Number	Part Number	For Cylinder
	Falcon M Series deadbolt functions	1 2 3 10	A09894-001-00 A09894-002-00 A09894-003-00 A12667-007-00	Falcon, Ilco, Lori, Schlage Arrow, Sargent & Yale Corbin Russwin Falcon I/C
	Falcon M Series non-deadbolt functions. Most old black cast iron locks. C/R ML2255 & ML2242 inside	4 5	A09897-000-00 A12667-003-00	Conventional I/C Most exit devices
	Falcon M381 outside	14 15	A20065-00-00 A20278-000-00	Conventional I/C

Monarch	Lock	Reference Number	Part Number	For Cylinder
	Monarch dogging cylinder Install cam upside down.	24 5	A09897-024-00 A12667-003-00	Conventional I/C
	Monarch Delta trim for 17C concealed vertical rod	21 22 23 20	A09894-021-00 A09894-022-00 A09894-023-00 A12667-020-00	Falcon, Ilco, Lori, Schlage Arrow, Sargent & Yale Corbin Russwin I/C

Schlage	Lock	Reference Number	Part Number	For Cylinder
	Schlage L Series	13 12	A09888-000-00 A12667-008-00	Conventional I/C

Each part number indicates a package of 10 cams

Other Manufacturers	Lock	Reference Number	Part Number	For Cylinder
	Adams Rite MS, 4500 and 4700 Series	6 8	A09899-000-00 A12667-001-00*	Conventional I/C
	Adams Rite 4070 deadlock	16 9	A09898-000-00 A12667-002-00	Conventional I/C
	Arrow, Corbin Russwin ML2200 except ML2255 and ML2242 inside	- 11	A20069-000-00 A12667-011-00	Conventional I/C

Other Manufacturers	Lock	Reference Number	Part Number	For Cylinder
	Corbin Russwin DL4000 Series	27	A12677-013-00	I/C
	Corbin Russwin master ring black cast iron locks only. Requires brushing A09890-000-00	25	A12667-006-00	Conventional I/C Most exit devices
	Sargent & Yale	26 7	A08867-000-00 A12667-000-00	Conventional I/C
	Sargent 7737	-	A12667-03A-00*	I/C

* Thick cams require throw pin A12663-003-00

Cam Assortment Kits

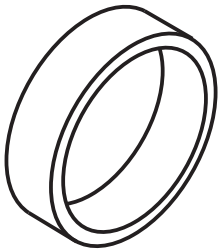
1396 Standard Cylinders
Contains ten each #1, 4 and 13; fifteen #6 and five each #2, 3 and 14 cams, plus 50 cam screws and a plug follower.

1397 I/C Mortise Cylinders
Contains ten each #5, 7, 10, 11 and 12; twenty #8 and five #15 cams, a supply of throw member pins and plates, and one #1402 staking punch.

MORTISE CYLINDERS
CYLINDER COLLARS

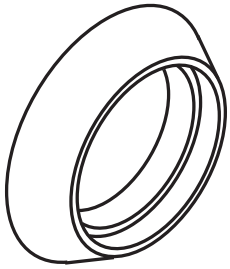
Standard Collars for Cylinders Ordered Separately

Length	Cylinder	Non-AR Cams	AR Cam
1″	984D	A08794-000	—
1-1/8″	250, 965, 966, 973, 974, 985 Series	A08794-000	008876-002
1-1/4″	251, 986 Series	A08794-001	008876-003
1-3/8″	252, 253, 987, C987, C997	A08794-002	008876-004
Longer	C260 Series, (C)988, (C)990, (C)992	A08794-000	008876-000



Escutcheon Trim Ring

Door Thickness	Function	985 1-1/8″	986 1-1/4″	(C)987 1-3/8″	(C)988 1-1/2″
1-1/2″	Single cylinder	—	A08790-000	A08790-001	A08790-002
1-1/2″	Double cylinder	A08790-000	—	—	—
1-3/4″	Single cylinder	—	—	A08790-000	A08790-001
1-3/4″	Double cylinder	—	A08790-000	A08790-001	A08790-002
2″	Single cylinder	—	—	A08790-000	A08790-001
2″	Double cylinder	—	—	A08790-000	A08790-001
2-1/4″	Single cylinder	—	—	—	A08790-000
2-1/4″	Double cylinder	—	—	—	—
2-1/2″	Single cylinder	—	—	—	—
2-1/2″	Double cylinder	—	—	—	—

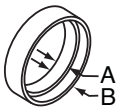


Sectional Trim Ring

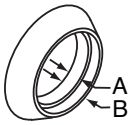
Door Thickness	Function	985 1-1/8″	986 1-1/4″	(C)987 1-3/8″	(C)988 1-1/2″
1-1/2″	Single cylinder	A08794-001	A08794-002	—	—
1-1/2″	Double cylinder	A08794-002	A08794-003	—	—
1-3/4″	Single cylinder	A08794-000	A08794-001	A08794-002	—
1-3/4″	Double cylinder	A08794-001	A08794-002	A08794-003	—
2″	Single cylinder	—	A08794-000	A08794-001	A08794-002
2″	Double cylinder	A08794-000	A08794-001	A08794-002	A08794-003
2-1/4″	Single cylinder	—	—	A08794-000	A08794-001
2-1/4″	Double cylinder	—	A08794-000	A08794-001	A08794-002
2-1/2″	Single cylinder	—	—	—	A08794-000
2-1/2″	Double cylinder	—	—	A08794-000	A08794-001

Specify part number and finish when ordering.
(e.g. A08790-000-626)

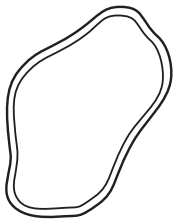
Rim Cylinder Tailpieces



Dim. A	Dim. B	Part No.
3/32″	9/32″	A08790-000
7/32″	13/32″	A08790-001
11/32″	17/32″	A08790-002
15/32″	21/32″	A08790-003
43/64″	55/64″	A08790-004

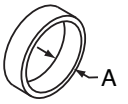


Dim. A	Dim. B	Part No.
3/32″	9/32″	A08794-000
7/32″	13/32″	A08794-001
11/32″	17/32″	A08794-002
15/32″	21/32″	A08794-003

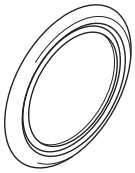


Wave washer included.

To order separately, specify 008789-001-60



Dim. A	Dim. B	Part No.
1/8″	—	008876-000
3/16″	—	008876-005
1/4″	—	008876-001
3/8″	—	008876-002
1/2″	—	008876-003
5/8″	—	008876-004



008862-000

For all rim cylinders and cam locks.

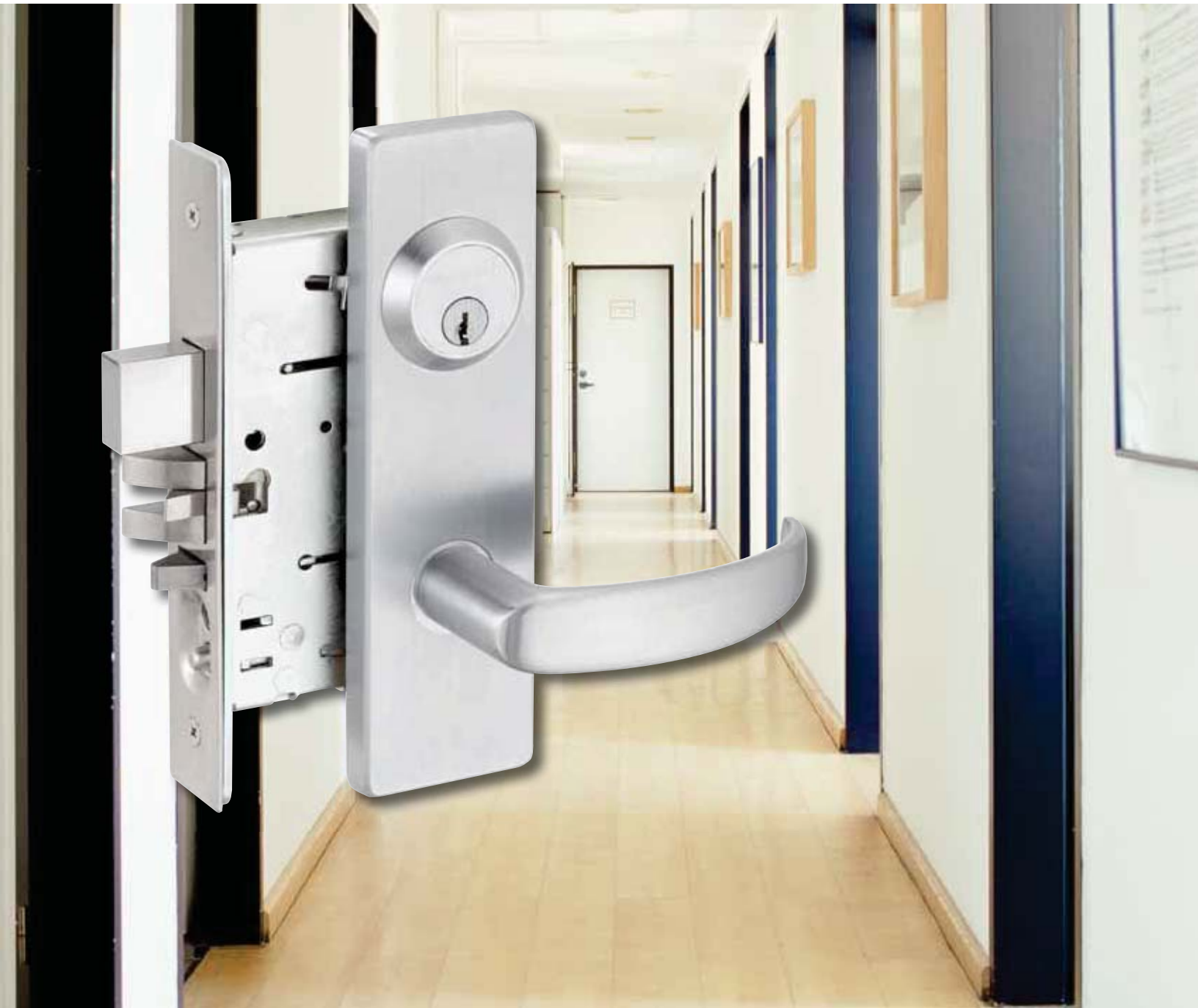
Note: Specify finishes: 605, 606, 612, 613, 625, 626

Specify part number and finish when ordering.
(e.g. A08790-000-626)

FALCON

MA Series

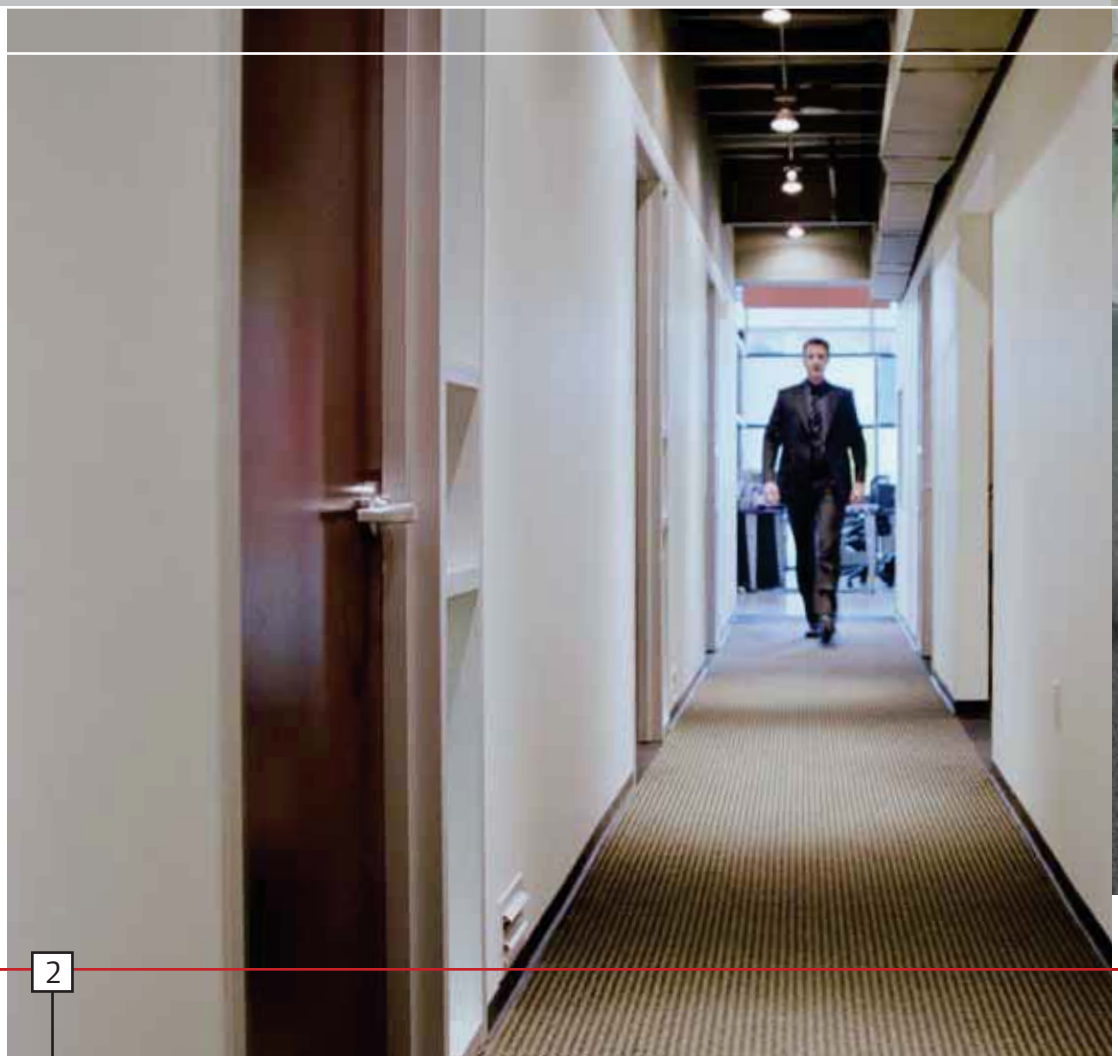
Grade 1 Mortise Lever and Knob Locks



THE FALCON DIFFERENCE

SAFETY, SECURITY AND UNCOMPROMISING VALUE

At Falcon, we know that every product you sell not only has to meet local building codes, but also your expectations for performance and quality. We take your expectations seriously, and that's why we build our locks to deliver durability, convenience and unmatched value. After all, we've built our reputation on the same standards that you have – providing quality products at a reasonable price, delivered on time. It's the way we do business and it's what makes Falcon locks a powerful choice no matter what your project.



FALCON MA SERIES

The Falcon MA Series lock delivers high performance at an affordable cost in your office, hospital, education or other commercial projects. One of Falcon's toughest, most dependable locks, the MA Series provides security and is built to stand up to constant use without fail. The MA Series also makes retrofit easy with an interchangeable core that can be removed for quick, easy re-keying and is compatible with SFIC products from other manufacturers. And they're backed by one of the best names in the business.

FEATURES

** Excludes MA551*
*** For 605, 606, 613, 625 and 626*

Lock Features

Door thickness: Standard accommodates thickness of 1-3/8" to 2-1/2".

Backset: 2-3/4" only.

Case: Cold formed steel, zinc dichromate plated, .090" thick. Optional lead wrapping available.

Hubs: Hardened steel.

Handing: Right hand is standard; left hand optional. Reversible in the field.

Cylinders: Solid brass cylinder and plug. 5, 6 or 7-pin are available on standard cylinders. 6 or 7-pin are available on interchangeable core cylinder. Furnished with two nickel silver keys standard

Keyways: "G" keyway standard on standard cylinder. "A" keyway standard on I/C cylinder. See price book for optional keyways

Bind Resistant Trim: Heavy-duty through-bolted inserts clamp the trim on the door assuring proper alignment. Provided with 8-32 screws for strength and thread sealant to prevent loosening.

Latch Bolt: Two-piece stainless steel, mechanical anti-friction bolt. 3/4" projection.

Dead Bolt: 1" throw, stainless steel with two 13/16" diameter hardened steel, free-turning, saw-resistant roller.

Faceplates: (Armored Front) 1-1/4" x 8" brass or stainless steel adjustable for door bevel. Reinforced by heavy gauge steel with stabilizing ribs.

Strike: Brass or stainless steel. Meets ANSI AII5.1 for frame preparation. Strike is non-handed.

Electrified Functions: Available in 12 or 24 VDC.

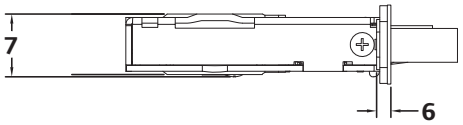
ANSI/BHMA: Meets ANSI/BHMA 156.13, Series 1000.

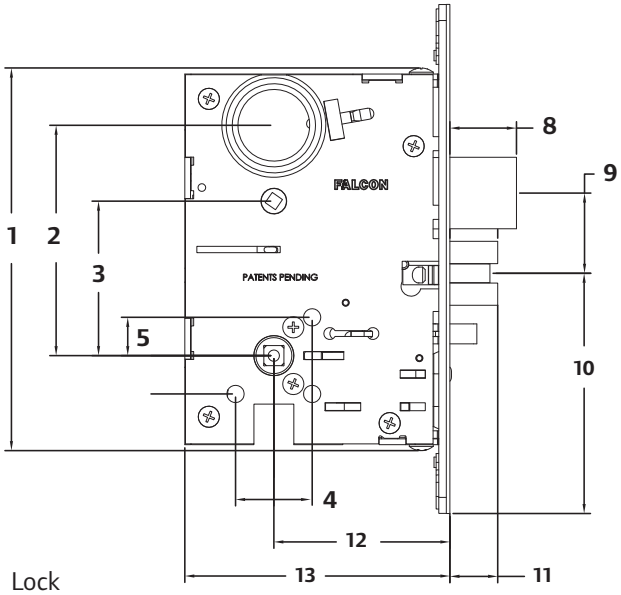
UL: 3 hour A label.

Falcon Mortise Lock Specifications

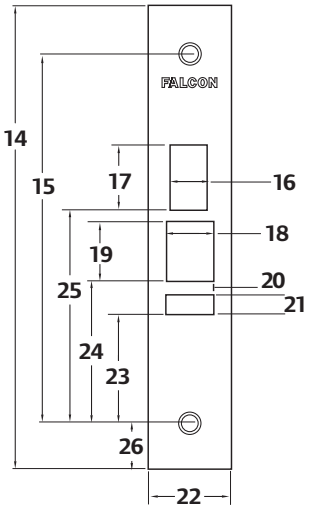
- Provide mortise locksets that comply with ANSI A156.13, Series 1000, Operational Grade 1 and Security Grade 1 with all standard trims and conventional mortise cylinders.
- Locksets comply with UL10B - neutral pressure and UL10C/UBC 7-2 – positive pressure testing requirements. All locks shall be UL listed for 3 hour fire door.
- Lock case shall be non-handed, reversible without opening the lock case, and shall be manufactured of zinc dichromate plated steel. Lock case shall be interchangeable for knob or lever applications without modifying the chassis, and shall be constructed with a screw configuration that limits access to operating parts.
- Latchbolt shall be 2-piece anti-friction type manufactured from stainless steel, with a standard 2¾" backset, a full ¾" throw and be field reversible. Deadbolt shall have 1" throw and shall be constructed of stainless steel, incorporating two 3/16" diameter security roller pins.
- All trim shall be cast, forged, or wrought and through-bolted with thread patch coated screws. Lever trim to have individual heavy duty springs for lever return, and independent rotation in both directions. Return to door style levers meets the ½" California State Fire Marshall requirement.
- Spindles to be independent, designed to 'break-away' at a maximum of 480 in./lbs. to prevent damage to the lock chassis.
- Provide standard non-handed curved lip strikes.
- Cylinders to be secured by a dual retainer.
- Acceptable manufacturer: FALCON Lock

FALCON

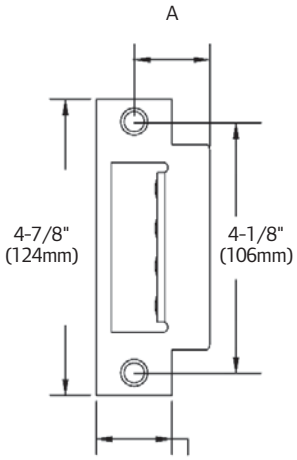




Lock



Faceplate



Strike

1-1/4"
(32mm)

Lock	Dimension
1	6″ (152mm)
2	3-39/64″ (92mm)
3	2-27/64″ (62mm)
4	1-3/16″ (30mm)
5	19/32″ (15mm)
6	1/4″ (6mm)
7	1″ (25mm)
8	1″ (26mm)
9	1-17/64″ (32mm)
10	3-49/64″ (96mm)
11	3/4″ (19mm)
12	2-3/4″ (70mm)
13	4-5/32″ (106mm)

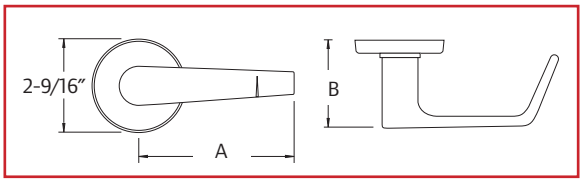
Faceplate	Dimension
14	8″ (203mm)
15	6-3/8″ (162mm)
16	9/16″ (14mm)
17	1-9/64″ (29mm)
18	45/64″ (18mm)
19	1-1/32″ (26mm)
20	1/4″ (6mm)
21	11/32″ (9mm)
22	1-1/4″ (31mm)
23	1-27/32″ (47mm)
24	2-7/16″ (62mm)
25	3-21/32″ (93mm)
26	25/32″ (20mm)

Strike	
(A) Door Thickness	**Lip Size**
1-3/4″	1-1/4″ (32mm)
2″	1-7/16″ (37mm)
2-1/4″	1-9/16″ (40mm)
2-1/2″	1-11/16″ (43mm)

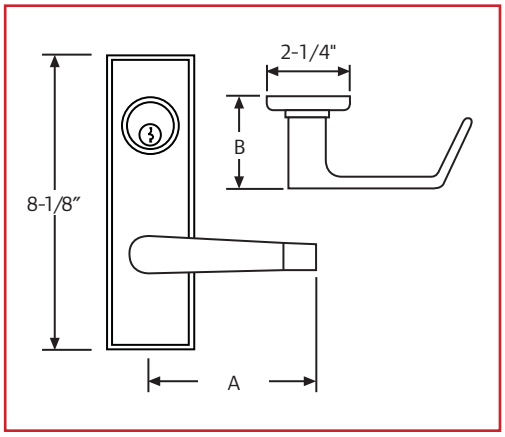
G
Gala Rose

N
Napa Escutcheon

Falcon MA Series is available in several design combinations; "G" Gala rose or "N" Napa escutcheon and "H" Hana knob designation or four levers "A" Avalon, "D" Dane, "Q" Quantum and "S" Sutro. When specifying, example: AN, Avalon (A) lever - with Napa (N) escutcheon.



Number	A - Width	B - Projection
AG	4-1/2"	2-7/8"
DG	4-1/2"	2-1/2"
QG	4-3/4"	3"
SG	4-7/8"	3"



Number	A - Width	B - Projection
AN	4-1/2"	2-7/8"
DN	4-1/2"	2-1/2"
QN	4-3/4"	3"
SN	4-7/8"	3"

Lever Trim

Cast or forged levers (Avalon, Dane and Quantum) and wrought brass or stainless levers (Sutro), wrought rose and forged or wrought escutcheons are standard.

AG
Avalon-Gala

DG
Dane-Gala

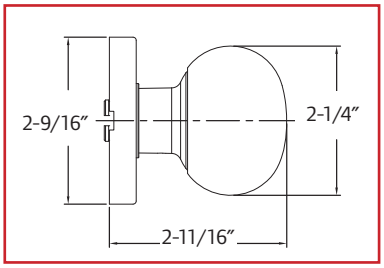
QG
Quantum-Gala

SG
Sutro-Gala

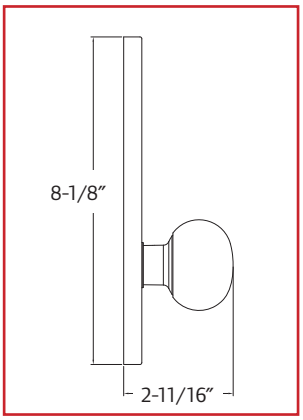
Knob Trim

Wrought knobs, wrought roses and forged or wrought escutcheons are standard.

HG
Hana-Gala
Gala - Rose
Hana - Knob



HN
Hana-Napa
N - Escutcheon
H - Knob



Trim Options

Abrasive Coated Knobs and Levers

All knobs and levers are available with abrasive coating to identify entrances to hazardous areas to the handicapped.

Knurled Levers

Levers are available knurled to identify entrances to hazardous areas to the handicapped.

Lead Wrapping

MA Series locksets and latchsets are available with lead-wrapping for use on X-ray room doors (or similar situations).

Trim Packages

Both knob and lever trim packages are available to allow complete replacement of inner and outer trim on any lock function. Packages include inside and outside trim, spindle and mounting screws. Please see current price book for more details.

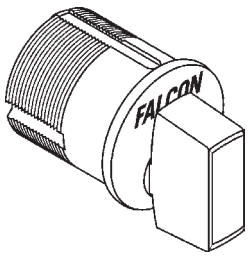
Strikes

Manufactured from heavy gauge brass or stainless steel. Meets ANSI Standard A115.1 for frame preparation. Strikes are available with various lip lengths.

Thumb Turn/Threaded Cylinders *(Sold Separate)*

Standard thumb turn threaded cylinders for dead bolt operation of MA Series locks may be used in lieu of surface mounted thumb turns. Furnished with A09894-1 cam. Available in length indicated and all MA Series finishes.

Catalog Number	Length
973	1-1/8″ RH (Turns counter-clockwise)
974	1-1/8″ LH (Turns clockwise)



MA Series
FUNCTIONS

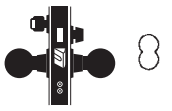
To order Falcon MA Series locksets, please consult page 17 for ordering information and assistance.

Indicates interchangeable core available.

Catalog Number	ANSI	Function Outside/Inside	Name	Description
MA101	F 01		Passage or Closet Latch	Latch bolt operated by knob/lever from either side at all times.
MA161	F 31		Exit or Connecting Lock	Latch bolt operated by knob/lever from inside. No trim outside. Auxiliary dead latch.
MA301	F 02		Privacy, Bedroom / Bath	Latch bolt operated by knob/lever from either side. Dead bolt operated by turn from inside and by emergency release from outside.
MA311	F 19		Privacy, Bedroom / Bath	Latch bolt operated by knob/lever from either side. Dead bolt operated by turn from inside and emergency release from outside. Operating inside knob/lever retracts both bolts.
MA321	F 22		Privacy, Bedroom / Bath	Latch bolt operated by knob/lever from either side except when outside knob/lever is locked by inside turn. Operating inside knob/lever, closing door or operating outside emergency release unlocks outside knob/lever.
MA371	F 14		Store Door Lock	Latch bolt operated by knob/lever from either side. Dead bolt operated by key from either side.
MA381	F 09		Apartment, Exit	Latch bolt operated by knob/lever from either side, except when outside knob/lever is locked by key from inside. When outside knob/lever is locked, latch bolt is retracted by key from outside or by operating inside lever. Auxiliary dead latch.
MA411	F 30		Asylum or Institutional Lock	Latch bolt operated by key from either side. Both knobs/levers always inoperative. Auxiliary dead latch.
MA431	F 34		Classroom Security with Deadbolt	Latch bolt operated by knob/lever from either side except when outside knob/lever is locked from inside or outside by key. Dead bolt retracted by key from inside or outside. Operating inside knob/lever retracts both bolts and unlocks outside. Latch bolt dead locked when dead bolt is thrown.

Indicates interchangeable core available.

Catalog Number	ANSI	Function Outside/Inside	Name	Description
MA441	F 32		Classroom Security Lock	Latch bolt operated by knob/lever from either side except when outside knob/lever is locked from inside or outside by key. When outside knob/lever is locked, latch bolt is retracted by key from inside or outside or by operating inside knob/lever. Auxiliary dead latch.
MA451	F 15		Hotel Guest Lock	Latch bolt operated by key from outside or by operating inside knob/lever. Outside knob/lever is always inoperative. Dead bolt projected by turn from inside and all keys except emergency key are shut out. Operating inside knob/lever retracts both bolts. Auxiliary dead latch.
MA521	F 04		Entry / Office Lock	Latch bolt operated by knob/lever from either side except when outside knob/lever is made inoperative by buttons in face. When outside knob/lever is locked, latch bolt is retracted by key from outside or by operating inside knob/lever. Auxiliary dead latch. Outside knob/lever is unlocked by button on face.
MA531	F 12 / F 20		Apartment Corridor Door Lock	Latch bolt operated by knob/lever from either side, except when outside knob/lever is made inoperative by buttons in face. Dead bolt operated by key outside or turn inside. Key outside operates both bolts. Operating inside knob/lever retracts both bolts and outside remains locked. Latch bolt is deadlocked when outside knob/lever is made inoperative or when the dead bolt is projected. When dead bolt is retracted, knob/lever is unlocked by buttons in face.
MA541	F 21		Room Door Lock	Latch bolt operated by knob/lever from either side. Dead bolt operated by key from outside or turn from inside.
MA551	F 06		Holdback Lock	Latch bolt operated by lever from either side except when outside lever is locked from outside by key. Latch bolt can be locked in a retracted position by key. When outside lever is locked, latch bolt is retracted by key from outside or by operating inside lever unless latch bolt has been locked in a retracted position. Auxiliary dead latch. Note: Chassis is handed. To activate the Holdback Function – from the unlocked position rotate the outside lever/knob to retract the latchbolt. Rotate key 360 degrees. Release lever/knob. To release Holdback Function, rotate key 360 degrees clockwise.
MA561	F 05		Classroom Lock	Latch bolt operated by knob/lever from either side except when outside knob/lever is locked from outside by key. When outside knob/lever is locked, latch bolt is retracted by key from outside, or by operating inside knob/lever. Auxiliary dead latch deadlocks latchbolt when door is closed. Inside knob/lever always free for immediate exit.
MA571	F 13		Dormitory or Exit Lock	Latch bolt operated by knob/lever from either side. Dead bolt projected by key from outside and turn from inside. Operating inside knob/lever retracts both bolts and unlocks outside.
MA581	F 07		StoreroomLock	Latch bolt operated by key from outside or by operating inside knob/lever. Outside knob/lever is always inoperative. Auxiliary dead latch.

Catalog Number	ANSI	Function Outside/Inside	Name	Description
MA621	F 08 / F 10		Front Door / Apartment Corridor	Latch bolt is operated by knob/lever from either side, except when outside knob/lever is made inoperative by buttons in face. Dead bolt is operated by turn inside. Key outside operates both bolts. Outside knob/lever is unlocked by button on face.
MA641	NA		Dormitory Lock	Latch bolt by knob/lever inside and key outside. Inside knob/lever free. Outside knob/lever rigid. Deadbolt by key outside or T-turn inside. Rotating inside knob/lever retracts both bolts. Deadlocking latch.
MA851	NA		Storeroom-Fail Safe (EL - 12 & 24 VDC)	Latch bolt operated by knob/lever from either side except when outer knob/lever is electrically locked. When outer knob/lever is locked, latch bolt retracted by key in cylinder outside. Deadlocking latch.
MA881	NA		Storeroom-Fail Secure (EU - 12 & 24 VDC)	Latch bolt operated by knob/lever from inside except when outer knob/lever is electrically unlocked, then latch bolt from either side. When locked, key in cylinder outside retracts latch bolt. Deadlocking latch.
MA911	F 29		Classroom Dead Lock	Key from outside operates dead bolt. Turn from inside retracts but does not project dead bolt.
MA921	F 18		Dead Lock	Dead bolt operated by key from outside only.
MA931	F 16		Dead Lock	Dead bolt operated by key from either side.
MA941	F 17		Dead Lock	Dead bolt operated by key from outside and by turn from inside.
MA12	NA		Single Dummy	Single Dummy Trim
MA18	NA		Double Dummy	Double Dummy Trim

MA Series Grade 1 Mortise Locks

ANSI No./ Grade	Function	Falcon	Arrow	Best	Cal-Royal	Corbin/ Russwin	Dorma	Marks	Sargent	Yale
F 01	MA101	Passage or Closet Latch	A-B01	45N	M8010	ML2010	9010	5-55N	8215	8801
F 02	MA301	Privacy, Bedroom / Bath	-	45LB	M8040	ML2020	-	5-55L	8268	-
F 04	MA521	Entry Lock	A-B22	45A	M8050	Ml2051	9050	5-55E	8205	8807
F 05	MA561	Classroom Lock	A-B17	35R	M8070	ML2055	9070	5-55J	8237	8808
F 06	MA551	Holdback Lock	-	45RHB	-	ML2056	9076	5-55JM/ JR	8289	8824
F 07	MA581	Storeroom / Closet Lock	A-B12	45ED	M8080	ML2057	9080	5-55EW	8204	8805
F 08 / F 10	MA621	Front Door / Apartment Corridor	A-B21	45BA	-	ML2048	-	5-55A	8247	8747
F 09	MA381	Apartment, Exit	A-B32	45C	M8060	ML2042	9060	5-55G	8216	8817-2
F12 / F 20	MA531	Apartment Corridor Door Lock	A-B20	45AB	M8453	ML2067	9953	5-55FD	8243	8847
F 13	MA571	Dormitory or Exit Lock	A-B19	45FT	M8456	ML2065	9956	5-55FW	8225	8822
F 14	MA371	Store Door Lock	A-B31	45G	M8466	ML2022	9966	5-55C	8226	8860-2
F 15	MA451	Hotel Guest Lock	A-B15 /16	45H/HJ	-	ML2029	9985	5-55H	8250	8820
F 16	MA931	Dead Lock	A-B42	45WD	-	ML2012	9962	5-55T	8222	8814-2
F 17	MA941	Dead Lock	A-B41	45AD	-	ML2013	9960	5-55P	8221	8815
F 18	MA921	Dead Lock	A-B40	45YD	-	ML2011	9961	5-55S	8220	8814
F 19	MA311	Privacy, Bedroom / Bath	A-B02	45L	M8040	ML2030	9940	5-55LF	8266	8802
F 21	MA541	Room Door Lock	A-B13	45B	M8473	ML2024	9973	5-55B	8224	8860
F 22	MA321	Privacy, Bedroom / Bath	A-B26	-	M8040	ML2060	9040	5-55LJ	8265	8862
F 29	MA911	Classroom Dead Lock	-	45RD	-	-	9963	5-55SC	8203	8813ST
F 30	MA411	Asylum or Institutional Lock	A-B33	45W	-	-	9082	5-55WW	8217	8830-2
F 31	MA161	Exit or Cummunicating Lock	-	45Y	-	-	9025	5-55EX	8213	8828
F 32	MA441	Intruder Latch Bolt Lock	A-B37	45INL	-	ML2052	9071	5-55GC	8238	8808-2
F 34	MA431	Intruder Dead Bolt Lock	-	-	-	-	9967	-	8240	8812-2
NA	MA12	Single Dummy		451DT	M8170	ML2050	-	-	8293	855/855FL
NA	MA18	Double Dummy	-	452DT	-	ML2070	-	-	8294	836B/838FL
NA	MA851	Storeroom-Fail Safe (EL - 12 & 24 VAC or VDC)	A-B17-177	45EWEL	-	ML20903	9080EL	5-55EL	8270	8880
NA	MA881	Storeroom-Fail Secure (EU - 12 & 24 VAC or VDC)	A-B17-178	45EWEU	-	ML20905	9080EU	5-55EU	8271	8881
NA	MA641	Dormitory Lock	-	45FD	-	-	-	-	-	-

All effort has been made to make this information comprehensive. Since no two products are exactly alike, this data represents those products which are similar. This information was obtained from trade services and is not guaranteed nor meant to represent any product as equal to any other product.

Mortise Cylinders — Interchangeable Cores

All Falcon MA Series keyed locks are available with mortise cylinders that will accept Falcon small format interchangeable cores (SFIC) as well as some other manufacturers' SFIC. Interchangeable core cylinders are available in 6- or 7-pin configurations, for increased security by quick change of keying.

Interchangeable core cylinders allow the capability of immediately changing the keying on any door without the necessity of disassembling the lock. The core is removed by use of a special "control" key. Rotating the key to the right and gently pulling will disengage the core from the housing. The replacement core is then inserted and the control key rotated to the left to "lock" the core in place and the control key is removed.

To order: Falcon mortise locks with interchangeable cores, add "G" 6- or 7-pin in detail area of order.

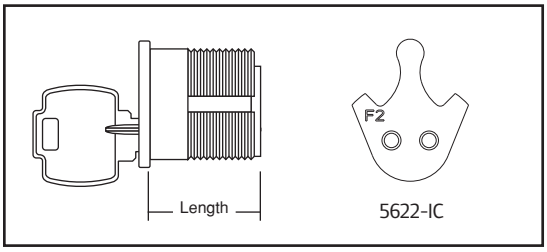
To order: Falcon mortise locks for interchangeable core, less core (SFIC), add "B" 6- or 7-pin in detail area of order.

Interchangeable Core MA Series Function/Cam Chart

Catalog Number	Outside Cam No.	Inside Cam No.
MA371	5622-IC	5622-IC
MA381	5621-IC	5620-IC
MA411	5622-IC	5622-IC
MA431	5622-IC	5622-IC
MA441	5622-IC	5622-IC
MA451	5622-IC	
MA521	5622-IC	
MA531	5622-IC	
MA541	5622-IC	
MA551	5622-IC	
MA561	5622-IC	
MA571	5622-IC	
MA581	5622-IC	
MA621	5622-IC	
MA641	5622-IC	
MA851	5622-IC	
MA881	5622-IC	
MA911	5622-IC	
MA921	5622-IC	
MA931	5622-IC	5622-IC
MA941	5622-IC	

Cam Numbers
5622-IC = interchangeable cam
5620-IC = F09 Interchangeable Inside
5621-IC = F09 interchangeable Outside

All keyed cylinders are supplied with two nickel silver keys.



Catalog Number	Length
Standard Cylinders	
C987	1-3/8″
C988	1-1/2″
C990	1-3/4″
C992	2″
Hotel/Motel Cylinders	
C261	1-1/2″ RH
C262	1-5/8″ RH
C264	1-1/2″ LH
C265	1-5/8″ LH

Special hotel/motel cylinders furnished with cam A12667-007-00.

Note: To order the cylinder housing only, order by listing catalog number for required length and cam number as indicated in the chart. Also specify finish and pin condition.

EXAMPLE: No. C987 with A12667-003-00, 626, for 7-pin interchangeable core.

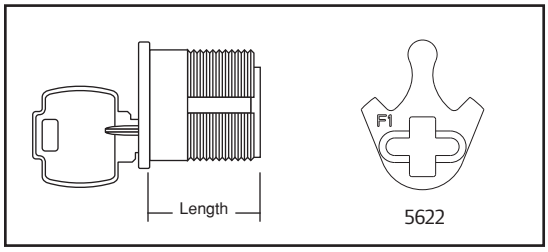
Mortise Cylinders - Standard

Only the finest materials are used in the manufacture of our cylinders. Modern equipment and gauging ensure consistent, reliable production of our entire line of cylinders. We offer a full and complete line of spacer rings, cylinder guards and spring washers, as well as numerous cams to fulfill the requirements of most applications. Standard mortise cylinders are furnished as 5- or 6-pin as standard. 7-pin cylinders are available. All keyed cylinders are supplied with two nickel silver keys.

Standard Core MA Series Function/Cam Chart

Catalog Number	Outside Cam No.	Inside Cam No.
MA371	5622	5622
MA381	5621	5620
MA411	5622	5622
MA431	5622	5622
MA441	5622	5622
MA451	5622	
MA521	5622	
MA531	5622	
MA541	5622	
MA551	5622	
MA561	5622	
MA571	5622	
MA581	5622	
MA621	5622	
MA641	5622	
MA851	5622	
MA881	5622	
MA911	5622	
MA921	5622	
MA931	5622	5622
MA941	5622	

Cam Numbers
5622 = standard cam
5620 = F09 standard Inside
5621 = F09 standard Outside



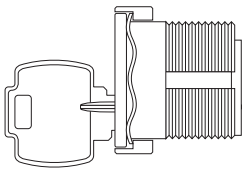
Catalog Number	Length	
Standard Cylinders		
985	1-1/8″	
987	1-3/8″	
988	1-1/2″	
990	1-3/4″	
992	2″	
Hotel/Motel Cylinders		
250	1-1/8″ RH	6-pin
251	1-1/4″ RH	6-pin
252	1-3/8″ LH	6-pin
253	1-3/8″ LH	7-pin

Special hotel/motel cylinders, furnished with cam A09894-001-00.

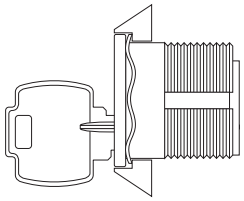
Note: To order cylinder separately, order by listing catalog number for required length and cam number as indicated in chart above. Also, specify finish and number of pins. EXAMPLE: 986 with A09897-000-00, 626, 6-pin

Cylinder Guards*

Falcon offers two different types of cylinder guards in various thicknesses to work with sectional or escutcheon trim, different door ranges and various cylinder lengths. Our standard cylinder, 985, is 1-1/8″ long. The factory will furnish the correct cam(s) and cylinder guard for the function and door thickness specified. The A08790 and A08794 cylinder guards in bar stock brass are available to accommodate different cylinder lengths and door thicknesses as shown.



985 Cylinder with A08790 Cylinder Guard.



985 Cylinder with A08794 Cylinder Guard.

A08790

A08794

Escutcheon Trim Ring

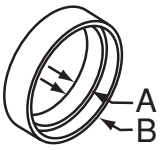
Door Thickness	Function	985 1-1/8″	986 1-1/4″	(c)987 1-3/8″	(c)988 1-1/2″
1-1/2″	Single cylinder	—	A08790-000	A08790-001	A08790-002
1-1/2″	Double cylinder	A08790-000	—	—	—
1-3/4″	Single cylinder	—	—	A08790-000	A08790-001
1-3/4″	Double cylinder	—	A08790-000	A08790-001	A08790-002
2″	Single cylinder	—	—	A08790-000	A08790-001
2″	Double cylinder	—	—	A08790-000	A08790-001
2-1/4″	Single cylinder	—	—	—	A08790-000
2-1/4″	Double cylinder	—	—	—	—
2-1/2″	Single cylinder	—	—	—	—
2-1/2″	Double cylinder	—	—	—	—

Sectional Trim Ring

Door Thickness	Function	985 1-1/8″	986 1-1/4″	(c)987 1-3/8″	(c)988 1-1/2″
1-1/2″	Single cylinder	A08794-001	A08794-002	—	—
1-1/2″	Double cylinder	A08794-002	A08794-003	—	—
1-3/4″	Single cylinder	A08794-000	A08794-001	A08794-002	—
1-3/4″	Double cylinder	A08794-001	A08794-002	A08794-003	—
2″	Single cylinder	—	A08794-000	A08794-001	A08794-002
2″	Double cylinder	A08794-000	A08794-001	A08794-002	A08794-003
2-1/4″	Single cylinder	—	—	A08794-000	A08794-001
2-1/4″	Double cylinder	—	A08794-000	A08794-001	A08794-002
2-1/2″	Single cylinder	—	—	—	A08794-000
2-1/2″	Double cylinder	—	—	A08794-000	A08794-001

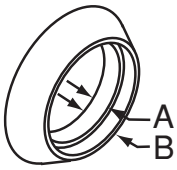
Specify part number and finish when ordering. (e.g. A08790-000-626)** Single cylinder functions.

Cylinder Guards Continued

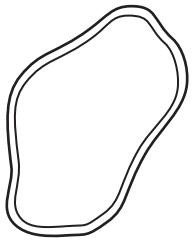


Rim Cylinder Tailpieces

Dim. A	Dim. B	Part No.
3/32″	9/32″	A08790-000
7/32″	13/32″	A08790-001
11/32″	17/32″	A08790-002
15/32″	21/32″	A08790-003
43/64″	55/64″	A08790-004

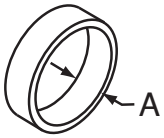


Dim. A	Dim. B	Part No.
3/32″	9/32″	A08794-000
7/32″	13/32″	A08794-001
11/32″	17/32″	A08794-002
15/32″	21/32″	A08794-003



Wave washer included.

To order separately, specify 008789-001-60



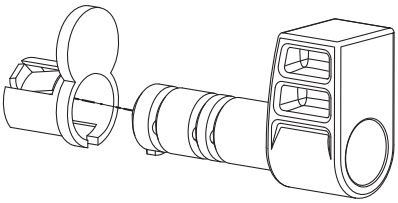
Dim. A	Dim. B	Part No.
1/8″	—	008876-000
3/16″	—	008876-005
1/4″	—	008876-001
3/8″	—	008876-002
1/2″	—	008876-003
5/8″	—	008876-004

Construction Keying

Falcon offers two different construction key systems depending on the size of and application within the project. Both systems permit the installation and use of regular door locks during construction, yet completely preserve the security of the keying system for the ultimate building owner. The Master, Grand Master and change keys are never with the locks during the construction phase of a building. Only the "construction" keys are sent to the job site. Where the job permits, we will utilize the "Lost Pin System" as our standard system for construction keying. Larger or more complicated jobs may require the use of our "Blockokey® System" for construction keying.

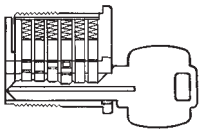
"Disposable Construction" Interchangeable Cores

This newly designed disposable construction core (1408) is an inexpensive alternative to interior keyed construction cores. This core should be used on interior door applications or where security on a site is not a concern. No keys need to be issued. The disposable core is inserted in the lever or knob and is operated by a thumb turn, which retracts the latch bolt. Please use either brass or permanent construction cores on exterior doors or secured areas.

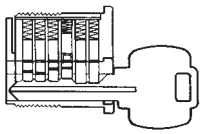


Locks with "Lost Pin System"

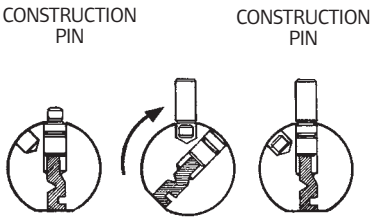
Our "lost" pin construction key system consists of one construction pin and a shallow hole in the side of the plug.



Construction Key—KB566
When the "construction" key is used, the construction pin is always in the cylinder plug, sitting on top of the bottom pin.



Master Key—KB578
When the Master key is inserted, the construction pin is pushed up into the cylinder housing. As the Master key is rotated to the right, the construction pin will drop into the hole in the plug, thereby eliminating any future use of the construction key.



Locks with Blockokey® Cylinders

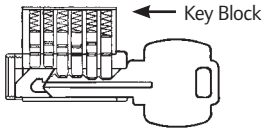
All lock cylinders on a specific project are operable by a special "project key." Duplicates of this key may be assigned by the building contractor to workmen and subcontractors as required. No regular change keys or Master keys are needed on the job. This eliminates the possibility of subsequent exposure from lost or stolen keys.

How to order locks with Blockokey® Cylinders

Blockokey® locksets are ordered by adding the word "Blockokey" after the balance of the ordering information.
EXAMPLE: 72 Each B511 D 626 1AA-72AA (Blockokey)

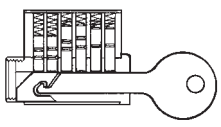
Locks with Blockokey® Cylinders

1.



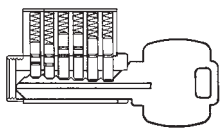
Project Key—KB531
Lock cylinder is operated by the special "project key." The last two pins in the cylinder are held inoperative by the key block.

2.



Removal Tool—KB536
The special "project key" is canceled out by removal of the key block. A key block removal tool is furnished with the Master keys for the locks. Simply push the removal tool into the keyway, then withdraw it to remove the block. Thereafter, the "project key" will no longer operate the lock cylinder.

3.



Change or Master Key—KB578
Cylinder is now only operable by the regular change key or Master key.

How to Order

For correct ordering, and to ensure no delays in shipment of your order, the following descriptive data must be listed in the sequence shown. Necessary information can be found in other parts of this catalog.The example below shows an order for 16 each MA locksets in the 521 Entry function, DG (Dane-Gala) trim design in a 626 (satin chrome) finish, 8 RH (right hand) and 8 LH (left hand) to accommodate doors 1-3/4" thick with AA1-AA16 keying.

Quantity: Indicate the quantity required.

Catalog Number: Select catalog number.

Trim Design: Indicate letter of knob or lever design followed by letter of rose or escutcheon design.

Example: DG-D for Dane lever followed by G for Gala rose.

Finish: When the finish is the same for the outside and inside trim, it is shown once (626). For split finishes, the outside is designated first, then the inside (626 x 625).

Latch: Two-piece mechanical anti-friction standard. All catalog numbers shown in this catalog indicate 2-3/4" backset.

Strike: 4-7/8" x 1-1/4" x 1-5/16" lip-to-center with curved lip standard. Optional strikes with shorter or longer lip lengths available.

Cylinder Type: For 6-pin, add 6-pin. For 7-pin, add 7-pin.

Door Hand: See chart .

Keying Detail: We suggest using the standard terms developed by the A.H.C. (Consult Factory).

Example: AA1 - Grand Master keyed, Master keyed, change key 1.

Interchangeable Core: To order product capable of accepting an interchangeable core, add "B" less SFIC (for interchangeable core). To order product with an interchangeable core, add "SFIC" (with interchangeable core). ex: "G" with Falcon SFIC core.

Keyway: "G" is standard on regular cylinders, "A" is standard on interchangeable cores. Other keyways available. See price book.

Additional Keys: Note the total number of keys required.

Large Bow Keys: Add - "with large bow keys."

How to Order Example

Qty.	Catalog Number	Trim Design	Finish	Latch	Strike	Cylinder	Door Hand RH	LH	RHR	LHR	Detail
8	MA521P	DG	626	STD	STD	6-PIN	X				AA1-AA8 1-3/4" DR
8	MA521P	DG	626	STD	STD	6-PIN		X			AA9-AA16 1-3/4" DR

MA 501 P

Latch Suffix
D = Deadlatch

Cylinder Suffix
B = Less SFIC
BB = With SFIC Core (Best)
BDC = Disp. Const. Core
G = With SFIC Core (Falcon)
H = With SFIC Keyed Const. Core
L = Less 6-Pin Cylinder
P = 6-Pin Cylinder pinned to 5 chambers
P6 = 6-Pin Cylinder pinned to 6 chambers
P7 = 7-Pin Cylinder to 7 chambers
CP6 = 6-Pin Cylinder Schlage C

Function
See MA-2

Lock Series

SFIC = Small Format (Best® Style) Interchangeable Core

Finishes

Falcon offers several finish choices to compliment the design elements of most any project. Falcon applies the best available protective plating or coating to the surface of our products to minimize the exposure to weather, pollution, perspiration, extremes of climate, frequency of us and other factors. Please consult with us if your building is subjected to chemical or corrosive conditions, as some finishes would not be recommended for these areas. Falcon recommends chrome plated or stainless steel finishes for high corrosive environments.

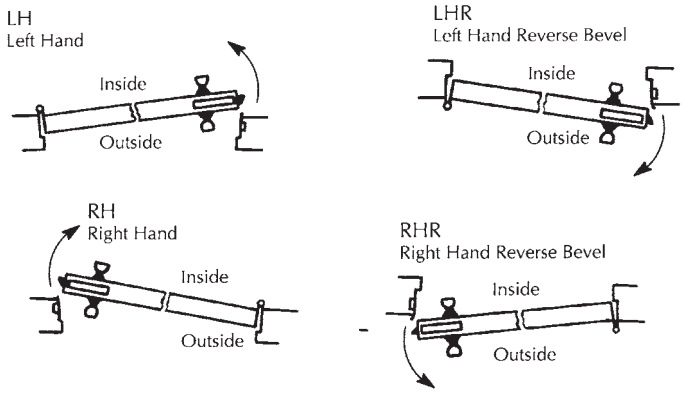
Trim Finishes Chart

Description	ANSI No.	Available on
Bright Brass	605	All Trim
Satin Brass	606	All Trim
Satin Bronze Oil Rubbed	613	All Trim
Bright Chrome	625	All Trim
Satin Chrome	626	All Trim
Satin Stainless Steel	630	All Trim

Available Finishes

605 Bright Brass | **606** Satin Brass | **613** Oil Rubbed Bronze | **625** Bright Chrome | **626** Satin Chrome | **630** Satin Stainless Steel

How to Determine the Hand of a Door



Ingersoll Rand's Security Technologies Sector is a leading global provider of products and services that make environments safe, secure and productive. The sector's market-leading products include electronic and biometric access-control systems; time-and-attendance and personnel scheduling systems; mechanical locks; portable security; door closers, exit devices, architectural hardware, and steel doors and frames; and other technologies and services for global security markets.

800-266-4456 www.falcon.ingersollrand.com www.ingersollrand.com

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90 Series Surface Overhead Door Holders/Stops

90 Series Heavy-Duty

Glynn-Johnson 90 series holders and stops are the most rugged models available for heavy-duty applications. The channel is surface-mounted to the door, most often with sex bolts, and the jamb bracket is surface mounted to the jamb, requiring minimal door and frame preparation.

These versatile units can be used in conjunction with most surface-applied door closers. The provided templates allow for variable mounting positions, ranging from 85º to 110º Hold-Open/Stop angle. These templates are designed for installation in almost all types of doors, including doors with conventional butt-type hinges or specialty hinges.

Four Models:
- 90H Series Hold-Open Model
- 90S Series Stop-Only Model
- 90F Series Friction Hold-Open Model
- 90SE Series Special Stop-Only Model

Five Sizes:
- Simple
- Standardized
- Each model is available in five sizes

Three Options:
- J—Angle Jamb Bracket
- SHIM—Blade Stop Shim Kits
- SOC—Pin-in-Socket Security Screw Package

Unmatched Convenience:
- Non-Handed
- Improved Compatibility with Door Closers
- Single-Acting Doors
- Interior/Exterior Applications
- Durable
- Easy to Install
- Improved Corrosion Resistance
- Function Conversion Kits Available

Materials and Finishes:
In 300 series Stainless Steel, Brass and Steel substrates, these models are available in the largest selection of finishes in the industry. Stainless Steel models offer the highest resistance to corrosion. Available in the following finishes:

Finish	Description
US3	Polished Brass
US4	Satin Brass
US10	Satin Bronze
US10B	Oil Rubbed Bronze
US32	Polished Stainless Steel
US32D	Satin Stainless Steel
SP4	Powder Coat Brass
SP10	Powder Coat Bronze
SP28	Powder Coat Aluminum
SP313	Powder Coat Dark Bronze
SPBLK	Powder Coat Black
652	Chrome-like Coating

Models

Glynn-Johnson 90 series door holders and stops provide long-lasting protection for doors, frames and hardware. All models incorporate a heavy-duty channel/slide-arm design and offset jamb bracket. This unique design allows for simple field modification of functions, should user requirements change.

90H Series Hold-Open

(Suffix H) Hold-Open models provide a convenient method of holding the door open at a predetermined position for short or long periods of time, permitting an unobstructed traffic flow through the opening. The Hold-Open function can easily be turned on or off by simply rotating the serrated knob on the bottom of the channel. This knob engages the Hold-Open mechanism, allowing the door to be held open at a predetermined position ranging from 85º to 110º. When the knob is flipped over, it acts as a stop and shock absorber.

The tension on the Hold-Open mechanism can be adjusted using a phillips screwdriver to offset air currents or other exterior conditions. The Hold-Open tension adjustment is located on the top of the slider in the channel.

90S Series Stop-Only

(Suffix S) When the Hold-Open function is not a requirement, Stop-Only models provide a reliable method of door control. Stop-Only models provide the same shock-absorbing capability as Hold-Open models. The Stop-Only model may be used on fire doors.

90F Series Friction Hold-Open

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

90SE Series Special Stop-Only

(Suffix SE) When Stop-Only models are used in conjunction with single-point, Hold-Only electronic door closers, the Stop-Only function may be ordered without the shock-absorbing mechanism. Used as an auxiliary stop, these models 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 taken when using this option in other applications, as the elimination of the shock-absorbing spring can put added stress on the door and frame.

Application Information

UL Classification

The 90 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. 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:

Dead-stop templating is recommended for applications where a wall or similar obstruction is placed at an opening angle of 110º or less (i.e., doors that open back-to-back). Dead-stop templating can be applied to Hold-Open, Stop-Only and Friction models. The Dead-Stop position is the point at which the shock-absorbing spring is fully compressed. Therefore, when Dead-Stop Templating is used, the initial degree of opening will be 5º to 7º less than the Dead-Stop opening.

Example: If the holder is templated to a 100º Dead Stop, the door will hold open at an angle between 93º and 95º but no further than 100º

Note: Do not use dead-stop templating on the 90SE 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

- FK90H—Converts a 90F or a 90S unit into a 90H unit. To order specify FK90H.
- FK90F—Converts a 90H or a 90S unit into a 90F unit. To order specify FK90F.
- FK90SE—Converts a 90H, 90F or a 90S unit into a 90SE unit. To order specify FK90SE–Finish.
- No kit is needed to convert a 90H or 90F unit into a 90S unit.

Options

Suffix J (Angle Jamb Bracket):

An angle jamb bracket is available for converting standard models to hinge-side or flush transom mounting. The angle jamb bracket affixes to the standard jamb bracket. If ordered with the unit add suffix J. If needed separately order 90J by finish needed.

Suffix SOC (Pin-in-Socket Security Screws):

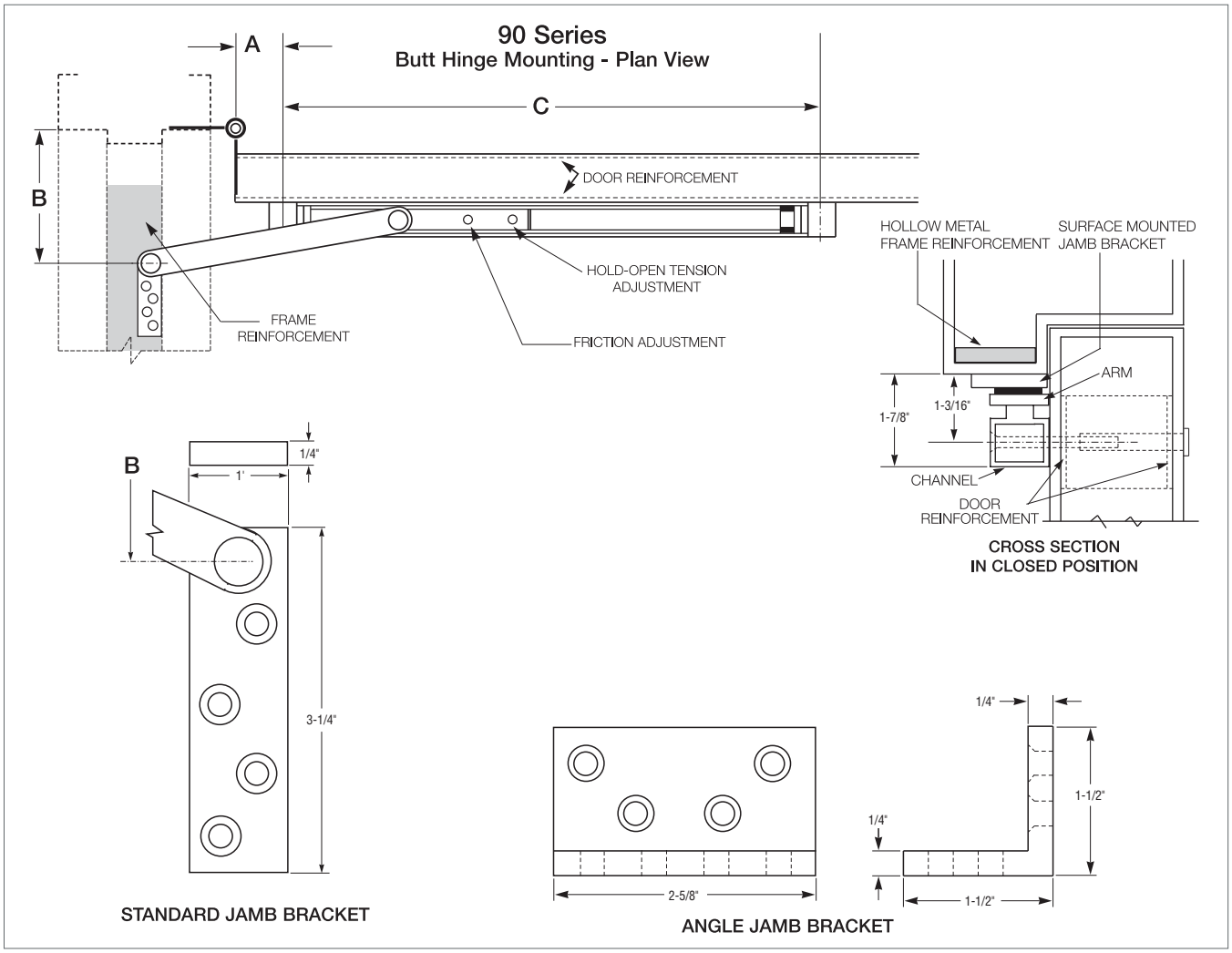
A screw package with pin-in-socket screws for mounting the door bracket and the jamb bracket is provided instead of the standard screw package.

Suffix SHIM (Blade Stop Shims):

Shim kits are available in 3 sizes
90 SHIM1 is a 1/4" Shim Kit
90 SHIM2 is a 1/2" Shim Kit
90 SHIM3 is a 3/4" Shim Kit

If ordered with overhead, add suffix SHIM (1, 2 or 3). If needed separately order 90 SHIM (1, 2 or 3)–Finish.

90 Series Surface Overhead Door Holders/Stops



90 Series Sizing Chart								
BUTTS/OFFSET PIVOTS					**CENTER HUNG**			
SIZE	**DOOR OPENING**	**STOP ONLY**	**HOLD OPEN**	**FRICTION**	**DOOR OPENING**	**STOP ONLY**	**HOLD OPEN**	**FRICTION**
1	-----	-----	-----	-----	-----	----	----	----
2	23-1/16"–27"	902S	902H	902F	27-1/16"–33"	902S	902H	902F
3	27-1/16"–33"	903S	903H	903F	33-1/16"–39"	903S	903H	903F
4	33-1/16"–39"	904S	904H	904F	39-1/16"–45"	904S	904H	904F
5	39-1/16"–45"	905S	905H	905F	45-1/16"–51"	905S	905H	905F
6	45-1/16"–51"	906S	906H	906F	51-1/16"–59"	906S	906H	906F

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

BHMA/ANSI, A156.8 & FED. Spec. Cross Reference		
G-J Model	**BHMA***	**FED. Spec.**
902 - 906H	C02511	1161
902 - 906S	C02541	1161A
902 - 906F	C02531	—

** First numeral (0) designates optional material.*

To specify:
Brass material, change 0 to 1 (i.e. C12511)
Stainless Steel material, change 0 to 5 (i.e. C52511)
Steel material, change 0 to 8 (i.e. C82511)

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.

How to Order

90 4 H – US32D – J

Overhead Series:
- **90**

Size (Door Opening Using Butts or Offset Pivots):
- **2** (23-1/16"–27")
- **3** (27-1/16"–33")
- **4** (33-1/16"–39")
- **5** (39-1/16"–45")
- **6** (45-1/16"–54")

Function:
- **H** Hold-Open
- **F** Friction Hold-Open
- **S** Stop-Only
- **SE** Special Stop-Only

Finishes:
- **US3** Polished Brass
- **US4** Satin Brass
- **US10** Satin Bronze
- **US10B** Oil Rubbed Bronze
- **US32** Polished Stainless Steel
- **US32D** Satin Stainless Steel
- **SP4** Powder Coat Brass
- **SP10** Powder Coat Bronze
- **SP28** Powder Coat Aluminum
- **SP313** Powder Coat Dark Bronze
- **SPBLK** Powder Coat Black
- **652** Chrome-like Coating

Options:
- **J** Angle Jamb Bracket
- **SHIM** Blade Stop Shims—
  - SHIM1–1/4" Kit
  - SHIM2–1/2" Kit
  - SHIM3–3/4" Kit
- **SOC** Pin-in-Socket Security Screws

450 Series Surface Overhead Door Holders/Stops

450 Series Medium-Duty

Glynn-Johnson provides the most complete line of overhead holders and stops, offering solutions for the most demanding door control problems. These surface-mounted holders and stops offer the widest variety of functions, materials and finishes to fit all medium- to light-duty applications.

Glynn-Johnson 450 series holders and stops provide reliable and versatile surface-mounted overhead door control for all medium to light-duty applications. The visible components are available in a wide variety of architectural finishes to complement any design. The 450 series holders and stops are designed for installation in virtually all types of doors and frames including doors with conventional butt hinges, offset pivots, continuous hinges, swing clear hinges and many other specialty hinges. The templates provided allow for variable mounting positions, ranging from 85° - 110° of opening.

Four Models:
- 450H Series Hold-Open Model
- 450S Series Stop-Only Model
- 450F Series Friction Hold-Open Model
- 450SE Series Special Stop-Only Model

Five Sizes:
- Simple
- Standardized
- Each model is available in five sizes

Three Options:
- J—Angle Jamb Bracket
- SHIM—Blade Stop Shim Kit
- SOC—Pin-in-Socket Security Screw Package

Unmatched Convenience:
- Non-Handed
- Improved Compatibility with Door Closers
- Improved Jamb Bracket Design
- Single Acting Doors
- Interior Applications
- Durable
- Easy to Install
- Improved Corrosion Resistance

Materials and Finishes:
In Brass, 300 series stainless steel or steel, these models offer the broadest range of finishes in the industry to complement any design. Brass and Stainless Steel offer the highest resistance to corrosion, while all these base materials are suitable for normal interior use.

Finish	Description
US3	Polished Brass
US4	Satin Brass
US10	Satin Bronze
US10B	Oil Rubbed Bronze
US32	Polished Stainless Steel
US32D	Satin Stainless Steel
SP4	Powder Coast Brass
SP10	Powder Coat Bronze
SP28	Powder Coat Aluminum
SP313	Powder Coat Dark Bronze
SPBLK	Powder Coat Black
652	Chrome-like Coating

Models

Glynn-Johnson 450 series holders and stops are designed for medium to light-duty applications. They're ideal for openings that are subject to normal activity, providing protection for the door, frame, hinges and surrounding walls or obstructions.

Designed for improved compatibility with most door closers, all models incorporate popular channel/slide arm design and offset jamb brackets. The improved design makes it easier to change functions in the field, should user requirements change.

450H Series Hold-Open

(Suffix H) These models conveniently hold doors open at a predetermined position, permitting unobstructed traffic flow.

These models feature an adjustable automatic Hold-Open that is activated when the door is opened to a preset angle. The Hold-Open tension can be adjusted using an allen wrench through the end of the slider located in the channel at the top of the door. Each meets the 250,000 test cycles required for Grade 1 classification.

450S Series Stop-Only

(Suffix S) When the Hold-Open function is not required, the Stop-Only function provides the same effective door control without keeping the door held open. The Stop-Only model may be used on fire doors.

450F Series Friction Hold-Open

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

450SE Series Special Stop-Only

(Suffix SE) When Stop-Only models are used in conjunction with single point Hold-Open electronic door closers, the function 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 taken when using this option in other applications, as the elimination of the shock-absorbing spring can put added stress on the door and frame.

Application Information

Closer Applications
Glynn-Johnson 450 series models require minimal door and frame preparation. They may be used in conjunction with most surface-applied door closers. In some cases, optional drop brackets may need to be mounted on the closers. These brackets are available from the closer manufacturer.

UL Classification
The 450 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. 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:
For situations where a wall or similar obstruction is in place at an opening angle of 110° or less (e.g. 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, allowing an initial degree of opening of 5º to 7º less than the Dead Stop opening.

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

Note: Do not use dead-stop templating on the 450SE Series since there is no shock-absorbing spring.

Environmental Conditions:
To assure a long operating life for holders and stops, consider the environment where they will be used. Doors that open to the exterior of a building or are subject to corrosive conditions should have a holder constructed primarily of stainless steel, brass or bronze materials. For interior doors, steel material may be acceptable, although brass and bronze substrates will provide a more attractive architectural grade finish.

Heavy-Use Applications:
Where doors and frames are subject to heavy use and abuse, a heavy-duty holder or stop should be considered. Also heavy-duty units should be considered on exterior doors subject to wind.

Options

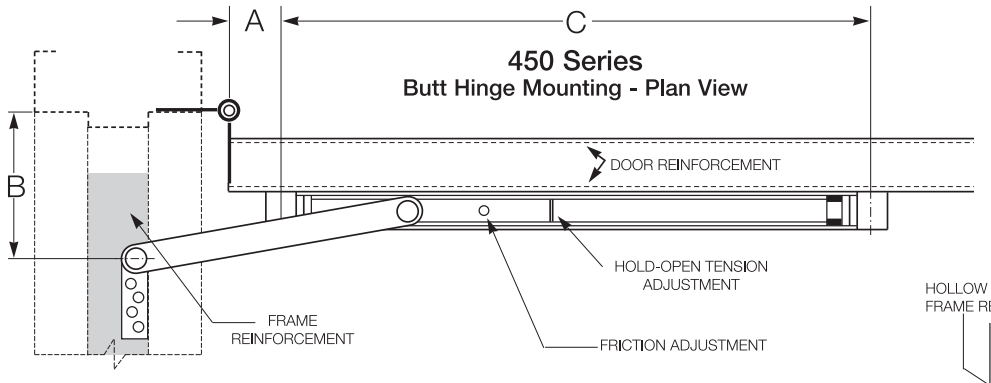
Suffix J (Angle Jamb Bracket):
An additional option on the 450 Series is the Angle Jamb Bracket for hinge-side or flush transom mounting. The angle jamb bracket affixes to the standard jamb bracket. If ordered with the overhead add suffix J. If needed separately order 450J-Finish.

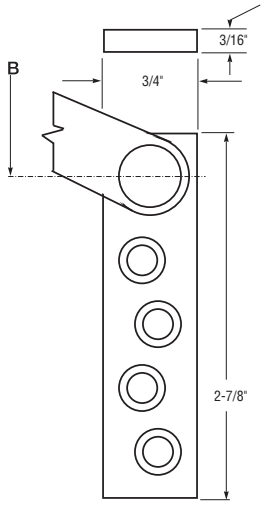
Suffix SHIM (Blade Stop Shims):
Shim kits are available in 3 sizes:
450 SHIM1 is a 3/16" Shim Kit
450 SHIM2 is a 3/8" Shim Kit
450 SHIM3 is a 9/16" Shim Kit

If ordered with overhead, add suffix SHIM (1, 2 or 3). If needed separately order 450SHIM (1, 2 or 3)–Finish.

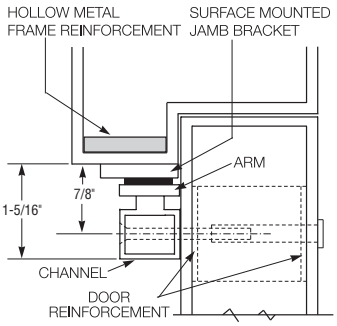
Suffix SOC (Pin-in-Socket Security Screw Package):
A screw package with pin-in-socket screws for mounting the channel to the door and the jamb bracket to the frame is provided instead of the standard screw package.

450 Series Surface Overhead Door Holders/Stops

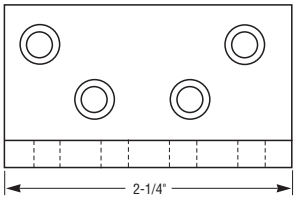


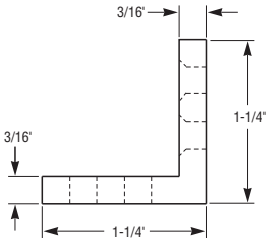


STANDARD JAMB BRACKET



CROSS SECTION IN CLOSED POSITION





ANGLE JAMB BRACKET

450 Series Sizing Chart								
BUTTS/OFFSET PIVOTS					**CENTER HUNG**			
SIZE	**DOOR OPENING**	**STOP ONLY**	**HOLD OPEN**	**FRICTION**	**DOOR OPENING**	**STOP ONLY**	**HOLD OPEN**	**FRICTION**
1	18"–23"	451S	451H	451F	23-1/16"–27"	451S	451H	451F
2	23-1/16"–27"	452S	452H	452F	27-1/16"–33"	452S	452H	452F
3	27-1/16"–33"	453S	453H	453F	33-1/16"–39"	453S	453H	453F
4	33-1/16"–39"	454S	454H	454F	39-1/16"–45"	454S	454H	454F
5	39-1/16"–45"	455S	455H	455F	45-1/16"–51"	455S	455H	455F

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

BHMA/ANSI, A156.8 & FED. Spec. Cross Reference		
G-J Model	**BHMA***	**FED. Spec.**
451-455 H	C05511	1166
451-455 S	C05541	1166A
451-455 F	C05531	1164

** First numeral (0) designates optional material.*

To specify:
Brass/bronze material, change 0 to 1 (e.e. C15511)
Stainless Steel Material, change 0 to 5 (i.e. C55511)
Steel material, change 0 to 8 (i.e. C85511)

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.

How to Order

45 1 H – US32D – J

Overhead Series:
- **45**

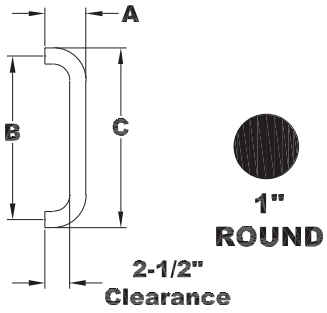
Size (Door Opening Using Butts or Offset Pivots):
- **1** (18"–23")
- **2** (23-1/16"–27")
- **3** (27-1/16" –33")
- **4** (33-1/16"–39")
- **5** (39-1/16"–45")

Function:
- **H** Hold-Open
- **F** Friction Hold-Open
- **S** Stop-Only
- **SE** Special Stop-Only

Finishes:
- **US3** Polished Brass
- **US4** Satin Brass
- **US10** Satin Bronze
- **US10B** Oil Rubbed Bronze
- **US32** Polished Stainless Steel
- **US32D** Satin Stainless Steel
- **SP4** Powder Coat Brass
- **SP10** Powder Coat Bronze
- **SP28** Powder Coat Aluminum
- **SP313** Powder Coat Dark Bronze
- **SPBLK** Powder Coat Black
- **652** Chrome-like Coating

Options:
- **J** Angle Jamb Bracket
- **SHIM** Blade Stop Shims—
  SHIM1–3/16" Kit
  SHIM2–3/8" Kit
  SHIM3–9/16" Kit
- **SOC** Pin-in-Socket Security Screws

Architectural Door Trim



8103EZ Door Pull - Large 2-1/2" Clearance for the Physically Impaired

Prod No.	Proj. (A)	Center to Center (B)	Overall Length (C)
8103EZ	3-1/2"	8"	9"
8103EZ	3-1/2"	10"	11"
8103EZ	3-1/2"	12"	13"

How to Order

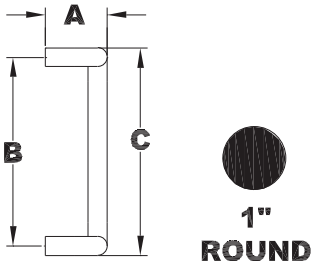
8103EZ - ____ - ____ - ____

Size:
8 for 8"
0 for 10"
2 for 12"

Finishes
US3, US4, US10, US10B,
US26, US26D, US28, US32, US32D

Mounting Type:

Blank	Standard
L	Surface Concealed Two-Anchor
M	Back-To-Back with Spanner Collar
N	Back-to-Back Two-Anchor
O	Decorative Blind Thru-Bolt



8190 90° Offset Door Pull

Prod No.	Proj. (A)	Center to Center (B)	Overall Length (C)
8190	3-1/4"	8"	9"
8190	3-1/4"	10"	11"
8190	3-1/4"	12"	13"
8190	3-1/4"	18"	19"

How to Order

8190 - ____ - ____ - ____

Size:
8 for 8"
0 for 10"
2 for 12"
18 for 18"

Finishes
US3, US4, US10, US10B
US26, US26D, US32, US32D

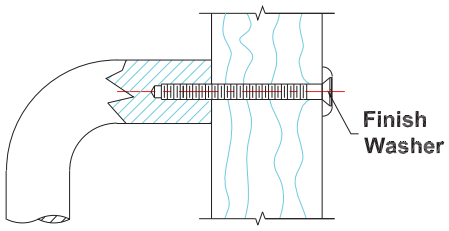
Mounting Type:

Blank	Standard
L	Surface Concealed Two-Anchor
M	Back-To-Back with Spanner Collar
N	Back-to-Back Two-Anchor
O	Decorative Blind Thru-Bolt

Architectural Door Trim

Mounting

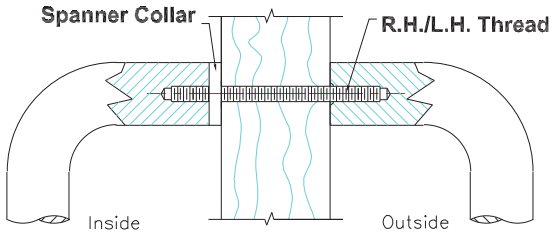
Thru - Bolt



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.

Back-to-Back with Spanner Collar



Type M

Wood or Metal Door

Available only for 8103EZ and 8190 Pulls.

- (2) 3/8-16 x 2-7/8" RH/LH bolts with finish matching spanner collars for tight, durable back-to-back mounting.

Type NS-Standard Push/Pull Mounting

Type N & Standard

Pushbar to Pull

- (1) 1/4-20 X 3"steel countersunk trim head machine screws with (2) set screws.
- (1) steel screw sleeve, zinc plated.

Free End Pushbar & Pull

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

Type NO Push/Pull Mounting

Type N & Type O

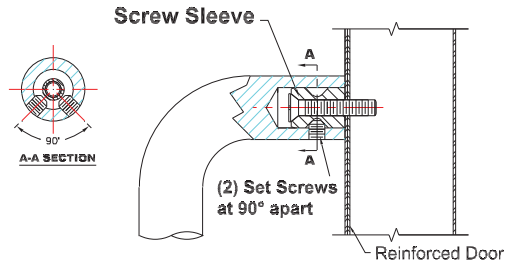
Pushbar to Pull

- (1) 1/4-20 X 3"steel countersunk trim head machine screws with (2) set screws.
- (1) steel screw sleeve, zinc plated.

Free End Pushbar & Pull

- (2) 1/4-20 X 2-1/4" blind thru-bolts; plated to match.

Surface Concealed "Two-Anchor"



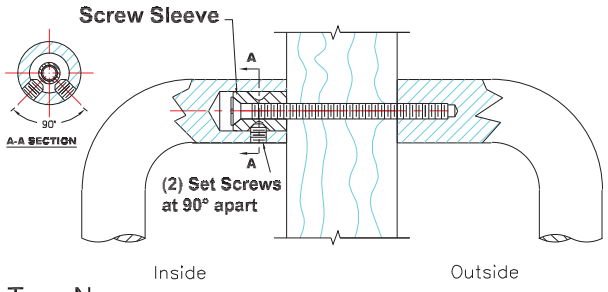
Type L

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.

Back-to-Back "Two-Anchor"



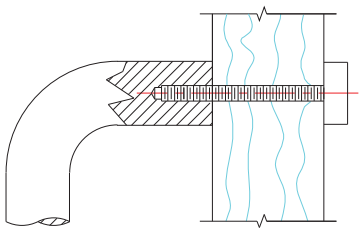
Type N

Wood or Metal Door

Available only for 8103EZ, 8190 and 9100 series Push/Pull Combinations.

- (2) 1/4-20 x 2-3/4" steel countersunk trim head machine screws with (4) set screws for maximum anchoring force.
- (2) Steel screw sleeves; zinc plated.

Decorative Blind Thru - Bolt



Type O

Wood or Metal Door

Available only for 8103EZ, 8190 and 9100 series Push/Pull Combinations.

- (2) 1/4-20 x 2-1/4" blind thru - bolts; plated to match.

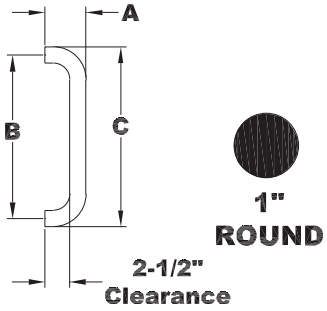
NOTES:

* All mounting hardware is for standard 1-3/4" door.

* Consult Customer Service if other than standard.

8100 Series Door Pulls

- Made from the finest architectural brass, stainless steel and aluminum available.
- Each pull is carefully machined, polished and inspected before being individually wrapped and packaged.
- Door pulls are packed with standard type fasteners for 1-3/4" doors. For special mounting methods other than standard, see pages C11 - C13.
- For sizes and finishes not listed in this catalog, contact our Customer Service Department for availability.



8103EZ Door Pull - Large 2-1/2" Clearance for the Physically Impaired

Prod. No.	Proj. "A"	Center to Center "B"	Overall Length "C"
8103EZ	3-1/2"	8"	9"
8103EZ	3-1/2"	10"	11"
8103EZ	3-1/2"	12"	13"

How to Order

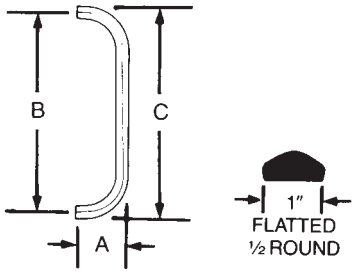
8103EZ - ___ - ___ - ___

Size:
8 for 8"
0 for 10"
2 for 12"

Finishes
US3, US4, US10, US10B, US15, US15A
US26, US26D, US28, US32, US32D

Mounting Type:

Blank	Standard
L	Surface Concealed Two-Anchor
M	Back-To-Back with Spanner Collar. Furnished in Pairs. (PR)
M1	Single (SGL) Pull. Back-to-back With Spanner Collar. RH Thread.
M2	Single (SGL) Pull. Back-to-back With Spanner Collar. LH Thread.
N	Back-to-Back Two-Anchor. Furnished in Pairs. (PR)
N2	Single (SGL) Pull, Back-to-Back Two Anchor.
O	Decorative Blind Thru-Bolt



8105 Door Pull

Prod. No.	Proj. "A"	Center to Center "B"	Overall Length "C"
8105-6	2"	6"	6-1/2"
8105-8	2"	8"	8-1/2"
8105-0	2"	10"	10-1/2"

How to Order

8105 - ___ - ___ - ___

Size:

6	for 6"
8	for 8"
0	for 10"

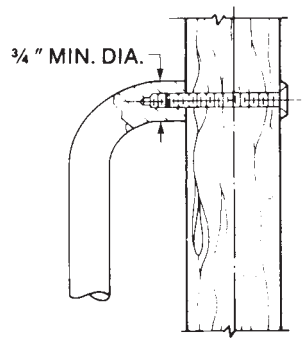
Finishes:
US3, US4, US5, US10, US10B, US15, US15A, US26, US26D, US28, US32, US32D

Mounting Type:

Blank	Standard
F	Concealed wood door w/push plate (special)

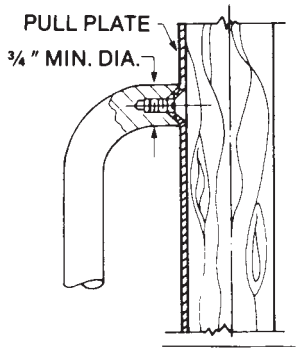
Mounting

- 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



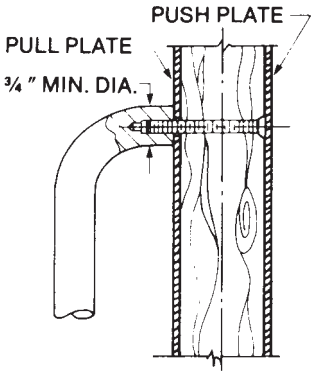
Type G

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.

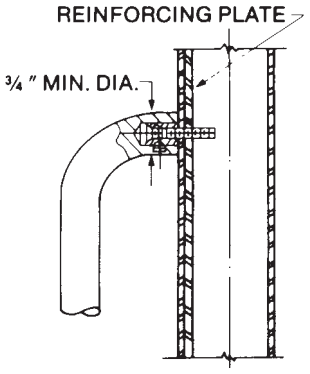


Type F-Special

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.

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.
- Finishes: US3, US4, US10, US10B, US32, US32D.
- Finished Cover Plates permit finish changes in stock or at job site.
- Bolts have 3/4" throw with a 7/8" vertical adjustment.
- Standard Rod Length is 12", which is measured from the center of the flush bolt body to the bolt tip.
- Meets ANSI A156.3 Type 25.
- 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".

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.
- Finishes: US3, US4, US10, US10B, US32, US32D.
- 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 25.
- Optional Dust Proof Strikes—DP1 or DP2, prevents dirt build-up assuring full engagement of bottom bolt.

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.

- UL Listed 90 minutes on 8'0" x 8'0" Opening

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 20 minutes on 8'0" x 8'0" Opening

FB41T

Top Bolt Only

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

Manual Flush Bolts - Metal Doors

FB457 and FB457N Series for Metal Doors

- When the active door is opened, the lever can be moved to the 'up' position, retracting the bolt and allowing the inactive leaf to be opened. When the inactive leaf is closed, the lever can be moved to the 'down' position, projecting the bolt into the strike and securely locking the inactive leaf.
- Simplified installation in metal frames. Round bolt head requires only a punched hole. Use of strike optional. Special design of guide and flat sided bolt tip to prevent bolt rotation.
- Non-handed.
- FB457 UL Listed for Fire Doors.
- FB457N not UL Listed for Fire Doors.
- Brass Finishes: B3, B4, B5, B10, B10B, B14, B15, B15A, B26, B26D.
- Bolt tip is 1/2" Diameter.
- Bolts have 3/4" throw with a bolt backset of 3/4".
- Standard Rod Length is 12", which is measured from the center of the flush bolt body to the bolt tip.
- Meets ANSI/BHMA A156.16, L04251.
- Optional Dust Proof Strikes — prevents dirt build-up assuring full engagement of bottom bolt.
- Optional rod lengths available for FB457: 6", 9", 18" and 24".
- Optional rod lengths available for FB457N: 6", 9", 18", 24", 30", 36" and 48".

FB457

Top or Bottom Bolt

- UL Listed 3 hours on 8'0" x 10'0" Opening

FB457N

Top or Bottom Bolt

Dimensions:

Body Size: 1-1/4" Wide x 6-3/4" Long x 1-1/8" Deep
Guide Size: 1" Wide x 2" Long x 5/64" Thick
Strike Size: 15/16" Wide x 2-1/4" Long x 5/64" Thick

Manual Flush Bolts - Metal Doors

FB458, FB458N and FB0458N Series for Metal Doors

- When the active door is opened, the lever can be moved to the 'up' position, retracting the bolt and allowing the inactive leaf to be opened. When the inactive leaf is closed, the lever can be moved to the 'down' position, projecting the bolt into the strike and securely locking the inactive leaf.
- Simplified installation in metal frames. Round bolt head requires only a punched hole. Use of strike optional. Special design of guide and flat sided bolt tip to prevent bolt rotation.
- FB458 UL Listed for Fire Doors.
- FB458N and FB0458N not UL Listed for Fire Doors.
- FB0458N features 1/4" radius corners on body.
- Non-handed.
- Brass Finishes: B3, B4, B5, B10, B10B, B14, B15, B15A, B26, B26D.
- Bolt tip is 1/2" diameter.
- Bolts have 3/4" throw with a bolt backset of 3/4".
- Standard Rod Length is 12", which is measured from the center of the flush bolt body to the bolt tip.
- Meets ANSI/BHMA A156.16, L04251.
- Optional Dust Proof Strikes— prevents dirt build-up assuring full engagement of bottom bolt.
- Optional Rod Lengths available for FB458: 6", 9", 18" and 24".
- Optional Rod Lengths available for FB458N and FB0458N: 6", 9", 18", 24", 30", 36" and 48".

FB458

Top or Bottom Bolt

- UL Listed 3 hours on 8'0" x 10'0" Opening

FB458N

Top or Bottom Bolt

FB0458N

Top or Bottom Bolt

Dimensions:

Body Size: 1" Wide x 6-3/4" Long x 1-1/8" Deep
Guide Size: 1" Wide x 2" Long x 5/64" Thick
Strike Size: 15/16" Wide x 2-1/4" Long x 5/64" Thick

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.
- Finishes: US3, US4, US10, US10B, US26, US26D.

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.

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

For Openings Where Doors Are Same Size

Coordinator Number	Length of Channel	For Opening Widths	Common Applications
COR32	32"	34" - 52"	Pair of 2'0" Doors
COR42	42"	52" - 72"	Pair of 2'6" Doors
COR52	52"	62" - 92"	Pair of 3'0" Doors
COR60	60"	70" - 108"	Pair of 3'6" Doors
COR72	72"	84" - 132"	Pair of 4'0" Doors

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.

Filler Bar Number	Length
FL20	20"
FL32	32"
FL44	44"

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.

MB1

MB2

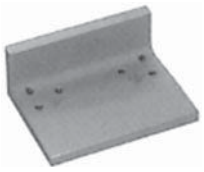
Product	Jamb Depth	Stop Width
MB1	4-3/4" Min.	Over 2-1/2"
MB2	4-3/4" Min.	Up to 2-1/2"

Dimensions:

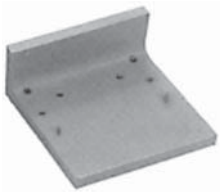
MB1: 4" Wide x 3" Deep x 15/16" Tall
MB2: 4" Wide x 3-1/4" Deep x 1-5/8" Tall

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.



MB1F



MB2F

MB3F

Product	Jamb Depth	Stop Width
MB1F	5" Min.	1-1/2" to 2-1/4"
MB2F	5-7/8" Min.	2-3/8" to 3-1/4"
MB3F	6-7/8" Min.	3-3/8" and Wider

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

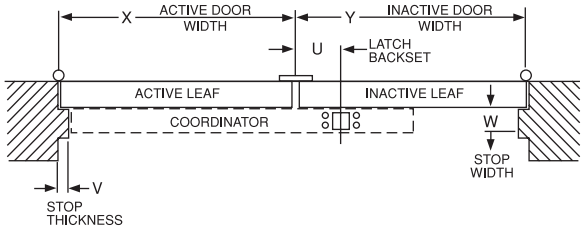
MB1V, MB2V and **MB3V** (not shown)

Same as MB1F, MB2F and MB3F with factory preparation for the Von Duprin 8827-F soffit latch.

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”

Exit Device Manufacturer	Exit Device Number	Device Backset	Maximum Active Door	Coordinator Size Needed	Coordinator Cutout Type	Mounting Bracket Needed
Von Duprin	5547-F	2-3/8"	33" 43" 51" 63"	42" 52" 60" 72"	A	None
Von Duprin	8827-F	2-3/4"	33" 43" 51" 63"	42" 52" 60" 72"	B	MB1V, MB2V or MB3V
Von Duprin	8847-F	2-3/8"	33" 43" 51" 63"	42" 52" 60" 72"	C	None
Von Duprin	33/3547 33/3547-F 98/9947 98/9947-F	2-3/4"	33" 43" 51" 64"	42" 52" 60" 72"	D	None
Von Duprin	33/3548 33/3548-F 98/9948 98/9948-F	2-3/4"	33" 43" 51" 64"	42" 52" 60" 72"	D	None
Von Duprin	33/3547WDC 33/3547WDC-F 98/9947WDC 98/9947WDC-F	1-5/16"	34" 44" 52" 65"	42" 52" 60" 72"	E	None
Monarch	17-C F-17-C 18-C F-18-C XX-C F-XX-C	2-3/4"	33" 43" 51" 63"	42" 52" 60" 72"	F	None
Monarch	17-C-WDC F-17-C-WDC 18-C-WDC F-18-C-WDC XX-C-WDC F-XX-C-WDC	2-13/16"	33" 43" 51" 63"	42" 52" 60" 72"	G	None

Ordering Guide for Bar Coordinators

How to Order COR and Accessories

COR 52 - US28 - FL20 - D - 36" - 2-MB2

COR Size:
32, 42, 52, 60, 72

Finishes:
US28, US26D, 315AN (Black)

Filler Bar (if desired):
FL20, FL32, FL44

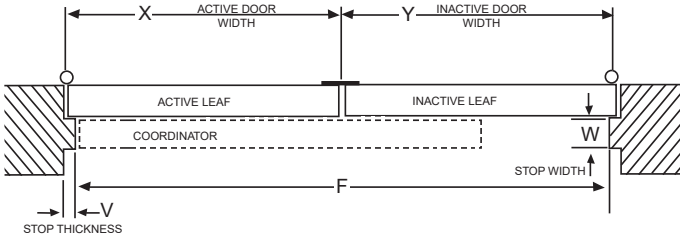
Vertical Rod Exit Device Cutout Type (if applicable):
A, B, C, D, E, F, G
If other Vertical Rod Exit Device not listed on chart, from page A14, include information as shown on page A14.

Net Active Door Size – Required for ALL Vertical Rod Exit Device Applications

Mounting Bracket:
Indicate quantity, then bracket. MB1, MB2, MB1F, MB2F, MB3F, MB1V, MB2V, MB3V
Mounting brackets are sold and packaged separately from coordinators.

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

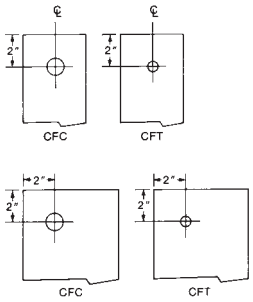
- Pair of 36" Doors, 5/8" Stops
  Active Door Size, X = 36"
  Overall Frame Opening between Stops, F = 70-3/4"
  Recommended Coordinator: COR52

- 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

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 and Pull 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.

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"

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:
US3, US4, US5, US10, US10B, US15, US15A, US26, US26D, US28, US32, US32D

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

Floor Stops

FS441

Features:

- Designed to blend well with all types of construction and provide a minimum of hindrance to cleaning efforts.
- Accommodates door undercut up to 1-1/2".
- Heavy-Duty cast brass or aluminum construction.
- Non-marring rubber bumper.
- FS441 packed with expansion shield and tampin.
- FS441-WS packed with wood screws.
- FS441 meets ANSI/BHMA 156.16, L12131 for brass and L32131 for aluminum. FS441-WS meets ANSI/BHMA 156.16, L12121 for brass and L32121 for aluminum.
- Finishes: US3, US4, US5, US10, US10B, US14, US15, US15A, US26, US26D, US28.

Product No.	Overall Height	Overall Length	Base Depth
FS441-MS	2-1/8"	2-7/8"	1-5/8"
FS441-WS	2-1/8"	2-7/8"	1-5/8"

FS442

Features:

- Designed to blend well with all types of construction and provide a minimum of hindrance to cleaning efforts.
- Accommodates door undercut up to 2".
- Heavy-Duty cast brass or aluminum construction.
- Non-marring rubber bumper.
- FS442 packed with expansion shield and tampin.
- FS442-WS packed with wood screws.
- FS442 meets ANSI/BHMA 156.16, L12131 for brass and L32131 for aluminum. FS442-WS meets ANSI/BHMA 156.16, L12121 for brass and L32121 for aluminum.
- Finishes: US3, US4, US5, US10, US10B, US14, US15, US15A, US26, US26D, US28.

Product No.	Overall Height	Overall Length	Base Depth
FS442	2-7/8"	2-3/4"	1-5/8"
FS442-WS	2-7/8"	2-3/4"	1-5/8"

Floor Stops

FS444

Features:

- Ideal for interior or exterior use.
- Cast brass construction.
- Accommodates door undercut up to 2-1/2".
- Non-marring rubber tip.
- Packed with expansion shield and lead shield.
- Meets ANSI/BHMA 156.16, L12131 for brass, and L32131 for aluminum.
- Finishes: US3, US4, US5, US10, US10B, US14, US15, US15A, US26, US26D, US28.

Product No.	Overall Height	Base Diameter
FS444	3"	2-1/2"

FS448

Features:

- Ideal for interior or exterior use.
- Cast brass construction.
- Accommodates door undercut up to 2-1/2".
- Non-marring rubber tip.
- Packed with wood screws.
- Meets ANSI/BHMA 156.16, L12121, for brass and L32121 for aluminum.
- Finishes: US3, US4, US5, US10, US10B, US14, US15, US15A, US26, US26D, US28.

Product No.	Overall Height	Base Diameter
FS448	3"	2-1/2"

Wall Bumpers

WS406CVX & WS407CVX
WS406CCV & WS407CCV

Features:

- Constructed in sturdy yet economical wrought base of brass, aluminum or stainless steel construction.
- Feature concealed tamper-proof mounting.
- Shipped factory preassembled backplate to reduce installation cost.
- Easy installation by inserting screwdriver through small hole in rubber.
- The WS406CVX unit is designed with a convex rubber bumper, packed with wood screw and plastic anchor.
- The WS406CCV unit is designed with a concave rubber bumper, which avoids damage to locks with projecting buttons, packed with wood screw and plastic anchor.
- The WS407CVX unit is designed with a convex rubber bumper packed with screw and drywall anchor.
- The WS407CCV unit is designed with a concave rubber bumper which avoids damage to locks with projecting buttons and is packed with screw and drywall anchor.
- WS406CVX & WS407CVX meets ANSI/BHMA 156.16 L22201 for brass, L42101 for aluminum and L52101 for stainless steel.
- WS406CCV &WS407CCV meets ANSI/BHMA 156.16 L22251 for brass and L42251 for aluminum, and L52251 for stainless steel.
- Finishes: US3, US4, US5, US10, US10B, US14, US15, US15A, US26, US26D, US28, US32D.

Product No.	Mounting Hardware	Base Diameter	Base Thickness	Overall Projection
WS406CVX	Wood screw, plastic anchor	2-1/2"	3/8"	1"
WS406CCV	Wood screw, plastic anchor	2-1/2"	3/8"	1"
WS407CVX	Screw, Drywall Anchor	2-1/2"	3/8"	1"
WS407CCV	Screw, Drywall Anchor	2-1/2"	3/8"	1"

WS406CVX & WS407CVX

WS406CCV & WS407CCV

Wall Stops

WS443

Features:

- Constructed in brass.
- Ideal for interior or exterior use.
- Non-marring rubber tip.
- Packed with expansion shield and lead shield.
- Meets ANSI/BHMA 156.16, L12021 for brass and L32021 for aluminum.
- Finishes: US3, US4, US5, US10, US10B, US14, US15, US15A, US26, US26D, US28.

Product No.	Base Diameter	Overall Projection
WS443	2-1/4"	3-11/16"

WS447

Features:

- Constructed in brass or aluminum.
- Ideal for interior or exterior use.
- Non-marring rubber tip.
- Furnished with 3 mounting holes for drywall mounting.
- Packed with wood screws.
- Meets ANSI/BHMA 156.16, L12011 for brass and L32011 for aluminum.
- Finishes: US3, US4, US5, US10, US10B, US14, US15, US15A, US26, US26D, US28.

Product No.	Base Diameter	Overall Projection
WS447	2-1/4"	3-11/16"

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.

Product No.	Diameter	Thickness
SR64	1/2"	1/8"

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.

Product No.	Height	Width	Thickness
SR64	3/4"	3/8"	1/8"

SR66

Features:

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

Product No.	Diameter	Thickness
SR66	1/2"	1/8"

Surface Bolts

SB360

Features:

- Surface Bolt has 1-1/4" throw for maximum security.
- Jimmy-resistant design, bolt locks automatically when thrown, can be released only be pressing knob toward door while retracting.
- Ideal for all types of doors.
- Available in 12" or 24" lengths.
- Unit locks in both the up and down position.
- Accepts padlock (not furnished) with maximum 3/8" diameter shackle, minimum 1-3/4" shackle opening height.
- Units packed with one-way screws for added security. Standard screws also supplied.
- Units available with either a universal top strike (T) or a flat bottom strike (B).
- Constructed of heavy duty steel.
- 12" Bolt is UL listed up to 3 hours when used on the inactive door of a pair up to 10' in height.
- Meets ANSI/BHMA A 156.16.
- Finish: US2C
- Optional Sex Bolts available.
- Optional Mortise Strike available.

Dimensions:

Bar: 3/4" Wide x 3/4" Thick
Overall Width: 2-1/32"
Overall Projection: 2-1/16"
Top Strike: 1-1/2" x 1-1/2" Angle, 3/16" Thick
Optional Mortise Strike: 3-1/2" Long x 1-5/8" Wide x 1/8" Thick

How to Order:

SB360 - _____ - _____ - _____

Length:
12 For 12" bolt
24 For 24" bolt

Strike:
T Universal Top Strike (standard)

Finish:
US2C

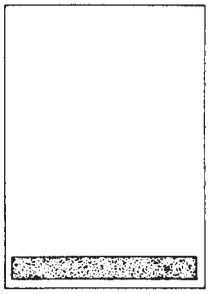
Series 8400 Door Protection Plates

.050" Thickness

Features:

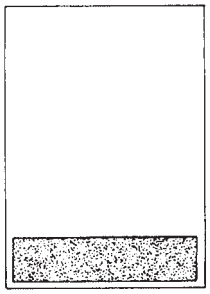
- Door Protection Plates are fabricated from the finest architectural aluminum, brass, and stainless steel, or 1/8" thick clear acrylic plastic or black or brown high impact polyethylene.
- All aluminum, brass, bronze and stainless steel Door Protection Plates meet ANSI A156.6 requirements for .050" 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.

- Use No. 8401 Kickplate Gasket Tape as a buffer between brass kickplates and metal doors to help prevent tarnishing which may result from electrolytic oxidation. One package provides enough double-sided adhesive-backed foam tape for the perimeter of an 8" x 34" plate.
- Finishes:
  Brass: B3, B4, B5, B10, B10B (for heights over 24", check with customer serivce)
  Stainless Steel: S32D, S32
  Aluminum: PA28
  Plastic: BLK, BRN, CLR



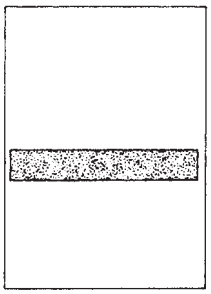
Mop Plates

- 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



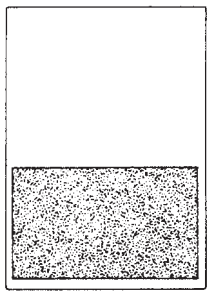
Kick Plates

- 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

8400 ____ - ____ x ____ - ____

Finish

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 – Dome

FS436 Dome Stop

Features:

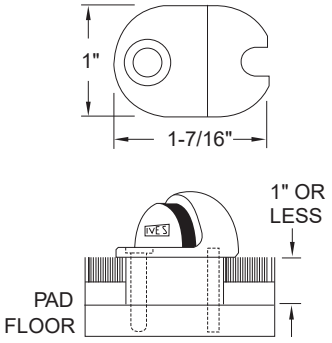
- For doors without threshold.
- Heavy-Duty Cast Dome Stops constructed of brass, bronze or aluminum.
- Gray, non-marring rubber bumper.
- Packed with wood screw and plastic anchor, specify Tampin (TPN) or lead expansion shield (LS), if required.
- Meets ANSI/BHMA 156.6, L12141 for brass or bronze and L32141 for aluminum.
- Finishes: US3, US4, US5, US10, US10B, US14, US15, US15A, US26, US26D and US28.

Product No.	Overall Height	Base Height	Base Diameter
FS436	1"	3/16"	1-3/4" x 2" Oval

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.



Product No.	Size
R435	1" x 1-3/8" Oval

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:

US3, US4, US5, US10, US10B, US14, US15, US15A, US26, US26D, US28

Mounting:

Blank	Standard
TPN	Tampin
LS	Lead Expansion Shield

Full Mortise Hinges - 5 Knuckle

5PB1

5 Knuckle, Plain Bearing

PLAIN BEARING • LOW FREQUENCY • STANDARD WEIGHT

For use on Standard Weight Doors with Low Frequency Usage, not intended for use with door closing devices.

5PB1 Steel with steel pin
5PB1 Brass with stainless steel pin
5PB1 Stainless steel with stainless steel pin (630 finish)
NRP = Non-Removable Pin

- Dimensions & tolerances conform to ANSI - A156.7
- Packed with wood and machine screws
- 5PB1 Steel description conforms to ANSI - A8133
- 5PB1 Brass conforms to ANSI - A2133
- 5PB1 Stainless Steel description conforms to ANSI - A5133

Size (Inches)	Size (mm)	Gauge
3.5 x 3.5	89 x 89	0.123
4.5 x 4	114 x 102	0.134
4.5 x 4.5	114 x 114	0.134

5BB1

5 Knuckle, Ball Bearing

2 BALL BEARING • MEDIUM FREQUENCY • STANDARD WEIGHT

For use on Standard Weight Doors with Medium Frequency Usage

5BB1 Steel with steel pin
5BB1 Brass with stainless steel pin
5BB1 Stainless steel with stainless steel pin (630 finish only)
NRP = Non-Removable Pin

- Dimensions & tolerances conform to ANSI - A156.7
- 5BB1 Steel description conforms to ANSI - A8112
- 5BB1 Brass conforms to ANSI - A2112
- 5BB1 Stainless description conforms to ANSI - A5112
- Packed with wood and machine screws

Size (Inches)	Size (mm)	Gauge
4 x 4	102 x 102	0.130
4.5 x 4	114 x 102	0.134
4.5 x 4.5	114 x 114	0.134
4.5 x 5	114 x 127	0.146
5 x 4.5	127 x 114	0.146

5BB1RC

5 Knuckle, Ball Bearing, Round Corner

2 BALL BEARING • MEDIUM FREQUENCY • STANDARD WEIGHT

For use on Standard Weight Doors with Medium Frequency Usage

5BB1 Steel with steel pin
NRP = Non-Removable Pin

- Dimensions & tolerances conform to ANSI - A156.7
- 1/4" radius
- 5BB1 Steel description conforms to ANSI - A8112
- Packed with wood and machine screws

Size (Inches)	Size (mm)	Gauge
3.5 x 3.5	89 x 89	0.123
4.5 x 4	114 x 102	0.134

Full Mortise Hinges - 5 Knuckle

5BB1HWRC

5 Knuckle, Ball Bearing,
Heavy Weight, Round Corner

4 BALL BEARING • HIGH FREQUENCY • HEAVY WEIGHT

For use on Heavy Weight Doors or High Frequency Usage

5BB1HW Steel with steel pin
5BB1HW Brass with stainless steel pin
5BB1HW Stainless steel with stainless steel pin (630 finish only)
NRP = Non-Removable Pin

- Dimensions & tolerances conform to ANSI - A156.7
- 1/4" radius
- 5BB1HW Steel description conforms to ANSI - A8111
- 5BB1HW Brass description conforms to ANSI - A2111
- 5BB1HW Stainless description conforms to ANSI - A5111
- Packed with wood and machine screws

Size (Inches)	Size (mm)	Gauge
4.5 x 4	114 x 102	0.180

5BB1HW

5 Knuckle, Ball Bearing,
Heavy Weight

4 BALL BEARING • HIGH FREQUENCY • HEAVY WEIGHT

For use on Heavy Weight Doors or High Frequency Usage

5BB1HW Steel with steel pin
5BB1HW Brass with stainless steel pin
5BB1HW Stainless steel with stainless steel pin (630 finish only)
NRP = Non-Removable Pin

- Dimensions & tolerances conform to ANSI - A156.7
- 5BB1HW Steel description conforms to ANSI - A8111
- 5BB1HW Brass description conforms to ANSI - A2111
- 5BB1HW Stainless description conforms to ANSI - A5111
- Packed with wood and machine screws

Size (Inches)	Size (mm)	Gauge
4.5 x 4	114 x 102	0.180
4.5 x 4.5	114 x 114	0.180
4.5 x 5	114 x 127	0.190
5 x 5	127 x 127	0.190

5BB1SC

5 Knuckle, Ball Bearing,
Swing Clear

2 BALL BEARING • MEDIUM FREQUENCY
STANDARD WEIGHT • SWING CLEAR

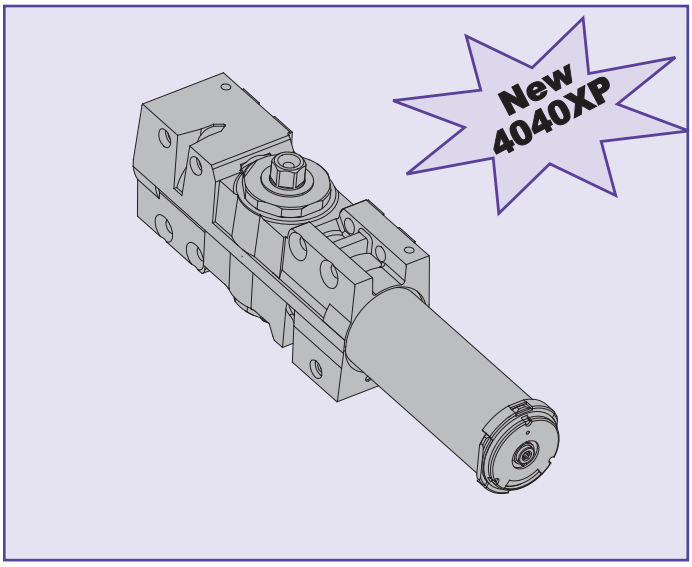
Designed to completely clear the opening when door is opened 92 degrees.
Pins and tips are reversible.

5BB1SC Steel with steel pin

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

Size (Inches)	Size (mm)	Gauge
4.5	114	0.134
5	127	0.134

FEATURES

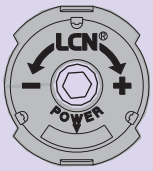


New 4040XP

The new 4040XP is LCN's most durable heavy duty closer designed for the most demanding, high use and abuse applications.

- 44% increased bearing load capacity
- Strongest pinion ever- at 3/4" journal diameter
- Widest bearing ever- at 5/8"
- Stronger pinion teeth
- New V-shield™ seal with 20% longer life
- XP = eXtra Protection in real world applications
- Cast Iron
- Forged Steel Arm
- Double Heat Treated Steel Pinion
- All Weather Fluid
- Non-Handed
- LCN® Fast™ Power Adjust
- Fast & Accurate Installation
- UL & cUL Listed
- Tested and certified under ANSI Standard A156.4, grade one

- **NEW 4040XP** closer shipped with **EDA arm**, standard plastic cover, and self reaming and tapping screws.
- Non-sized cylinder is adjustable for interior doors to 5'0" and exterior doors to 4'0".
- Closer mounts parallel arm (EDA arm) on either right or left swinging doors.
- Optional hinge side and top jamb mount with optional regular arm.
- Closers to meet ADA requirements. See 4040XP Series page 49.
- Standard or optional custom powder coat finish.
- Optional plated finish on metal cover, arm and fasteners.
- Optional SRI primer for installations in corrosive conditions is available with powder coat only.
- Optional designer series metal cover
- UL and cUL listed for self-closing doors without hold-open.
- 4040XP can be used with all 4041 accessories. See pages 45-47 for options.



The 4040 Series includes the **LCN® FAST™ Power Adjust,** *a revolutionary visual indicator for Spring Power Adjustment.*

MOUNTING					FINISH		COVER			CYLINDER						**ARM FUNCTION								
HINGE(PULL)SIDE	TOP JAMB (PULL)	TOP JAMB (PUSH)	PARALLEL ARM	STOP FACE	POWDER COAT	PLATED	PLASTIC	METAL	DESIGNER METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAYED ACTION	AVB***	XP	REGULAR(DOUBLE)	STANDARD(SINGLE)	HOLD-OPEN	FUSIBLE LINK	EDA/HEDA	CUSH/HCUSH	SCUSH/SHCUSH
●	○	●	●	○	●	●	●	●	●	●	●	♿	○	○	●	120°	○	120°	○	180°	110°	110°

● *Available*
○ *Not available*

♿ *Closer available with less than 5.0 lbs. opening force on 36" door.*
***Maximum opening/hold-open point with standard template.*
**** Advanced Variable Backcheck*

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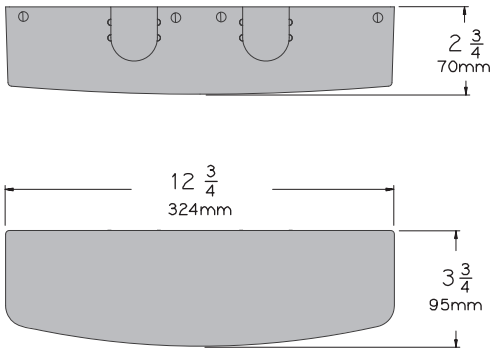
HINGE (PULL) SIDE MOUNTING

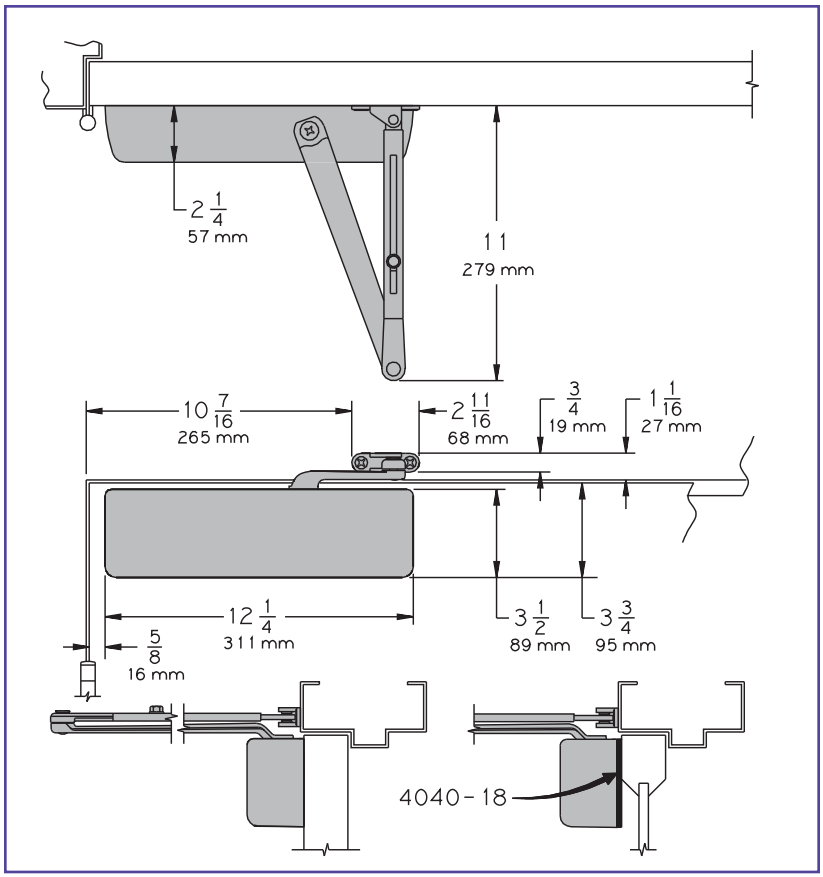
MAXIMUM OPENING

Templating allows up to 120°.

Hold-open points 90° up to 120° with hold-open arm.

Optional, Non-handed Designer Series Metal Cover





- **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. With Designer Series metal cover, use PLATE, 4040-18DS1
- **Clearance** of 2 3/8" (60 mm) behind door required for 90° installation. 2 7/8" (73 mm) for Designer Series metal covers
- **Delayed Action** (not available on 4040XP) Add suffix "DEL" to selected cylinder (eg. 4041 DEL). Delays closing from 120° to 70°. Delay time adjustable up to approximately 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

- 4040XP cylinder
- 4041 Delayed action cylinder.
- Hold-open arm.
- Metal or lead lined cover.
- Corner bracket.
- Designer Series metal cover.

Special Templates

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

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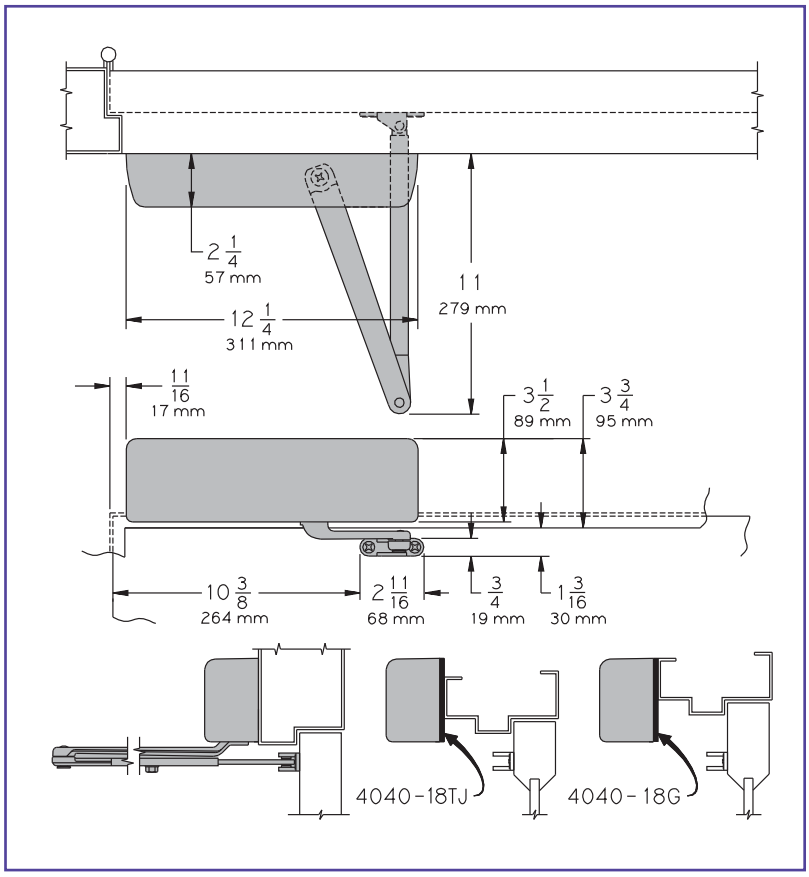
MOUNTING DETAILS



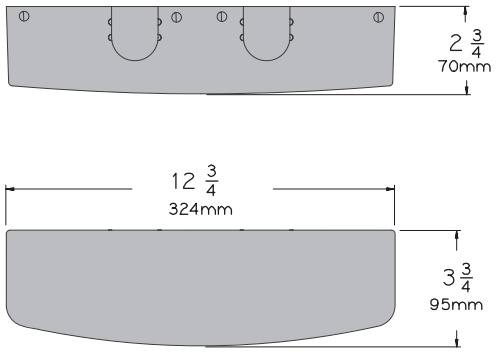
TOP JAMB (PUSH SIDE) MOUNTING

MAXIMUM OPENING

Templating allows up to 120°.

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

Optional, Non-handed Designer Series Metal Cover



- **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. With Designer Series metal cover, use PLATE, 4040-18TJDS1
- **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.
- **Delayed Action** (not available on 4040XP) Add suffix "DEL" to selected cylinder (eg. 4041 DEL). Delays closing from 120° to 80°. Delay time adjustable up to approximately 1 minute.

Options

- 4040XP cylinder
- 4041Delayed action cylinder.
- Long arm, extra long arm, hold-open arm, long hold-open arm.
- Metal or lead lined cover.
- Designer Series metal cover.

Special Templates

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

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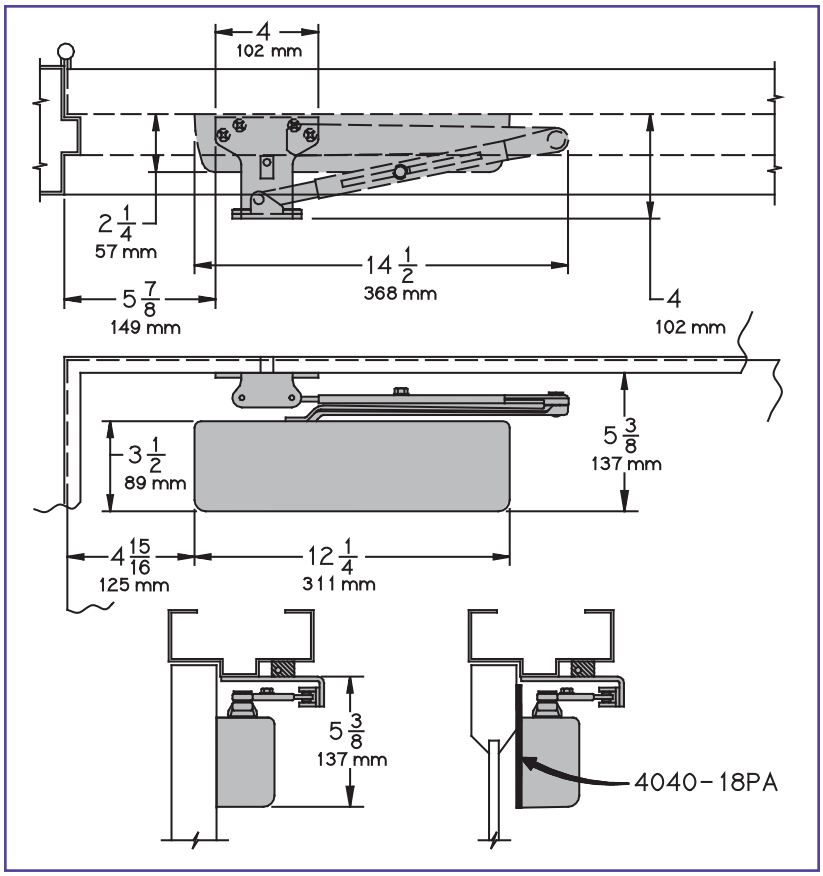
PARALLEL ARM (PUSH SIDE) MOUNTING

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.

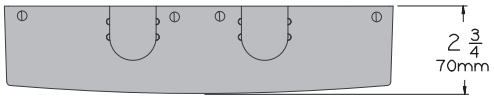
MAXIMUM OPENING

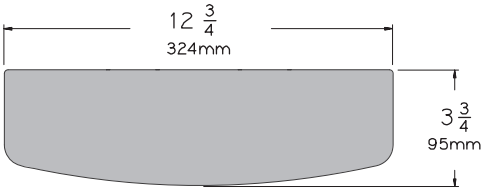
180° opening/hold-open points with all except CUSH arms.

110° opening/hold-open with CUSH arms.



Optional, Non-handed Designer Series Metal Cover





Options

- 4040XP cylinder
- 4041Delayed action cylinder.
- Hold-open, EDA, HEDA, CUSH, HCUSH, SPRING CUSH, or SPRING HCUSH arm.
- Metal or lead lined cover.
- Designer Series metal cover.

Special Templates

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

- **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 shoe projects 5 1/2" (140 mm) from door face.
  CUSH shoe projects 6" (152 mm) from door face.
- **Top Rail** less than 5 3/8" (137 mm) measured from the stop requires PLATE, 4040-18PA. Plate requires 2" (51 mm) minimum from the stop. With Designer Series metal cover, use PLATE, 4040-18PADS1
- **Head Frame** flush or rabetted requires PA SHOE ADAPTER, 4040-418.
- **Stop Width** minimum 1" (25 mm).
- **Blade Stop** clearance requires 1/2" (13mm) BLADE STOP SPACER, 4040-61.
- **Delayed Action** (not available on 4040XP) Add suffix "DEL" to selected cylinder (eg. P4041 DEL). Delays time adjustable up to approximately 1 minute.

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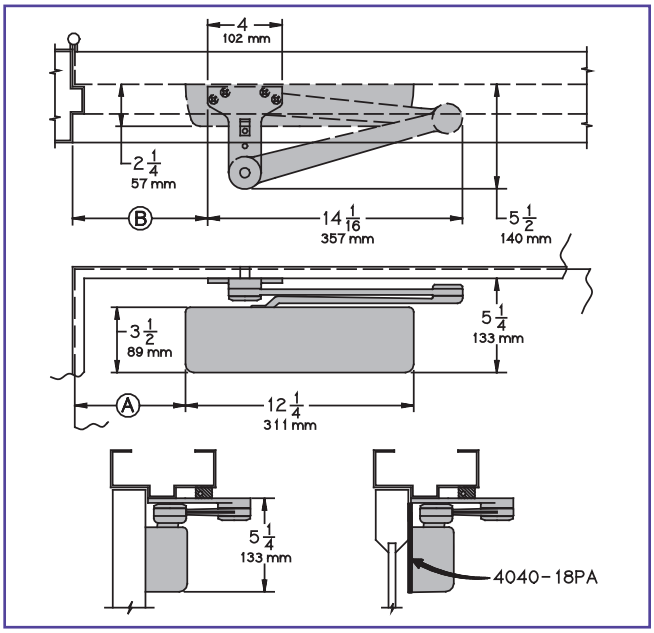
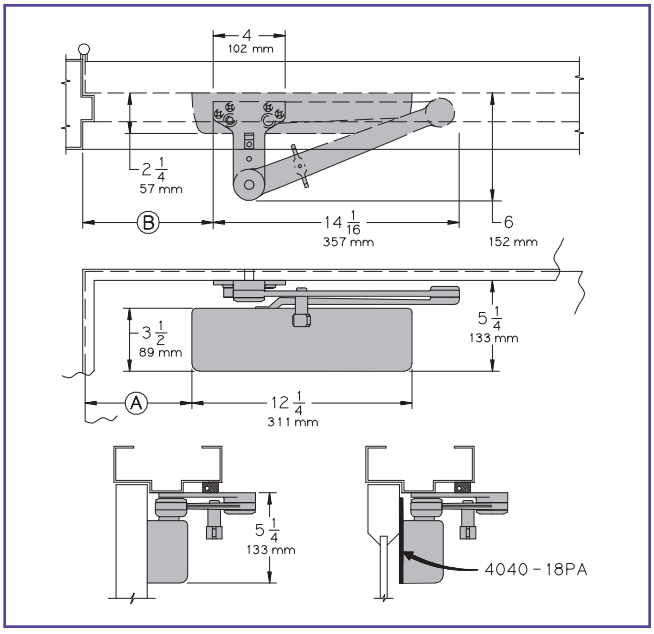
LCN 4040 SERIES

Mounting details are the same as 4040 Series REGULAR or HOLD-OPEN except as listed below. 4040 Series closers ordered with EDA or CUSH arms include 4040-201 FIFTH HOLE SPACER to support the shoe.

4040 SERIES EDA MOUNT



4040 SERIES CUSH MOUNT



- **Clearance** for 4040-62EDA is 5 1/2" (140 mm) from door face. 6" (152 mm) for CUSH.
- **Head Frame** flush or rabetted requires CUSH FLUSH PANEL ADAPTER, 4040-419.
- **CUSH ARM** requires SHOE SUPPORT, 4040-30 for fifth screw anchorage for narrow frames.
- **Delayed Action** (not available on 4040XP) Add suffix "DEL" to selected cylinder (eg. 4041 DEL). 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 approximately 1 minute.

MAXIMUM OPENING

EDA arm can be templated for points at: 110°,
Ⓐ = 6 3/8" (162 mm)
Ⓑ = 7 3/4" (197 mm)
or 180°.
Ⓐ = 2 7/8" (73 mm)
Ⓑ = 4 1/4" (108 mm)
Hold-open points up to maximum opening with HEDA arm.

CUSH arms can be templated for opening/hold-open point at:
85°,
Ⓐ = 7 15/16" (202 mm)
Ⓑ = 9 1/8" (232 mm)
90°,
Ⓐ = 7 3/16" (183 mm)
Ⓑ = 8 1/2" (216 mm)
100°,
Ⓐ = 6 1/16" (154 mm)
Ⓑ = 7 1/4" (184 mm)
or 110°.
Ⓐ = 5 1/16" (129 mm)
Ⓑ = 6 3/8" (162 mm)

Spring Cush dead stop points are approximately 5˚ more than templated stop point. Hold open at templated stop points.

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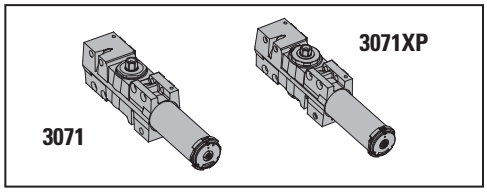
LCN 4040 SERIES

CYLINDERS

CYLINDER, 4041-3071
Standard, non-handed cast iron cylinder assembly.

CYLINDER, 4040XP-3071
Heavy duty, non-handed cast iron cylinder assembly.



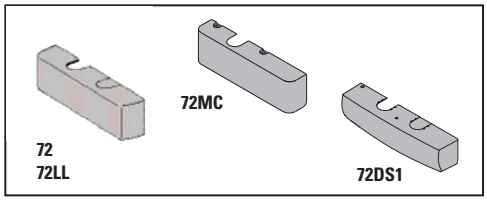
COVERS

COVER, 4040-72
Standard, non-handed plastic clip-on cover.

METAL COVER, 4040-72MC
Optional, handed cover. Required for plated finishes and custom powder coat finishes.

LEAD LINED COVER, 4040-72LL
Optional non-handed plastic clip-on cover.

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



ARMS

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

PA SHOE, 4040-62PA
Required for parallel arm mounting.

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

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.

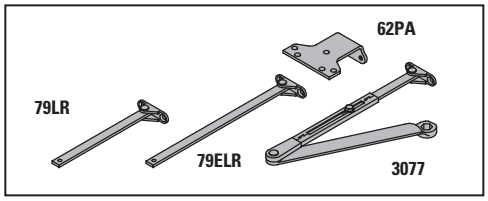
LONG HOLD-OPEN ARM, 4040-3049L
Optional non-handed arm includes LONG HEAD AND TUBE, 4040-3048L for top jamb mount.

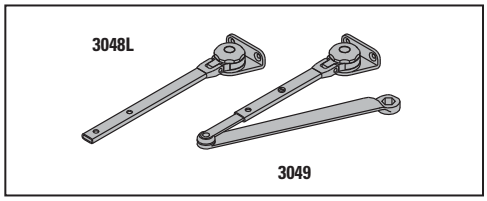
EXTRA DUTY ARM, 4040-3077EDA
Non-handed parallel arm features forged, solid steel main and forearm for potentially abusive installations.

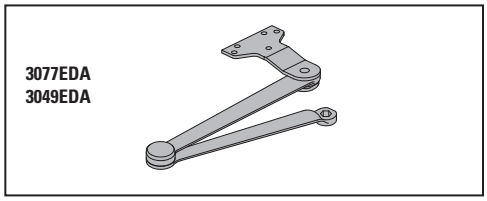
HOLD-OPEN EXTRA DUTY ARM, 4040-3049EDA
Optional handed arm provides hold-open function, adjustable at the shoe.

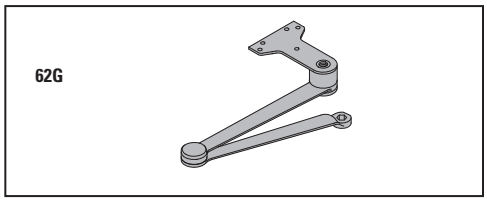
THICK HUB SHOE, 4040-62G
Optional for blade stop clearance, requires special templating.

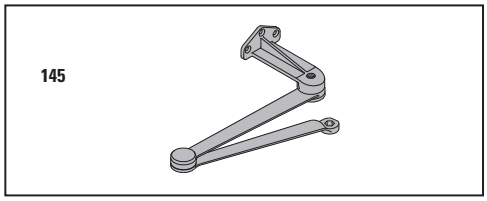
FLUSH TRANSOM SHOE, 4040-145
Optional for single rabetted installations, requires special templating.











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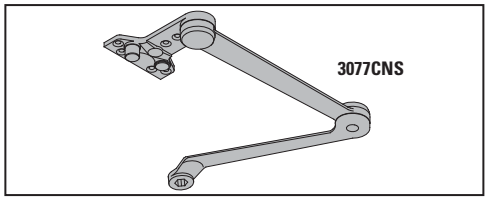
ARMS cont.

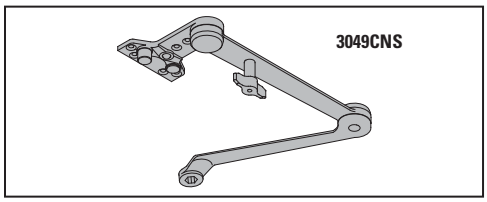
CUSH-N-STOP® ARM, 4040-3077CNS

Optional, non-handed parallel arm features solid forged steel main arm and forearm with stop in soffit shoe.



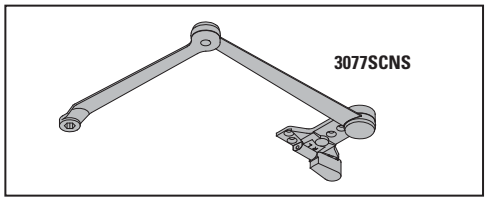
HCUSH ARM, 4040-3049CNS

Provides hold-open function with templated stop/hold-open points. Handle controls hold-open function.



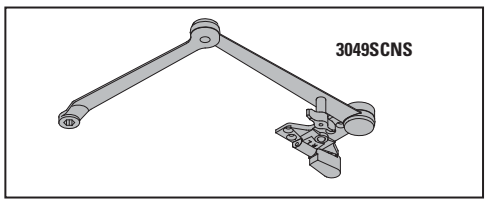
SPRING CUSH ARM, 4040-3077SCNS

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 HCUSH ARM, 4040-3049SCNS

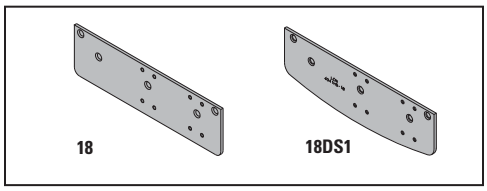
Optional, non-handed parallel arm for abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe. Handle controls hold-open function.



INSTALLATION ACCESSORIES

PLATE, 4040-18/4040-18DS1

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. With Designer Series metal cover, use PLATE, 4040-18DS1

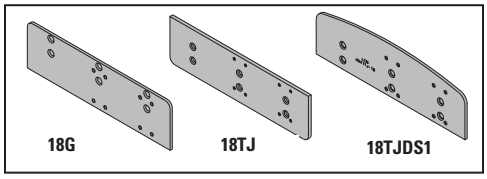


PLATE, 4040-18G

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.

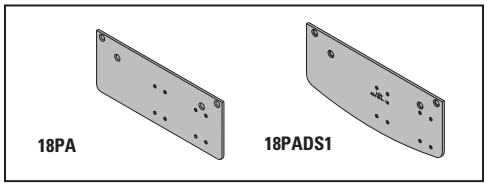
PLATE, 4040-18TJ/4040-18TJDS1

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. With Designer Series metal cover, use PLATE, 4040-18TJDS1



PLATE, 4040-18PA/4040-18PADS1

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. With Designer Series metal cover, use PLATE, 4040-18PADS1



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INSTALLATION ACCESSORIES cont.

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

CORNER BRACKET, 4040-16
For doors where top jamb or parallel arm mounting cannot be used (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).

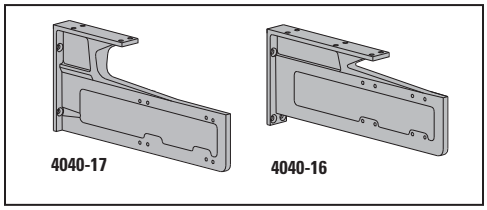
BLADE STOP SPACER, 4040-61 required to lower parallel arm shoe to clear 1/2" (13 mm) blade stop.

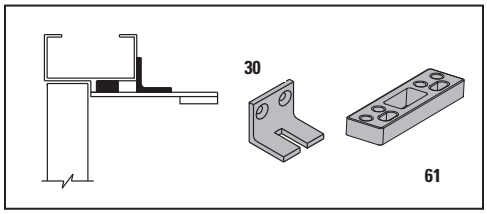
SOFFIT SHOE, 4040-65 adapts hinge side shoe to rounded or bull nose trim.

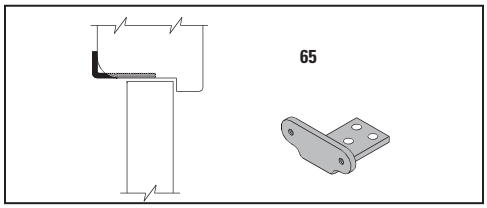
PA SHOE ADAPTER, 4040-418 provides horizontal mounting surface for parallel arm shoe on single rabetted or flush frame.

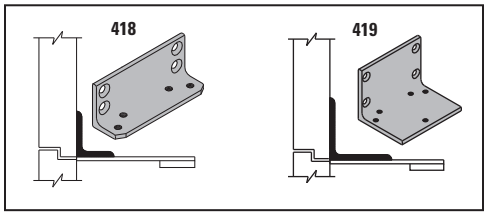
CUSH FLUSH PANEL ADAPTER, 4040-419 provides horizontal mounting surface for CUSH shoe on single rabetted or flush frame.

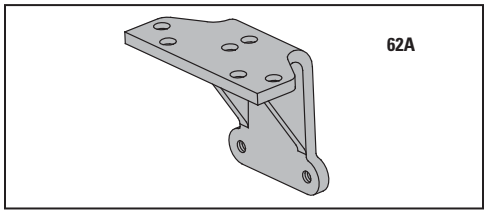
AUXILIARY SHOE, 4040-62A requires a top rail of 7" (178 mm). Optional shoe replaces -62PA for parallel arm mounting of regular arm with overhead holder/stop.











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LCN 4040 SERIES

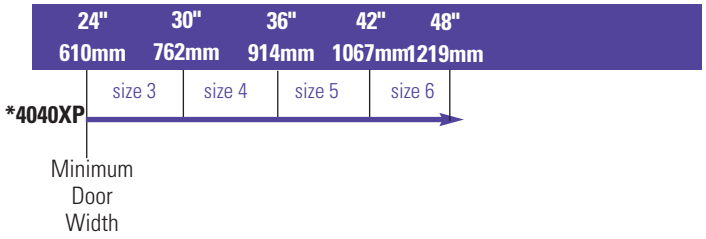
New 4040XP

TABLE OF SIZES

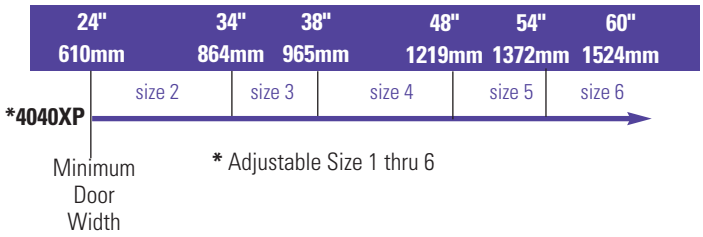
4040XP cylinders are adjustable from size 1 through size 6 and is shipped set to size 3.
Closing power of 4040 series closers may be adjusted 50%.

→ Indicates recommended range of door width for closer size.

EXTERIOR (and VESTIBULE) DOOR WIDTH



INTERIOR DOOR WIDTH



* Adjustable Size 1 thru 6

REDUCED OPENING FORCE 4040 SERIES 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.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	4041	4041	4041
	5.0* lbs.	4041	4041	4041

** Maximum opening force*

HOW-TO-ORDER 4040XP SERIES CLOSERS

1. SELECT FINISH.
☐ Standard Powder Coat _____
Aluminum, Dark Bronze , Tan, Statuary, Light Bronze, Black, Brass.

Closer will be shipped with:
- STANDARD CLIP-ON COVER,
*- **EDA ARM**,*
- SELF-REAMING and TAPPING SCREWS, unless options listed below are selected.

CLOSER OPTIONS

COVER
☐ Lead Lined (LL)
☐ Metal (specify right or left hand) (MC)
☐ Designer Series Metal (non-handed) (DS1)

FINISH
☐ Custom Powder Coat (RAL) _____
(handed metal cover required)
☐ Plated Finish, US _____
(handed metal cover required)
☐ SRI primer

ARM
☐ Regular (Rw)
☐ Regular w/62PA (Rw/PA)
☐ Regular w/62A (R/62A)
☐ Long (LONG)
☐ Extra Long (XLONG)
☐ Hold-Open (H)
☐ Hold-Open w/62PA (Hw/PA)
☐ Long Hold-Open (HLONG)
☐ EDA -62G or -145
☐ HEDA (specify right or left hand, optional-62G or -145)
☐ Cush-N-Stop (CUSH)
☐ HCush-N-Stop (HCUSH)
☐ Spring Cush (SCUSH)
☐ Spring HCush (SHCUSH)

OPTIONAL SCREW PACKS
☐ TB* w/Self-Reaming and Tapping (TBSRT)
☐ Wood & Machine Screw (WMS)
☐ TB*, Wood & Machine Screw (TBWMS)
☐ TORX Machine Screw (TORX)
☐ TB* & TORX Machine Screw (TBTRX)
* Specify door thickness if other than 1 3/4".

INSTALLATION ACCESSORIES
☐ Plate, 4040-18
☐ Plate, 4040-18TJ
☐ Plate, 4040-18G
☐ Plate, 4040-18PA
☐ Plate, 4040-18DS1
☐ Plate, 4040-18TJDS1
☐ Plate, 4040-18PADS1
☐ 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

SPECIAL TEMPLATE
☐ ST- _____

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AD-300

Networked Hardwired Electronic Lock

Overview

AD-Series electronic locks from Schlage are designed to be modular and provide more options to choose from, more functionality in the lock and more compatibility with existing systems. Its patent-pending modular design allows the lock to be customized to fit the needs of an application now, and can change to meet future needs without removing it from the door.

Factory orderable options include choices of credential readers, chassis type, network configurations, locking functions, lever styles and finishes. It also offers a wide selection of features that can be configured in the field to customize your openings.

To simplify installation, the AD-Series combines all the hardware components required at the door for a complete access control system into one integrated design that includes the electrified lock, credential reader, request-to-exit and -enter sensors, door position switch, tamper switch and more.

The AD-300 has a number of features built in that are configurable in the field and a long list of items that can be monitored by access control software. Please consult your access control software partner for details on the integration of specific features.

Features and Benefits

- Open Architecture platform
- Panel interface options ensure seamless communication with your system
- Real-time communication between access control system and lock
- Field configurable Fail Safe/Fail Secure and other capabilities per code
- Available in cylindrical, mortise, mortise with deadbolt and exit trim
- Compatible with major brands of master key systems
- A wide selection of credential readers and networking options to choose from
- AD-Series with multi-technology readers are NFC compatible
- ANSI/BHMA A156.25, ANSI/BHMA Grade 1, UL 294, UL10C, FCC Part 15, ADA, RoHS

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Security Technologies

AD-300 Electronic Lock Specifications	
Credential Verification Time	< 1 second
Data Rate	RS-485 : 9.6 kbps
Visual/Audible Communications	Tri-colored LED's & audible indicators (field configurable)
System Interface	Wiegand or Clock & Data via PIB300, or RS-485 directly
Power Supply	12 VDC or 24 VDC
Voltage Range	4 VDC to 26 VDC
Max Current Requirement	Up to 250 mA
Cable Specifications for Power	18AWG, 2 Conductor (Belden 8760 or equivalent)
Cable Distance for Power	AD-300 to Power Supply: up to 1000 ft (303 m)
Cable Specifications for Data	24AWG, 2 or 4 Conductor Shielded (Belden 9841, 9842 or equivalent)
Cabling Distance for Data	AD-300 to PIB300 or ACP, RS-485: up to 4000 ft (1219 m)
Operating Temperature	-31° to 151°F (-35° to 66°C)
Operating Humidity	0 - 100% condensing
Certifications	ANSI/BHMA A156.25, ANSI/BHMA Grade 1, UL 294, UL10 C, FCC Part 15, ADA, RoHS
Accessories	Panel Interface Board (PIB300), Handheld Device (HHD), Dry Contact Relay Board (RLBD) may be required for supervised inputs (Wiegand systems)

† Software indicates lock/unlock status based on sequence of events, but cannot validate mechanical clutch positions unless monitored on RS-485* connection

Functions

- *Classroom/Storeroom*
- *Office**
- *Privacy**
- *Apartment**

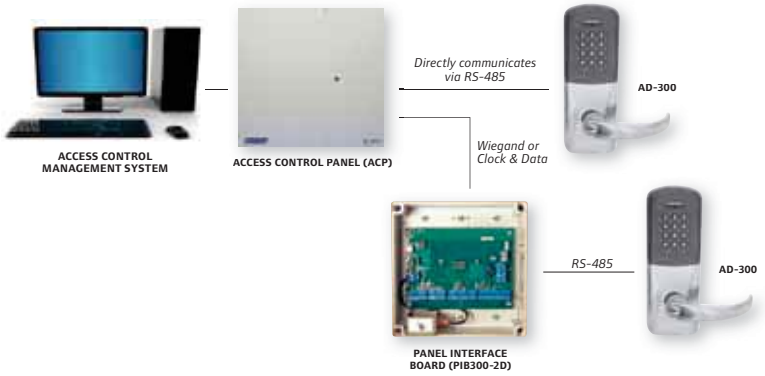
Note: BHMA/ANSI functions such as these can be implemented by the Software when Door Position, Deadbolt Position and/or Interior Push button are monitored. Consult Software provider for specific capabilities. Classroom/ Storeroom and Office function not available with Mortise Deadbolt option.

Available Status Signals

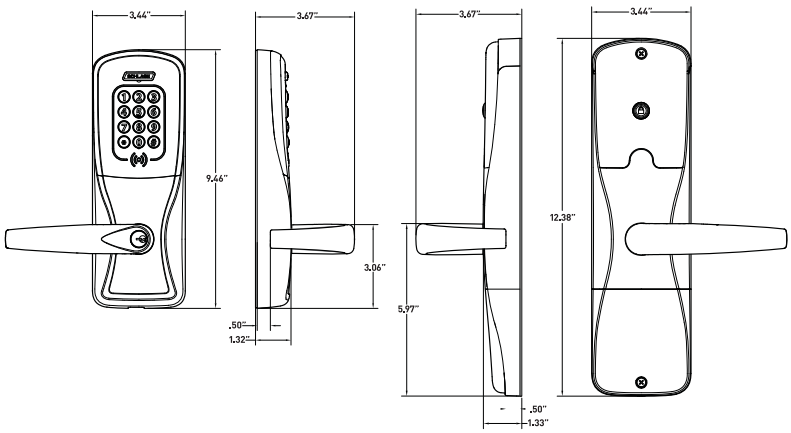
- *Lock/Unlock Status*†
- *Request-to-Exit*
- *Door Position*
- *Mechanical Key Override**
- *Deadbolt Position**
- *Interior Cover Tamper Guard**
- *Communication Status**
- *Interior Push Button**
- *Request-to-Enter**

* Consult your access control software provider for specific scope of support. Interior pushbutton, mechanical key override and deadbolt position are only available when linked via PIM400-485.

System Configuration



Dimensions



Panel Interface Board (PIB300-2D)

If the system requires Wiegand or Clock & Data protocol (rather than a direct RS-485 connection), the AD-Series open architecture platform connects up to two AD-300 locks to the Panel Interface Board (PIB300 - sold separately, if required) that seamlessly connects to an access control panel or reader interface board. All monitoring is captured at the remote monitoring station.

PIB300-2D Specifications	
Communication Range	**PIB300 to Lock**, RS-485: up to 4000′ **PIB300 to ACP**, Wiegand or Clock & Data: up to 500′
Visual/Audible	13 LEDs for Status Indicators
System Interface	Wiegand or Clock & Data
Voltage Range	9.5 VDC to 26 VDC
Power Supply	12 VDC or 24 VDC
Max Current Requirements	Up to 250 mA
Operating Temperature	-31° to 151°F (-35° to 66°C)
Dimensions (HWD)	7.1″ x 7.1″ x 3.0″ (18.0 cm x 18.0 cm x 7.6 cm)
Weight	1.25 lb (.57 kg)
Cable Specifications (PIB300 to ACP)	22AWG, 8 Conductor Shielded (Alpha 1298C or equivalent)
Certifications	NEMA 1, 4, 4X, 6; UL 294, FCC Part 15; RoHS

Mechanical Specifications

Chassis	Cylindrical (Based on Schlage ND-Series)	Mortise (Based on Schlage L-Series)
Handing	Handed to Order, Field Reversible	
ANSI Standard	Meets or exceeds A156.25 and A156.2 Series 4000, Grade 1 strength and operational requirements	Meets or exceeds A156.25 and A156.13 Series 1000, Grade 1 operational and security
Door Thickness	1-3/4″ standard, 1-3/8″ to 2-3/4″ optional (available in 1/8″ increments)	
Backset	2-3/4″ standard, 2-3/8″, 3-3/4″ and 5″ optional	2-3/4″ only
Latch Bolt	1/2″ throw security latch standard, 3/4″ throw optional	3/4″ throw with anti-friction tongue standard, **1″ throw deadbolt on Mortise Deadbolt option***
Levers	Pressure cast zinc, plated to match finish symbols	Steel, plated to match finish symbols
Strike	ANSI curved lip strike 1-1/4″ x 4-7/8″ x 1-3/16″ lip to center standard, optional strikes, lip lengths and ANSI strike box available	ANSI curved lip strike 1-1/4″ x 4-7/8″ x 1-3/16″ lip to center with dust box standard, optional strikes lip lengths available
Cylinder & Keys	Schlage 6-pin Everest C123 keyway cylinder with two patented keys standard Additional options available including Standard, SFIC, FSIC and competitor brands	

**Classroom/Storeroom and Office options not available with deadbolt.

AD-Series Exit Trim

AD-300 and AD-400 exit trim is exclusively compatible with Von Duprin 98/99 and 98/99XP (Rim, Mortise, and SVR. CVC and CVR on metal doors only), Von Duprin 22/22F (Rim and SVR) and Falcon 25 (Rim) exit devices made by Ingersoll Rand. The proper low current request to exit switch (RX-LC or AE) is required.

Part Numbers for Request to Exit Switch:
- *Von Duprin: 050281*
- *Falcon: 650359*

Multi-Technology Reader Specification

Frequency	125 kHz proximity and 13.56 MHz smart card
Standards	Standards ISO Standard 15693 and ISO 14443
Maximum Read Range	up to 1.25″ on 125 kHz proximity, up to 0.75″ on 13.56 MHz smart card
125 kHz compatibility	Schlage Proximity, XceedID™ Proximity, HID® Proximity, GE/CASI ProxLite®, AWID® Proximity, LenelProx®
13.56 MHz compatibility	Schlage MIFARE® Secure Sector, XceedID™ MIFARE® Secure Sector, aptiQ™ Smart Cards using MIFARE DESFire™ EV1 with PACSA; PIV and PIV-I**†
13.56 MHz compatibility (serial number only)	DESFire® CSN, HID iClass® CSN, Inside Contactless PicoTag® CSN, MIFARE®, MIFARE DESFire™ EV1, ST Microelectronics® CSN, Texas Instruments Tag-It® Serial Number, Phillips I-Code® CSN
125 kHz Compatible Schlage Credentials	125 kHz Clamshell (SXF7410), 125 kHz ISO Card (SXF7510), 125 kHz ISO Card w/Magnetic Stripe (SXF7510MS)
13.56 MHz Compatible Schlage Credentials	13.56 MHz MIFARE Clamshell (SXF9420), 13.56 MHz MIFARE ISO Printable (SXF9520, SXF9551, SXF9558), 13.56 MHz MIFARE Key Tag (SXF9651), 13.56 MHz MIFARE PVC Patch (SXF9751), aptiQ™ Smart Cards using MIFARE DESFire™ EV1 (SXF9000 Series)
Certifications/Standards	FCC, RSS210, UL 294, Listed, ISO Standard 15693, and ISO Standard 14443
Style/Layout	Option for 12 button, 3x4 matrix backlit keypad

Notes:

** *FIPS 201-1 Compliant Option Available: The AD-Series can be used in applications which require approval by the U.S. Federal Government under HSPD-12 for FIPS 201-1 Compliance. Specific components are required, please see the AD-401 data sheet or AD-301 data sheet for complete details.*

† *75 bit output format default. Configurable to other output formats*

Benefits of AD-Series Multi-Technology Readers:

- Reads multiple brands of both proximity (125 kHz) and smart (13.56 MHz) technologies with single device
- AD-Series multi-technology readers are NFC compatible
- Allows end user to migrate to more secure credentials over time and as budgets permit

Additional Readers

Magnetic Stripe
- Now available with choice of Insertion or Swipe style readers
- Triple Track Reader (1, 2 or 3), field configurable
- ABA, ISO76XX Standard
- Reader can be cleaned without removing lock from door
- Option for 12 button, 3x4 matrix backlit keypad

Keypad
- Backlit keypad
- 12 button, 3x4 matrix

Available AD-Series Reader Modules

- **Multi-Technology**
  - Proximity
  - Smart Card

  + **KEYPAD**

- **Multi-Technology**
  - Proximity
  - Smart Card

- **Magnetic Stripe** (Insertion)

  + **KEYPAD**

- **Magnetic Stripe** (Insertion)

- **Magnetic Stripe** (Swipe)

  + **KEYPAD**

- **Magnetic Stripe** (Swipe)

- **Keypad**

Ordering Information

Available through one of our GSA Schedule 84 approved distributors; BAA Options Available

AD-	300-	CY-	70-	MG-	SPA-	626-	PD-	C123-	RH-	13-049-	10-025-	1-3/4
Series	Class	Chassis	Function	Reader	Lever Style	Finish	Lever Cylinder	Keying Type	Handing	Backset & Latch	Strike	Door Thickness
1	2	3	4	5	6	7	8	9	10	11	12	13

Selections Correspond With the Numbers Above

Standard options are indicated in bold. See price book for specific configuration options.

3 Chassis

CY	Cylindrical
MS	Mortise
MD	Mortise Deadbolt
993R	Exit Trim – Rim/CVR/CVC
993S	Exit Trim – SVR
993M	Exit Trim – Mortise
993DT	Non-Functioning Dummy Trim for Exit

4 Function

70	Classroom/Storeroom
50	Office
40	Privacy
60	Apartment

Lock function capabilities are determined by users access control system

5 Reader

KP	Keypad
MG	Magnetic Stripe (Insertion)
MGK	Magnetic Stripe + Keypad (Insertion)
MS	Magnetic Stripe (Swipe)
MSK	Magnetic Stripe + Keypad (Swipe)
MT	Multi-Technology (125 kHz and 13.56 MHz)
MTK	Multi-Technology + Keypad (125 kHz and 13.56 MHz)
DT	Dummy Trim

6 Lever

SPA	Sparta
RHO	Rhodes
ATH	Athens
TLR	Tubular

Available with knurled surface

7 Finish

626	Satin Chrome
605	Bright Brass
606	Satin Brass
612	Satin Bronze
619	Satin Nickel
625	Bright Chrome
643e	Aged Bronze
626AM	Satin Chrome Antimicrobial

8 Lever Cylinder Type

PD	Schlage 6-pin Full Cylinder

See price book for other SFIC, FSIC and Less Cores options available. Compatible with Schlage, Sargent, Corbin, Medeco and Yale

9 Keyway Type

C123 **Everest**

See price book for other available keyway options including master keying

10 Handing

RH **Right Handed**
LH Left Handed

Field reversible

11 Backset & Latch or Armor Front

Cylindrical
13-049 2-3/4" Backset, Deadlatch, Square Corner, 1-1/8" x 2-1/4"
Mortise
09-663 Armor Front, 1-1/4" Wide, Square Corner

See price book for mortise deadbolt and other backset and latch options or armor front options

12 Strike

Cylindrical
10-025 1-3/16 Lip, ANSI, No Box, 1-1/4" x 4-7/8"
Mortise
10-072 1-3/16" Lip, 1-1/4" x 4-7/8" Square Corner, Box

See price book for other available strikes

13 Door Thickness

1-3/4"
Other thicknesses available between 1-3/8" and 2-3/4

See price book for detail.

Lever styles

Standard cylinders shown, SFIC and FSIC also available.

Sparta

Rhodes

Athens

Tubular

Warm tone finishes

605
Bright Brass

606
Satin Brass

612
Satin Bronze

643e
Aged Bronze

Cool tone finishes

619
Satin Nickel

625
Bright Chrome

626
Satin Chrome

626AM
Satin Chrome with Antimicrobial

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Security Technologies

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AD-300
Hardwired Electronic Lock

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Features

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- Panel interface options ensure seamless communication with your system
- Real-time communication between access control system and lock
- Field configurable Fail Safe/Fail Secure and other capabilities per code
- Available in cylindrical, mortise, mortise with deadbolt and exit trim
- Compatible with major brands of master key systems
- A wide selection of credential readers and networking options to choose from

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AD-300 Electronic Lock Specifications	
Credential Verification Time	< 1 second
Data Rate	RS485 : 9.6 kbps
Visual/Audible Communications	Tri-colored LED's & audible indicators (field configurable)
System Interface	Wiegand or Clock & Data via PIB300, or RS485 directly
Power Supply	12 VDC or 24 VDC
Voltage Range	4 VDC to 26 VDC
Max Current Requirement	Up to 250 mA
Cable Specifications	24AWG, 3 Conductor Shielded (Belden 9842, 9841 or equivalent)
Cabling Distance	RS485 up to 4000 ft (1219 m)
Operating Temperature	-31° to 151°F (-35° to 66°C)
Operating Humidity	0 - 100% condensing
Certifications	ANSI/BHMA A156.25 Grade 1, UL294*, UL10 C, FCC Part 15, ADA, RoHS
Accessories	Panel Interface Board (PIB300), Handheld Device (HHD)

*Pre-launch datasheet. UL294 certification pending. Certification will be achieved prior to shipment.

Functions

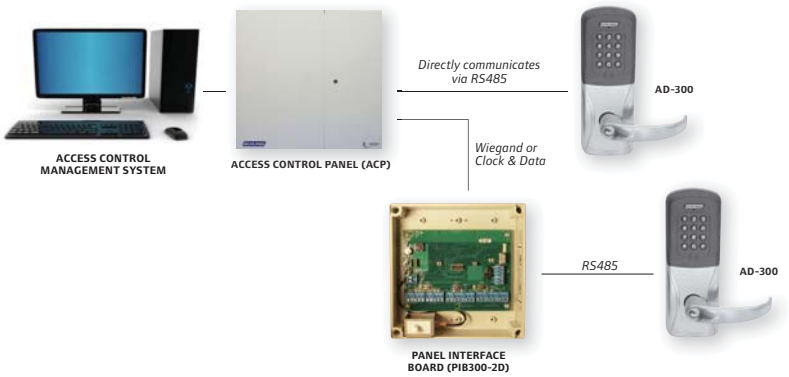
- *Classroom/Storeroom*
- *Office*
- *Privacy*
- *Apartment*

Note: Office function not available with Mortise Deadbolt option. To ensure safety all functions always allow for free egress.

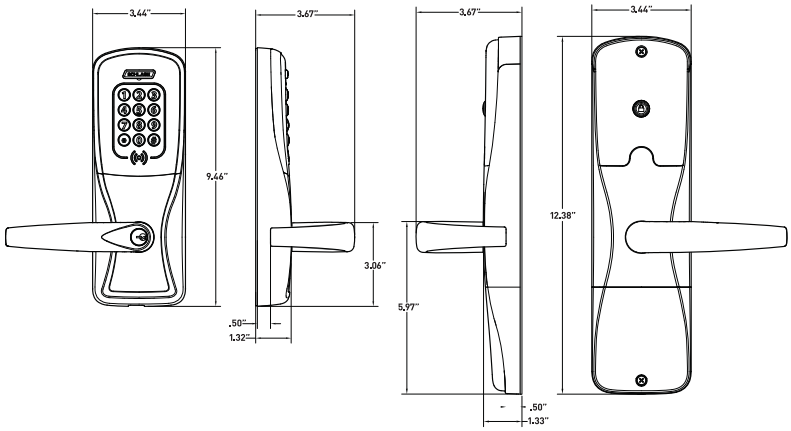
Standard Status Signals

- *Lock/Unlock Status (Clutch Position)*
- *Request-to-Exit Switch*
- *Door Position Switch*
- *Mechanical Key Override*
- *Deadbolt Position*
- *Interior Cover Tamper Guard*
- *Communication Status*
- *Request-to-Enter*

System Configuration



Dimensions



Panel Interface Board (PIB300-2D)

If the system requires Wiegand or Clock & Data protocol (rather than a direct RS485 connection), the AD-Series open architecture platform connects up to two AD-300 locks to the Panel Interface Board (PIB300 - sold separately, if required) that seamlessly connects to an access control panel or reader interface board. All monitoring is captured at the remote monitoring station.

PIB300-2D Specifications	
Communication Range	RS485: up to 4000', PIB300 to Lock; Wiegand or Clock & Data: up to 500'; PIB to ACP
Visual/Audible	13 LEDs for Status Indicators
System Interface	Wiegand or Clock & Data
Voltage Range	9.5 VDC to 26 VDC
Power Supply	12 VDC or 24 VDC
Max Current Requirements	Up to 250 mA
Operating Temperature	-31° to 151°F (-35° to 66°C)
Dimensions (HWD)	7.1" x 7.1" x 3.0" (18.0 cm x 18.0 cm x 7.6 cm)
Weight	1.25 lb (.57 kg)
Cable Specifications (PIB300 to ACP)	22AWG, 8 Conductor Shielded (Alpha 1298C or equivalent)
Data Rate	RS485 : 9.6 kbps
Certifications	NEMA 1, 4, 4X, 6; UL294, FCC Part 15; RoHS

Mechanical Specifications

Chassis	Cylindrical (Based on Schlage ND-Series)	Mortise (Based on Schlage L-Series)
Handing	Handed to Order, Field Reversible	
ANSI Standard	Meets or exceeds A156.25 and A156.2 Series 4000, Grade 1 strength and operational requirements	Meets or exceeds A156.25 and A156.13 Series 1000, Grade 1 Operational and Security
Door Thickness	1-3/4″ standard, 1-3/8″ to 2-3/4″ optional (available in 1/8″ increments)	
Backset	2-3/4″ standard, 2-3/8″, 3-3/4″ and 5″ optional	2-3/4″ only
Latch Bolt	1/2″ throw security latch standard, 3/4″ throw optional	3/4″ throw with anti-friction tongue standard, **1″ throw deadbolt on Mortise Deadbolt option**
Levers	Pressure cast zinc, plated to match finish symbols	Steel, plated to match finish symbols
Strike	ANSI curved lip strike 1-1/4″ x 4-7/8″ x 1-3/16″ lip to center standard, optional strikes, lip lengths and ANSI strike box available	ANSI curved lip strike 1-1/4″ x 4-7/8″ x 1-3/16″ lip to center with dust box standard, optional strikes lip lengths available
Cylinder & Keys	6-pin Everest C123 keyway cylinder with two patented keys standard Additional options available including SFIC, FSIC and competitor brands	

AD-Series Exit Trim

The AD-Series Exit Trim (installed with a universal mounting plate) is compatible with Von Duprin 98/99 exit devices.

Reader Specifications

	Multi-Technology	Smart Card	Proximity
Frequency or Track	125 kHz proximity and 13.56 MHz smart card	13.56 MHz	125 kHz
Standards	ISO 15693 and ISO 14443		None
Maximum Read Range	up to 0.75″		
Compatibility (secure sector)	Schlage, XceedID ISO-X, MIFARE, ISO-X Lite, my-d, FIPS 201/PIV II, DESFire 8-EV1		
Compatibility (serial number only)	MIFARE, DESFire, iCLASS, Inside Pictotag, ST Micro, TI Tagit		Schlage, XceedID, HID, GE/CASI ProxLite and AWID
Compatible Schlage Credentials	Reads same credentials as AD-Series smart card and proximity readers	13.56 MHz Clamshell (SXF9420 & SXF9440), 13.56 MHz Smart card ISOX or MIFARE Glossy White (SXF9520, SXF9540, SXF9551, SXF9558 & SXF9574), 13.56 MHz Key Tag (SXF9640 & SXF9651), 13.56 MHz PVC Patch (SXF9740, SXF9751 & SXF97), Schlage EV1	125 kHz Clamshell Proximity (SXF7410), 125 kHz ISO Card Proximity (SXF7510), 125 kHz ISO Card w/ Magnetic Stripe (SXF7510MS)
Certifications/ Standards	FCC, Canadian FCC, UL294 Listed*, ISO 15693 and ISO 14443	FCC, Canadian FCC, UL294 Listed*	FCC, Canadian FCC, UL294 Listed*
Style/Layout	Option for 12-button, 3x4 matrix backlit keypad		

Additional Readers

Magnetic Stripe
- Triple Track Reader (1, 2 or 3), field configurable
- Illuminated Card Slot
- ABA, ISO76XX Standard
- Reader can be cleaned without removing lock from door
- Option for 12 button, 3x4 matrix backlit keypad

Keypad
- Backlit keypad
- 12 button, 3x4 matrix

*Pre-launch datasheet. UL294 certification pending. Certification will be achieved prior to shipment.

Available AD-Series Reader Modules

- **Proximity**
- **Smart Card**
- **Multi-Technology**
- **+ KEYPAD**

- **Proximity**
- **Smart Card**
- **Multi-Technology**

- **Magnetic Stripe**
- **+ KEYPAD**

- **Magnetic Stripe**

- **Keypad**

Ordering Information

AD	300	CY	70	MG	SPA	626	PD	C123	RH	13-047	10-025	1-3/4
Series	Class	Chassis	Function	Reader	Lever Style	Finish	Lever Cylinder	Keying Type	Handing	Backset & Latch	Strike	Door Thickness
1	2	3	4	5	6	7	8	9	10	11	12	13

Selections Correspond With the Numbers Above

Standard options are indicated in bold.

3 Chassis

CY	Cylindrical
MS	Mortise
MD	Mortise Deadbolt
993R	Exit Trim – Rim/CVR
993S	Exit Trim – SVR
993M	Exit Trim – Mortise

4 Function

70	Classroom/Storeroom
50	Office
40	Privacy
60	Apartment

5 Reader

KP	Keypad
MG	Magnetic Stripe
MGK	Magnetic Stripe + Keypad
PR	Proximity
PRK	Proximity + Keypad
SM	Smart Card
SMK	Smart Card + Keypad
MT	Multi-Technology
MTK	Multi-Technology + Keypad

6 Lever

SPA	Sparta
RHO	Rhodes
ATH	Athens
TLR	Tubular

Available with knurled surface

7 Finish

626	Satin Chrome
605	Bright Brass
606	Satin Brass
612	Satin Bronze
619	Satin Nickel
625	Bright Chrome
643e	Aged Bronze
626AM	Satin Chrome

8 Lever Cylinder Type

PD	6-pin Full Cylinder

See price book for other SFIC, FSIC and Less Cores options available. Compatible with Schlage, Sargent, Corbin, Medeco and Yale

9 Keyway Type

C123	Everest

See price book for other available keyway options including master keying

10 Handing

RH	Right Handed
LH	Left Handed

Field reversible

11 Backset and Latch

13-047 2-3/4" Backset, Deadlatch, square corner, 1-1/8" x 2-1/4"

See price book for other backset and latch options

12 Strike

Cylindrical

10-025 1-3/16 Lip, ANSI, no box, 1-1/4" x 4-7/8"

See price book for other available cylindrical strikes

Mortise Options

10-072 1-3/16" Lip, 1-1/4" x 4-7/8" square corner, box

See price book for other available mortise strikes

13 Door Thickness

1-3/4"

Other thicknesses available between 1-3/8" and 2-3/4

See price book for detail.

Lever styles

Standard cylinders shown, SFIC and FSIC also available.

Sparta

Rhodes

Athens

Tubular

Warm tone finishes

605
Bright Brass

606
Satin Brass

612
Satin Bronze

643e
Aged Bronze

Cool tone finishes

619
Satin Nickel

625
Bright Chrome

626
Satin Chrome

626AM
Satin Chrome with Antimicrobial

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AD-Series

Exit Trim Compatibility

The AD-Series Electronic Lock is available in 993 Exit Trim for use on openings that require exit devices for either retrofit or new construction applications. Offline and networked solutions are available.

The 993 Exit Trim was designed to suite with AD-Series cylindrical and mortise locksets to ensure that the facility remains aesthetically consistent.

The AD-Series 993 Exit Trim utilizes universal hardware to simplify installation of offline trim to a variety of exit devices, including Rim style from Von Duprin, Falcon, Sargent, Corbin Russwin, Dorma, and Yale.

Available Exit Trim Styles:

- 993R – Rim or Concealed Vertical Rod (CVR for metal doors only)
- 993S – Surface Vertical Rod
- 993M – Mortise

Compatibility

Devices	AD-200/250	AD-300	AD-400
Von Duprin 98/99 Rim/SVR/CVR/Mortise	X	X	X
Von Duprin 22/22F Rim/SVR	X		
Falcon 25 Rim/SVR	X		
Sargent 80 Rim	X		
Precision 21 Rim 2100 converts to 21 with Precision's BP21 kit	X		
Yale 7000 Rim	X		
Corbin Russwin 5000 Rim	X		
Dorma 9300 Rim	X		

Note: The AD-300 and AD-400 Exit Trim are exclusively compatible with the Von Duprin 98/99 exit devices utilizing a low current request-to-exit switch (LC-RX).

Features

- Multiple Credential Reader Options
- Offline and Networked Communication Options
- A wide variety of finishes and lever styles
- Power options that include hardwired (12 VDC or 24 VDC) or batteries (4AA or 8AA)
- Compatible with most Standard, FSIC or SFIC keyways from major brands of master key systems including Schlage, Sargent, Corbin, Medeco and Yale

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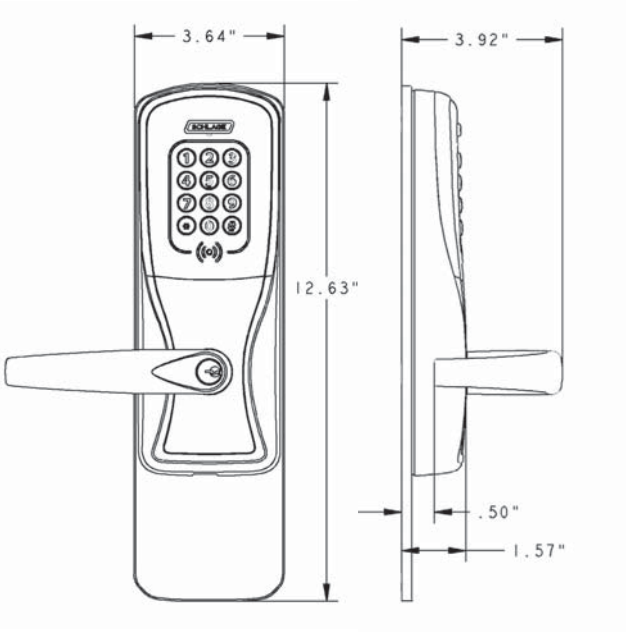
DIMENSIONS



Exterior View

Profile View

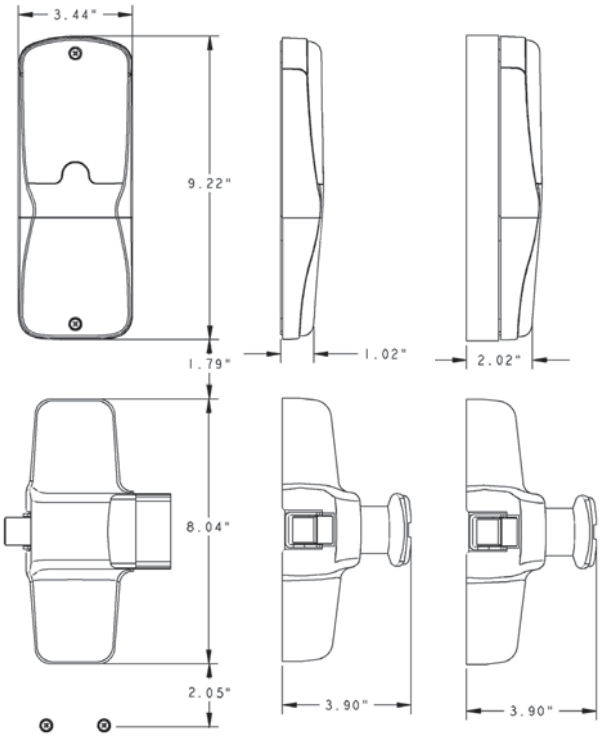
Available AD-Series Reader Modules

- Proximity (125 kHz)
- Smart Card (13.56 MHz)
- Multi-Technology (125 kHz proximity and 13.56 MHz smart card)
- Magnetic Stripe
- Keypad Only
- All credential readers available + Keypad
  - * unlike other AD-Series chassis styles, upgrading reader modules on the 993 Exit Trim requires the exterior escutcheon to be removed from the door

Available Communication Options

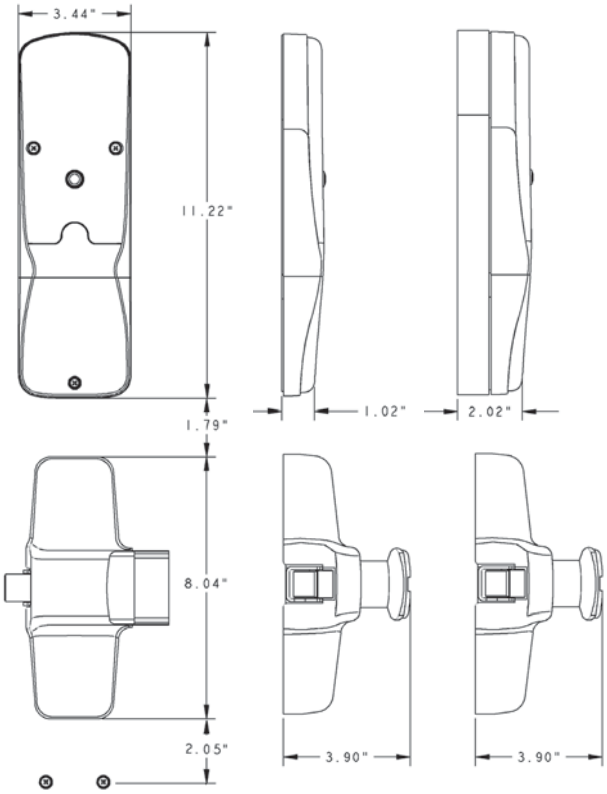
- AD-400: Networked Wireless Locks
- AD-300: Networked Hardwired Locks
- AD-250: Offline, access rights stored on the magnetic stripe credential
- AD-200: Offline, access rights stored on the lock

AD-Series - 993 Exit Trim



Interior View | **Side View** | **Side View**

AD-200/250/300 - all styles | AD-200/250/300 - RIM/CVR or Mortise | AD-200/250/300 SVR



Interior View | **Side View** | **Side View**

AD-400 all styles | AD-400 RIM/CVR or Mortise | AD-400 SVR

** AD-300 includes LED indicator*

Note: (2) #7 fasteners with decorative washers located 11.88″ below bottom edge of lock

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AD-Series

Exit Trim Compatibility

The AD-Series Electronic Lock is available in 993 Exit Trim for use on openings that require exit devices for either retrofit or new construction applications. Offline and networked solutions are available.

The 993 Exit Trim was designed to suite with AD-Series cylindrical and mortise locksets to ensure that the facility remains aesthetically consistent.

The AD-Series 993 Exit Trim utilizes universal hardware to simplify installation of offline trim to a variety of exit devices, including Rim style from Von Duprin, Falcon, Sargent, Corbin Russwin, Dorma, and Yale.

Available Exit Trim Styles:

- 993R – Rim or Concealed Vertical Rod (CVR for metal doors only)
- 993S – Surface Vertical Rod
- 993M – Mortise

Compatibility

Devices	AD-200/250	AD-300	AD-400
Von Duprin 98/99 Rim/SVR/CVR/Mortise	X	X	X
Von Duprin 22/22F Rim/SVR	X		
Falcon 25 Rim/SVR	X		
Sargent 80 Rim	X		
Precision 21 Rim 2100 converts to 21 with Precision's BP21 kit	X		
Yale 7000 Rim	X		
Corbin Russwin 5000 Rim	X		
Dorma 9300 Rim	X		

Note: The AD-300 and AD-400 Exit Trim are exclusively compatible with the Von Duprin 98/99 exit devices utilizing a low current request-to-exit switch (LC-RX).

Features

- Multiple Credential Reader Options
- Offline and Networked Communication Options
- A wide variety of finishes and lever styles
- Power options that include hardwired (12 VDC or 24 VDC) or batteries (4AA or 8AA)
- Compatible with most Standard, FSIC or SFIC keyways from major brands of master key systems including Schlage, Sargent, Corbin, Medeco and Yale

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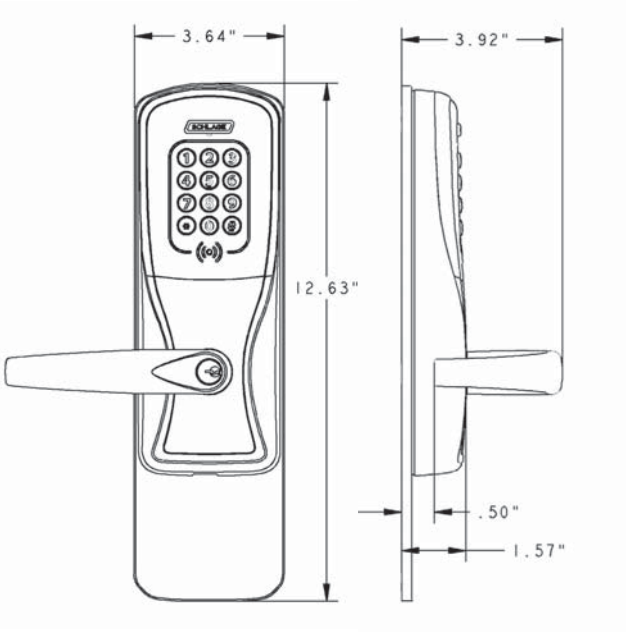
DIMENSIONS



Exterior View

Profile View

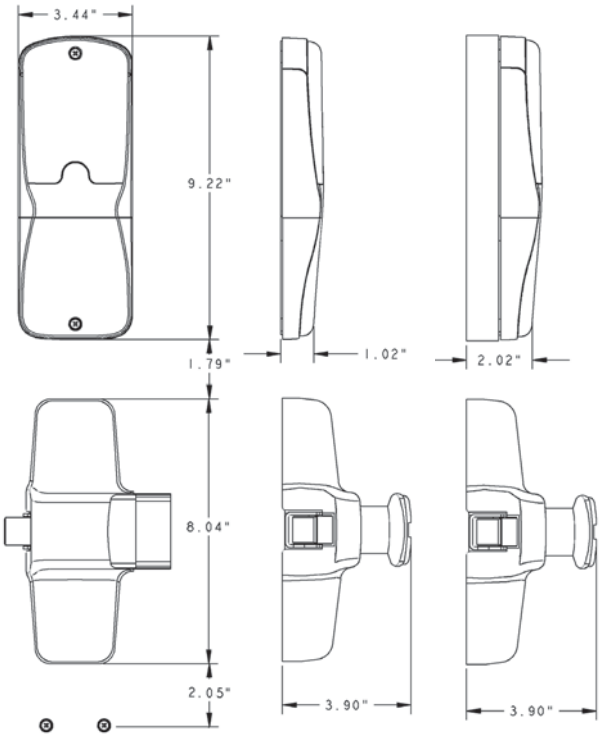
Available AD-Series Reader Modules

- Proximity (125 kHz)
- Smart Card (13.56 MHz)
- Multi-Technology (125 kHz proximity and 13.56 MHz smart card)
- Magnetic Stripe
- Keypad Only
- All credential readers available + Keypad
  - * unlike other AD-Series chassis styles, upgrading reader modules on the 993 Exit Trim requires the exterior escutcheon to be removed from the door

Available Communication Options

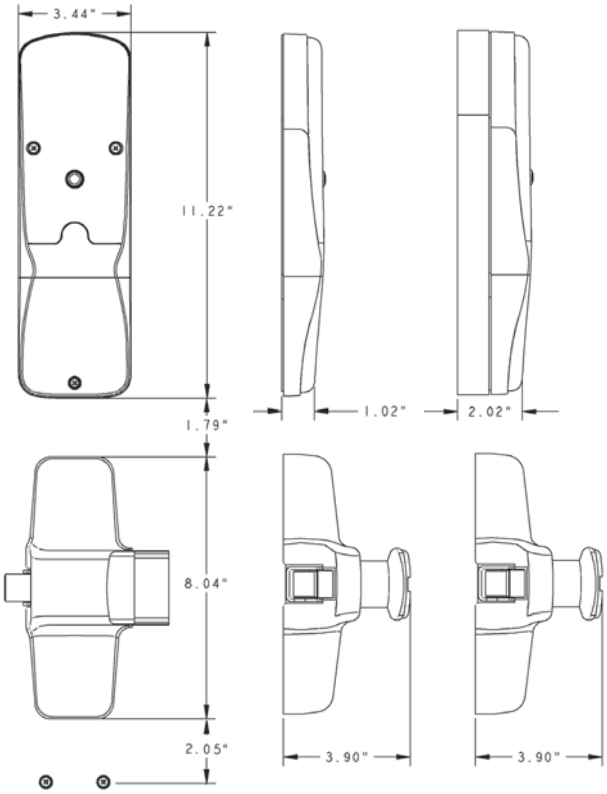
- AD-400: Networked Wireless Locks
- AD-300: Networked Hardwired Locks
- AD-250: Offline, access rights stored on the magnetic stripe credential
- AD-200: Offline, access rights stored on the lock

AD-Series - 993 Exit Trim



Interior View | **Side View** | **Side View**

AD-200/250/300 - all styles | AD-200/250/300 - RIM/CVR or Mortise | AD-200/250/300 SVR



Interior View | **Side View** | **Side View**

AD-400 all styles | AD-400 RIM/CVR or Mortise | AD-400 SVR

** AD-300 includes LED indicator*

Note: (2) #7 fasteners with decorative washers located 11.88″ below bottom edge of lock

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AD-Series

Exit Trim Compatibility

The AD-Series Electronic Lock is available in 993 Exit Trim for use on openings that require exit devices for either retrofit or new construction applications. Offline and networked solutions are available.

The 993 Exit Trim was designed to suite with AD-Series cylindrical and mortise locksets to ensure that the facility remains aesthetically consistent.

The AD-Series 993 Exit Trim utilizes universal hardware to simplify installation of offline trim to a variety of exit devices, including Rim style from Von Duprin, Falcon, Sargent, Corbin Russwin, Dorma, and Yale.

Available Exit Trim Styles:

- 993R – Rim or Concealed Vertical Rod (CVR for metal doors only)
- 993S – Surface Vertical Rod
- 993M – Mortise

Compatibility

Devices	AD-200/250	AD-300	AD-400
Von Duprin 98/99 Rim/SVR/CVR/Mortise	X	X	X
Von Duprin 22/22F Rim/SVR	X		
Falcon 25 Rim/SVR	X		
Sargent 80 Rim	X		
Precision 21 Rim 2100 converts to 21 with Precision's BP21 kit	X		
Yale 7000 Rim	X		
Corbin Russwin 5000 Rim	X		
Dorma 9300 Rim	X		

Note: The AD-300 and AD-400 Exit Trim are exclusively compatible with the Von Duprin 98/99 exit devices utilizing a low current request-to-exit switch (LC-RX).

Features

- Multiple Credential Reader Options
- Offline and Networked Communication Options
- A wide variety of finishes and lever styles
- Power options that include hardwired (12 VDC or 24 VDC) or batteries (4AA or 8AA)
- Compatible with most Standard, FSIC or SFIC keyways from major brands of master key systems including Schlage, Sargent, Corbin, Medeco and Yale

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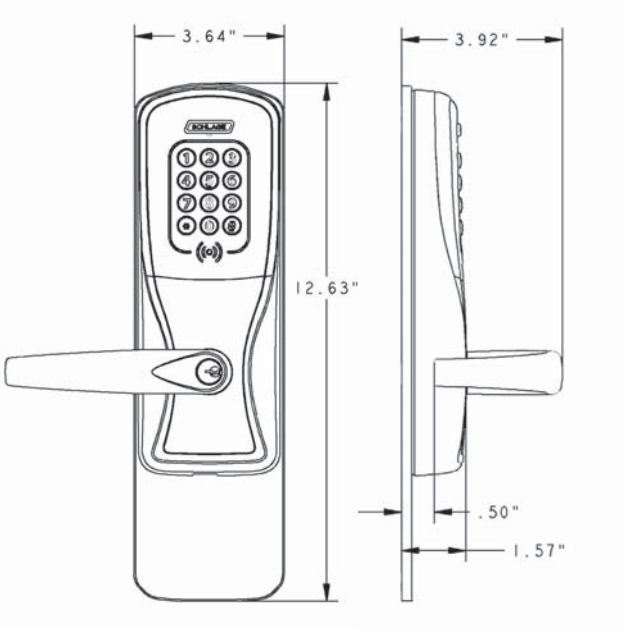
DIMENSIONS



Exterior View

Profile View

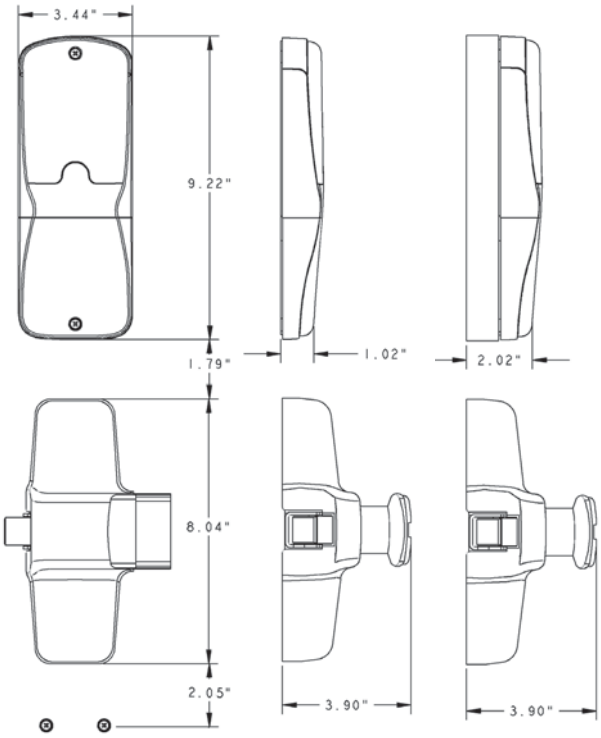
Available AD-Series Reader Modules

- Proximity (125 kHz)
- Smart Card (13.56 MHz)
- Multi-Technology (125 kHz proximity and 13.56 MHz smart card)
- Magnetic Stripe
- Keypad Only
- All credential readers available + Keypad
  - * unlike other AD-Series chassis styles, upgrading reader modules on the 993 Exit Trim requires the exterior escutcheon to be removed from the door

Available Communication Options

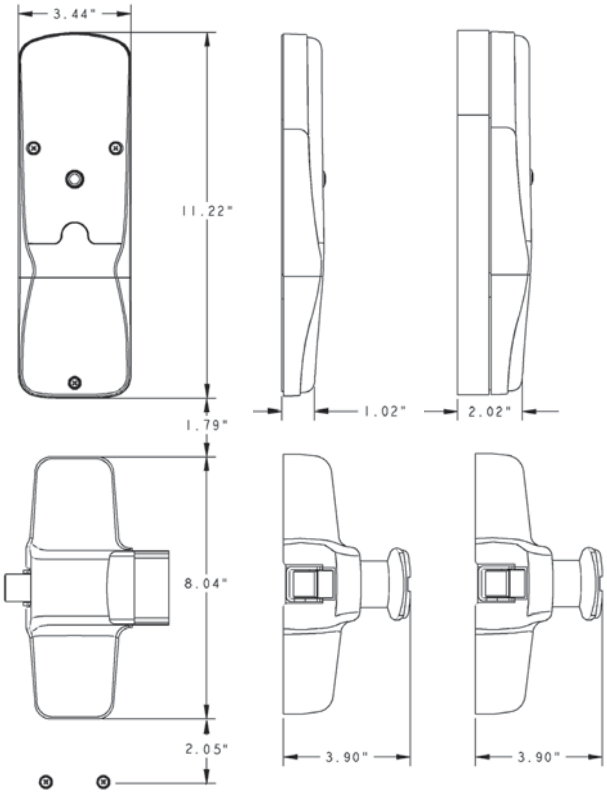
- AD-400: Networked Wireless Locks
- AD-300: Networked Hardwired Locks
- AD-250: Offline, access rights stored on the magnetic stripe credential
- AD-200: Offline, access rights stored on the lock

AD-Series - 993 Exit Trim



Interior View | **Side View** | **Side View**

AD-200/250/300 - all styles | AD-200/250/300 - RIM/CVR or Mortise | AD-200/250/300 SVR



Interior View | **Side View** | **Side View**

AD-400 all styles | AD-400 RIM/CVR or Mortise | AD-400 SVR

** AD-300 includes LED indicator*

Note: (2) #7 fasteners with decorative washers located 11.88″ below bottom edge of lock

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AD-300
Hardwired Electronic Lock

AD-Series electronic locks from Schlage are designed to be modular and provide more options to choose from, more functionality in the lock and more compatibility with existing systems. Its patent-pending modular design allows the lock to be customized to fit the needs of an application now, and can change to meet future needs without removing it from the door.

Factory orderable options include choices of credential readers, chassis type, network configurations, locking functions, lever styles and finishes. It also offers a wide selection of features that can be configured in the field to customize your openings.

To simplify installation, the AD-Series combines all the hardware components required at the door for a complete access control system into one integrated design that includes the electrified lock, credential reader, request-to-exit and -enter sensors, door position switch, tamper switch and more.

The AD-300 has a number of features built in that are configurable in the field and a long list of items that can be monitored by access control software.

Features

- Open Architecture platform
- Panel interface options ensure seamless communication with your system
- Real-time communication between access control system and lock
- Field configurable Fail Safe/Fail Secure and other capabilities per code
- Available in cylindrical, mortise, mortise with deadbolt and exit trim
- Compatible with major brands of master key systems
- A wide selection of credential readers and networking options to choose from

Ingersoll Rand
Security Technologies

AD-300 Electronic Lock Specifications	
Credential Verification Time	< 1 second
Data Rate	RS485 : 9.6 kbps
Visual/Audible Communications	Tri-colored LED's & audible indicators (field configurable)
System Interface	Wiegand or Clock & Data via PIB300, or RS485 directly
Power Supply	12 VDC or 24 VDC
Voltage Range	4 VDC to 26 VDC
Max Current Requirement	Up to 250 mA
Cable Specifications	24AWG, 3 Conductor Shielded (Belden 9842, 9841 or equivalent)
Cabling Distance	RS485 up to 4000 ft (1219 m)
Operating Temperature	-31° to 151°F (-35° to 66°C)
Operating Humidity	0 - 100% condensing
Certifications	ANSI/BHMA A156.25 Grade 1, UL294*, UL10 C, FCC Part 15, ADA, RoHS
Accessories	Panel Interface Board (PIB300), Handheld Device (HHD)

*Pre-launch datasheet. UL294 certification pending. Certification will be achieved prior to shipment.

Functions

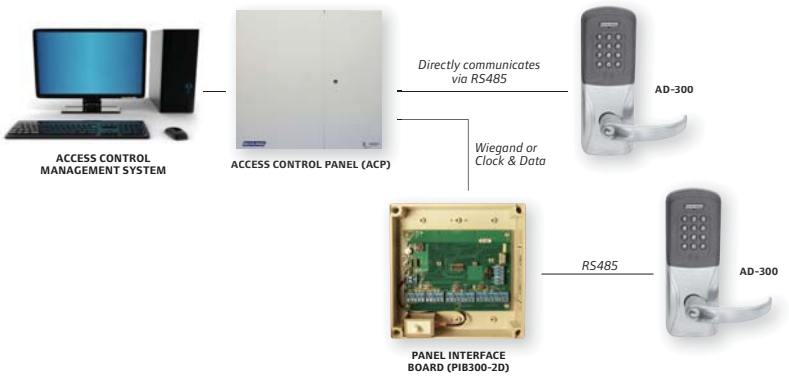
- *Classroom/Storeroom*
- *Office*
- *Privacy*
- *Apartment*

Note: Office function not available with Mortise Deadbolt option. To ensure safety all functions always allow for free egress.

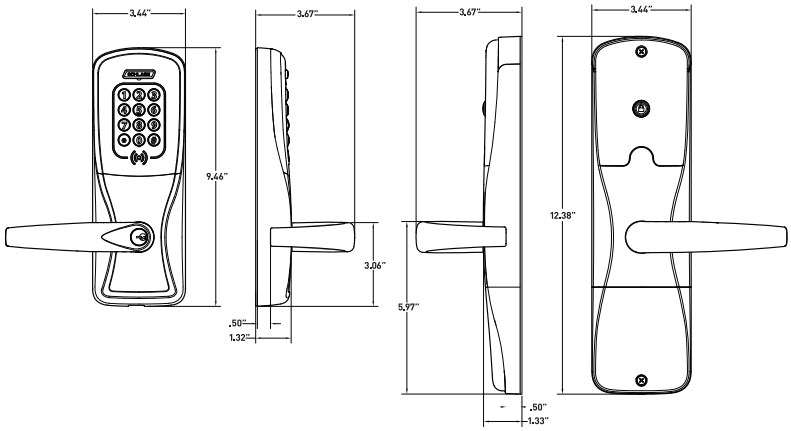
Standard Status Signals

- *Lock/Unlock Status (Clutch Position)*
- *Request-to-Exit Switch*
- *Door Position Switch*
- *Mechanical Key Override*
- *Deadbolt Position*
- *Interior Cover Tamper Guard*
- *Communication Status*
- *Request-to-Enter*

System Configuration



Dimensions



Panel Interface Board (PIB300-2D)

If the system requires Wiegand or Clock & Data protocol (rather than a direct RS485 connection), the AD-Series open architecture platform connects up to two AD-300 locks to the Panel Interface Board (PIB300 - sold separately, if required) that seamlessly connects to an access control panel or reader interface board. All monitoring is captured at the remote monitoring station.

PIB300-2D Specifications	
Communication Range	RS485: up to 4000', PIB300 to Lock; Wiegand or Clock & Data: up to 500'; PIB to ACP
Visual/Audible	13 LEDs for Status Indicators
System Interface	Wiegand or Clock & Data
Voltage Range	9.5 VDC to 26 VDC
Power Supply	12 VDC or 24 VDC
Max Current Requirements	Up to 250 mA
Operating Temperature	-31° to 151°F (-35° to 66°C)
Dimensions (HWD)	7.1" x 7.1" x 3.0" (18.0 cm x 18.0 cm x 7.6 cm)
Weight	1.25 lb (.57 kg)
Cable Specifications (PIB300 to ACP)	22AWG, 8 Conductor Shielded (Alpha 1298C or equivalent)
Data Rate	RS485 : 9.6 kbps
Certifications	NEMA 1, 4, 4X, 6; UL294, FCC Part 15; RoHS

Mechanical Specifications

Chassis	Cylindrical (Based on Schlage ND-Series)	Mortise (Based on Schlage L-Series)
Handing	Handed to Order, Field Reversible	
ANSI Standard	Meets or exceeds A156.25 and A156.2 Series 4000, Grade 1 strength and operational requirements	Meets or exceeds A156.25 and A156.13 Series 1000, Grade 1 Operational and Security
Door Thickness	1-3/4″ standard, 1-3/8″ to 2-3/4″ optional (available in 1/8″ increments)	
Backset	2-3/4″ standard, 2-3/8″, 3-3/4″ and 5″ optional	2-3/4″ only
Latch Bolt	1/2″ throw security latch standard, 3/4″ throw optional	3/4″ throw with anti-friction tongue standard, **1″ throw deadbolt on Mortise Deadbolt option**
Levers	Pressure cast zinc, plated to match finish symbols	Steel, plated to match finish symbols
Strike	ANSI curved lip strike 1-1/4″ x 4-7/8″ x 1-3/16″ lip to center standard, optional strikes, lip lengths and ANSI strike box available	ANSI curved lip strike 1-1/4″ x 4-7/8″ x 1-3/16″ lip to center with dust box standard, optional strikes lip lengths available
Cylinder & Keys	6-pin Everest C123 keyway cylinder with two patented keys standard Additional options available including SFIC, FSIC and competitor brands	

AD-Series Exit Trim

The AD-Series Exit Trim (installed with a universal mounting plate) is compatible with Von Duprin 98/99 exit devices.

Reader Specifications

	Multi-Technology	Smart Card	Proximity
Frequency or Track	125 kHz proximity and 13.56 MHz smart card	13.56 MHz	125 kHz
Standards	ISO 15693 and ISO 14443		None
Maximum Read Range	up to 0.75″		
Compatibility (secure sector)	Schlage, XceedID ISO-X, MIFARE, ISO-X Lite, my-d, FIPS 201/PIV II, DESFire 8-EV1		
Compatibility (serial number only)	MIFARE, DESFire, iCLASS, Inside Pictotag, ST Micro, TI Tagit		Schlage, XceedID, HID, GE/CASI ProxLite and AWID
Compatible Schlage Credentials	Reads same credentials as AD-Series smart card and proximity readers	13.56 MHz Clamshell (SXF9420 & SXF9440), 13.56 MHz Smart card ISOX or MIFARE Glossy White (SXF9520, SXF9540, SXF9551, SXF9558 & SXF9574), 13.56 MHz Key Tag (SXF9640 & SXF9651), 13.56 MHz PVC Patch (SXF9740, SXF9751 & SXF97), Schlage EV1	125 kHz Clamshell Proximity (SXF7410), 125 kHz ISO Card Proximity (SXF7510), 125 kHz ISO Card w/ Magnetic Stripe (SXF7510MS)
Certifications/ Standards	FCC, Canadian FCC, UL294 Listed*, ISO 15693 and ISO 14443	FCC, Canadian FCC, UL294 Listed*	FCC, Canadian FCC, UL294 Listed*
Style/Layout	Option for 12-button, 3x4 matrix backlit keypad		

Additional Readers

Magnetic Stripe
- Triple Track Reader (1, 2 or 3), field configurable
- Illuminated Card Slot
- ABA, ISO76XX Standard
- Reader can be cleaned without removing lock from door
- Option for 12 button, 3x4 matrix backlit keypad

Keypad
- Backlit keypad
- 12 button, 3x4 matrix

*Pre-launch datasheet. UL294 certification pending. Certification will be achieved prior to shipment.

Available AD-Series Reader Modules

- **Proximity**
- **Smart Card**
- **Multi-Technology**
- **+ KEYPAD**

- **Proximity**
- **Smart Card**
- **Multi-Technology**

- **Magnetic Stripe**
- **+ KEYPAD**

- **Magnetic Stripe**

- **Keypad**

Ordering Information

AD	300	CY	70	MG	SPA	626	PD	C123	RH	13-047	10-025	1-3/4
Series	Class	Chassis	Function	Reader	Lever Style	Finish	Lever Cylinder	Keying Type	Handing	Backset & Latch	Strike	Door Thickness
1	2	3	4	5	6	7	8	9	10	11	12	13

Selections Correspond With the Numbers Above

Standard options are indicated in bold.

3 Chassis

CY	Cylindrical
MS	Mortise
MD	Mortise Deadbolt
993R	Exit Trim – Rim/CVR
993S	Exit Trim – SVR
993M	Exit Trim – Mortise

4 Function

70	Classroom/Storeroom
50	Office
40	Privacy
60	Apartment

5 Reader

KP	Keypad
MG	Magnetic Stripe
MGK	Magnetic Stripe + Keypad
PR	Proximity
PRK	Proximity + Keypad
SM	Smart Card
SMK	Smart Card + Keypad
MT	Multi-Technology
MTK	Multi-Technology + Keypad

6 Lever

SPA	Sparta
RHO	Rhodes
ATH	Athens
TLR	Tubular

Available with knurled surface

7 Finish

626	Satin Chrome
605	Bright Brass
606	Satin Brass
612	Satin Bronze
619	Satin Nickel
625	Bright Chrome
643e	Aged Bronze
626AM	Satin Chrome

8 Lever Cylinder Type

PD	6-pin Full Cylinder

See price book for other SFIC, FSIC and Less Cores options available. Compatible with Schlage, Sargent, Corbin, Medeco and Yale

9 Keyway Type

C123	Everest

See price book for other available keyway options including master keying

10 Handing

RH	Right Handed
LH	Left Handed

Field reversible

11 Backset and Latch

13-047 2-3/4" Backset, Deadlatch, square corner, 1-1/8" x 2-1/4"

See price book for other backset and latch options

12 Strike

Cylindrical

10-025 1-3/16 Lip, ANSI, no box, 1-1/4" x 4-7/8"

See price book for other available cylindrical strikes

Mortise Options

10-072 1-3/16" Lip, 1-1/4" x 4-7/8" square corner, box

See price book for other available mortise strikes

13 Door Thickness

1-3/4"

Other thicknesses available between 1-3/8" and 2-3/4

See price book for detail.

Lever styles

Standard cylinders shown, SFIC and FSIC also available.

Sparta

Rhodes

Athens

Tubular

Warm tone finishes

605
Bright Brass

606
Satin Brass

612
Satin Bronze

643e
Aged Bronze

Cool tone finishes

619
Satin Nickel

625
Bright Chrome

626
Satin Chrome

626AM
Satin Chrome with Antimicrobial

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AD-Series

Exit Trim Compatibility

The AD-Series Electronic Lock is available in 993 Exit Trim for use on openings that require exit devices for either retrofit or new construction applications. Offline and networked solutions are available.

The 993 Exit Trim was designed to suite with AD-Series cylindrical and mortise locksets to ensure that the facility remains aesthetically consistent.

The AD-Series 993 Exit Trim utilizes universal hardware to simplify installation of offline trim to a variety of exit devices, including Rim style from Von Duprin, Falcon, Sargent, Corbin Russwin, Dorma, and Yale.

Available Exit Trim Styles:

- 993R – Rim or Concealed Vertical Rod (CVR for metal doors only)
- 993S – Surface Vertical Rod
- 993M – Mortise

Compatibility

Devices	AD-200/250	AD-300	AD-400
Von Duprin 98/99 Rim/SVR/CVR/Mortise	X	X	X
Von Duprin 22/22F Rim/SVR	X		
Falcon 25 Rim/SVR	X		
Sargent 80 Rim	X		
Precision 21 Rim 2100 converts to 21 with Precision's BP21 kit	X		
Yale 7000 Rim	X		
Corbin Russwin 5000 Rim	X		
Dorma 9300 Rim	X		

Note: The AD-300 and AD-400 Exit Trim are exclusively compatible with the Von Duprin 98/99 exit devices utilizing a low current request-to-exit switch (LC-RX).

Features

- Multiple Credential Reader Options
- Offline and Networked Communication Options
- A wide variety of finishes and lever styles
- Power options that include hardwired (12 VDC or 24 VDC) or batteries (4AA or 8AA)
- Compatible with most Standard, FSIC or SFIC keyways from major brands of master key systems including Schlage, Sargent, Corbin, Medeco and Yale

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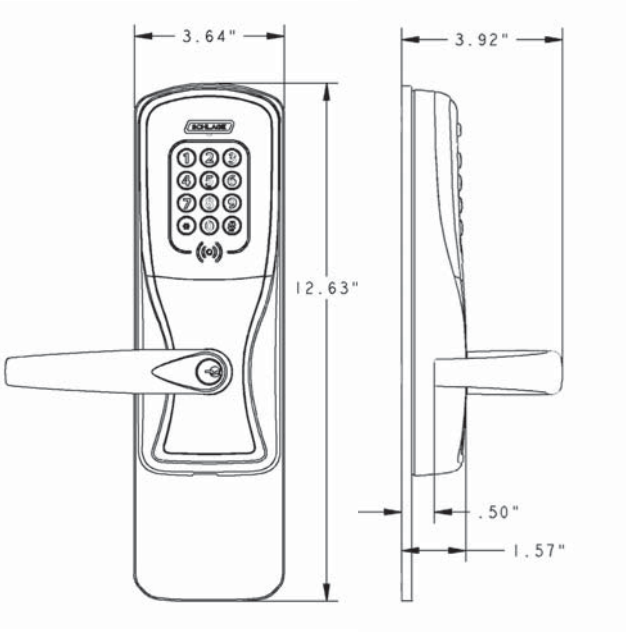
DIMENSIONS



Exterior View

Profile View

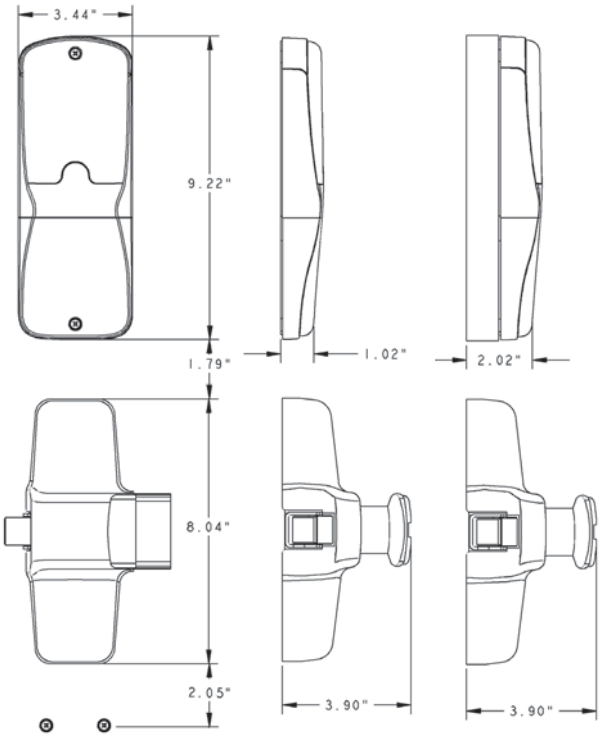
Available AD-Series Reader Modules

- Proximity (125 kHz)
- Smart Card (13.56 MHz)
- Multi-Technology (125 kHz proximity and 13.56 MHz smart card)
- Magnetic Stripe
- Keypad Only
- All credential readers available + Keypad
  - * unlike other AD-Series chassis styles, upgrading reader modules on the 993 Exit Trim requires the exterior escutcheon to be removed from the door

Available Communication Options

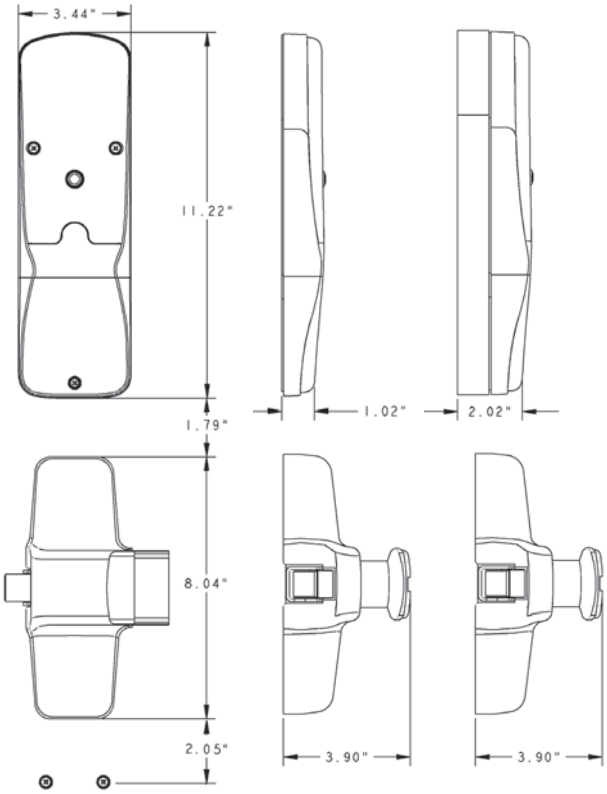
- AD-400: Networked Wireless Locks
- AD-300: Networked Hardwired Locks
- AD-250: Offline, access rights stored on the magnetic stripe credential
- AD-200: Offline, access rights stored on the lock

AD-Series - 993 Exit Trim



Interior View | **Side View** | **Side View**

AD-200/250/300 - all styles | AD-200/250/300 - RIM/CVR or Mortise | AD-200/250/300 SVR



Interior View | **Side View** | **Side View**

AD-400 all styles | AD-400 RIM/CVR or Mortise | AD-400 SVR

** AD-300 includes LED indicator*

Note: (2) #7 fasteners with decorative washers located 11.88″ below bottom edge of lock

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AD-Series

Exit Trim Compatibility

The AD-Series Electronic Lock is available in 993 Exit Trim for use on openings that require exit devices for either retrofit or new construction applications. Offline and networked solutions are available.

The 993 Exit Trim was designed to suite with AD-Series cylindrical and mortise locksets to ensure that the facility remains aesthetically consistent.

The AD-Series 993 Exit Trim utilizes universal hardware to simplify installation of offline trim to a variety of exit devices, including Rim style from Von Duprin, Falcon, Sargent, Corbin Russwin, Dorma, and Yale.

Available Exit Trim Styles:

- 993R – Rim or Concealed Vertical Rod (CVR for metal doors only)
- 993S – Surface Vertical Rod
- 993M – Mortise

Compatibility

Devices	AD-200/250	AD-300	AD-400
Von Duprin 98/99 Rim/SVR/CVR/Mortise	X	X	X
Von Duprin 22/22F Rim/SVR	X		
Falcon 25 Rim/SVR	X		
Sargent 80 Rim	X		
Precision 21 Rim 2100 converts to 21 with Precision's BP21 kit	X		
Yale 7000 Rim	X		
Corbin Russwin 5000 Rim	X		
Dorma 9300 Rim	X		

Note: The AD-300 and AD-400 Exit Trim are exclusively compatible with the Von Duprin 98/99 exit devices utilizing a low current request-to-exit switch (LC-RX).

Features

- Multiple Credential Reader Options
- Offline and Networked Communication Options
- A wide variety of finishes and lever styles
- Power options that include hardwired (12 VDC or 24 VDC) or batteries (4AA or 8AA)
- Compatible with most Standard, FSIC or SFIC keyways from major brands of master key systems including Schlage, Sargent, Corbin, Medeco and Yale

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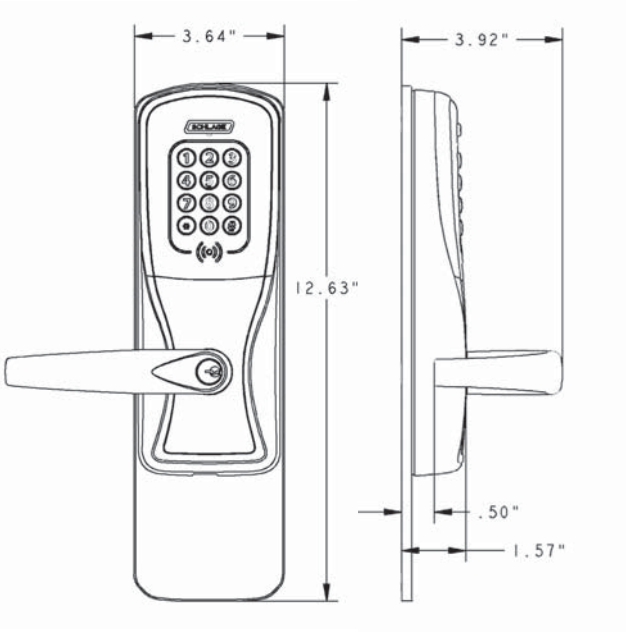


Exterior View

Profile View

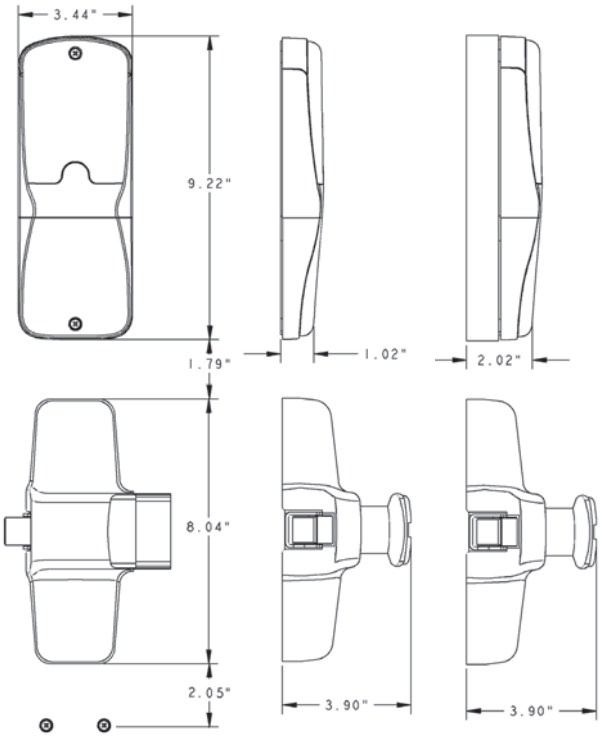
Available AD-Series Reader Modules

- Proximity (125 kHz)
- Smart Card (13.56 MHz)
- Multi-Technology (125 kHz proximity and 13.56 MHz smart card)
- Magnetic Stripe
- Keypad Only
- All credential readers available + Keypad
  - * unlike other AD-Series chassis styles, upgrading reader modules on the 993 Exit Trim requires the exterior escutcheon to be removed from the door

Available Communication Options

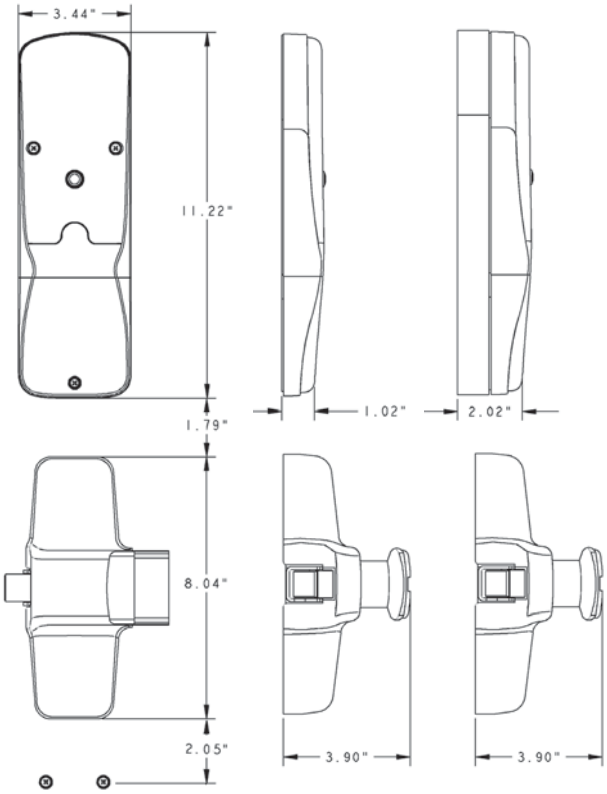
- AD-400: Networked Wireless Locks
- AD-300: Networked Hardwired Locks
- AD-250: Offline, access rights stored on the magnetic stripe credential
- AD-200: Offline, access rights stored on the lock

AD-Series - 993 Exit Trim



Interior View | **Side View** | **Side View**

AD-200/250/300 - all styles | AD-200/250/300 - RIM/CVR or Mortise | AD-200/250/300 SVR



Interior View | **Side View** | **Side View**

AD-400 all styles | AD-400 RIM/CVR or Mortise | AD-400 SVR

** AD-300 includes LED indicator*

Note: (2) #7 fasteners with decorative washers located 11.88″ below bottom edge of lock

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AD-Series

Exit Trim Compatibility

The AD-Series Electronic Lock is available in 993 Exit Trim for use on openings that require exit devices for either retrofit or new construction applications. Offline and networked solutions are available.

The 993 Exit Trim was designed to suite with AD-Series cylindrical and mortise locksets to ensure that the facility remains aesthetically consistent.

The AD-Series 993 Exit Trim utilizes universal hardware to simplify installation of offline trim to a variety of exit devices, including Rim style from Von Duprin, Falcon, Sargent, Corbin Russwin, Dorma, and Yale.

Available Exit Trim Styles:

- 993R – Rim or Concealed Vertical Rod (CVR for metal doors only)
- 993S – Surface Vertical Rod
- 993M – Mortise

Compatibility

Devices	AD-200/250	AD-300	AD-400
Von Duprin 98/99 Rim/SVR/CVR/Mortise	X	X	X
Von Duprin 22/22F Rim/SVR	X		
Falcon 25 Rim/SVR	X		
Sargent 80 Rim	X		
Precision 21 Rim 2100 converts to 21 with Precision's BP21 kit	X		
Yale 7000 Rim	X		
Corbin Russwin 5000 Rim	X		
Dorma 9300 Rim	X		

Note: The AD-300 and AD-400 Exit Trim are exclusively compatible with the Von Duprin 98/99 exit devices utilizing a low current request-to-exit switch (LC-RX).

Features

- Multiple Credential Reader Options
- Offline and Networked Communication Options
- A wide variety of finishes and lever styles
- Power options that include hardwired (12 VDC or 24 VDC) or batteries (4AA or 8AA)
- Compatible with most Standard, FSIC or SFIC keyways from major brands of master key systems including Schlage, Sargent, Corbin, Medeco and Yale

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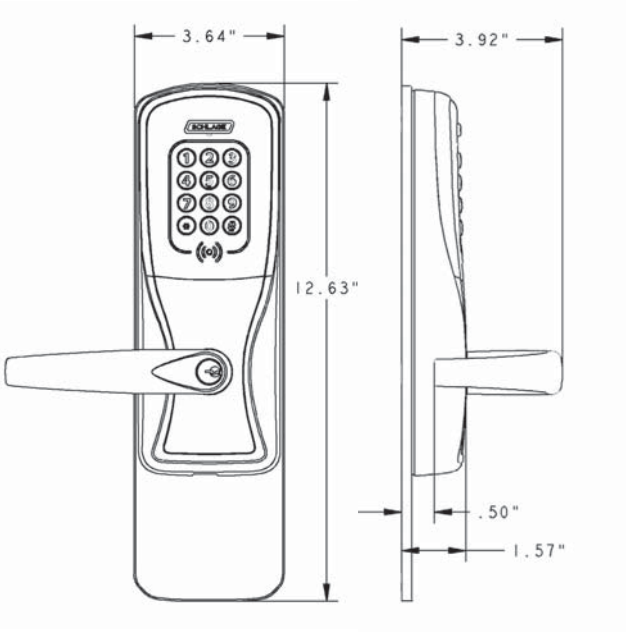


Exterior View

Profile View

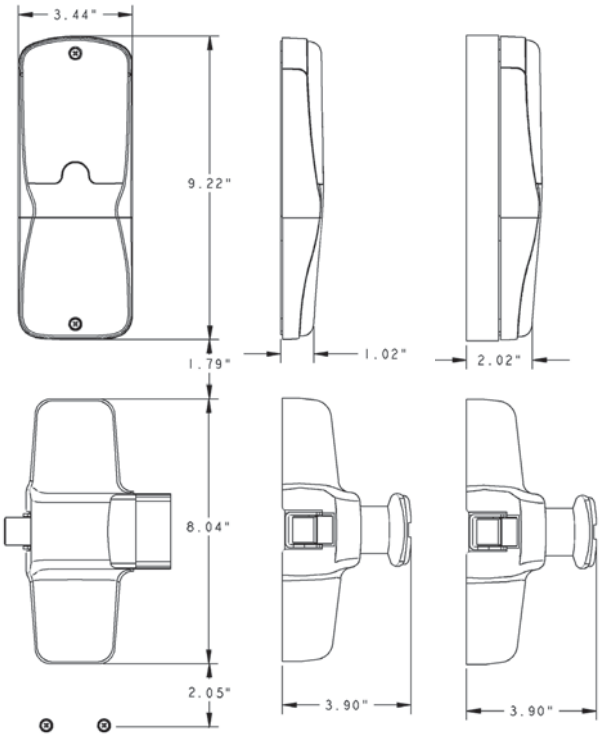
Available AD-Series Reader Modules

- Proximity (125 kHz)
- Smart Card (13.56 MHz)
- Multi-Technology (125 kHz proximity and 13.56 MHz smart card)
- Magnetic Stripe
- Keypad Only
- All credential readers available + Keypad
  - * unlike other AD-Series chassis styles, upgrading reader modules on the 993 Exit Trim requires the exterior escutcheon to be removed from the door

Available Communication Options

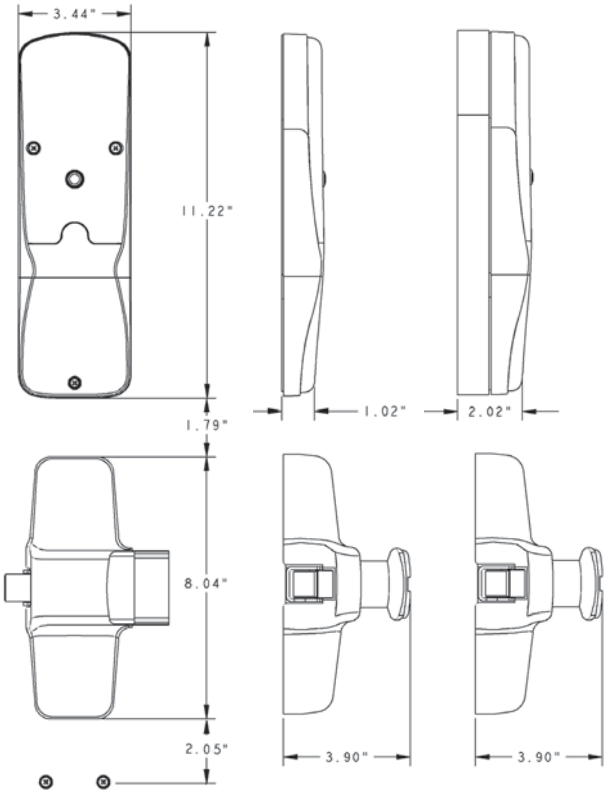
- AD-400: Networked Wireless Locks
- AD-300: Networked Hardwired Locks
- AD-250: Offline, access rights stored on the magnetic stripe credential
- AD-200: Offline, access rights stored on the lock

AD-Series - 993 Exit Trim



Interior View | **Side View** | **Side View**

AD-200/250/300 - all styles | AD-200/250/300 - RIM/CVR or Mortise | AD-200/250/300 SVR



Interior View | **Side View** | **Side View**

AD-400 all styles | AD-400 RIM/CVR or Mortise | AD-400 SVR

** AD-300 includes LED indicator*

Note: (2) #7 fasteners with decorative washers located 11.88″ below bottom edge of lock

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AD-Series

Exit Trim Compatibility

The AD-Series Electronic Lock is available in 993 Exit Trim for use on openings that require exit devices for either retrofit or new construction applications. Offline and networked solutions are available.

The 993 Exit Trim was designed to suite with AD-Series cylindrical and mortise locksets to ensure that the facility remains aesthetically consistent.

The AD-Series 993 Exit Trim utilizes universal hardware to simplify installation of offline trim to a variety of exit devices, including Rim style from Von Duprin, Falcon, Sargent, Corbin Russwin, Dorma, and Yale.

Available Exit Trim Styles:

- 993R – Rim or Concealed Vertical Rod (CVR for metal doors only)
- 993S – Surface Vertical Rod
- 993M – Mortise

Compatibility

Devices	AD-200/250	AD-300	AD-400
Von Duprin 98/99 Rim/SVR/CVR/Mortise	X	X	X
Von Duprin 22/22F Rim/SVR	X		
Falcon 25 Rim/SVR	X		
Sargent 80 Rim	X		
Precision 21 Rim 2100 converts to 21 with Precision's BP21 kit	X		
Yale 7000 Rim	X		
Corbin Russwin 5000 Rim	X		
Dorma 9300 Rim	X		

Note: The AD-300 and AD-400 Exit Trim are exclusively compatible with the Von Duprin 98/99 exit devices utilizing a low current request-to-exit switch (LC-RX).

Features

- Multiple Credential Reader Options
- Offline and Networked Communication Options
- A wide variety of finishes and lever styles
- Power options that include hardwired (12 VDC or 24 VDC) or batteries (4AA or 8AA)
- Compatible with most Standard, FSIC or SFIC keyways from major brands of master key systems including Schlage, Sargent, Corbin, Medeco and Yale

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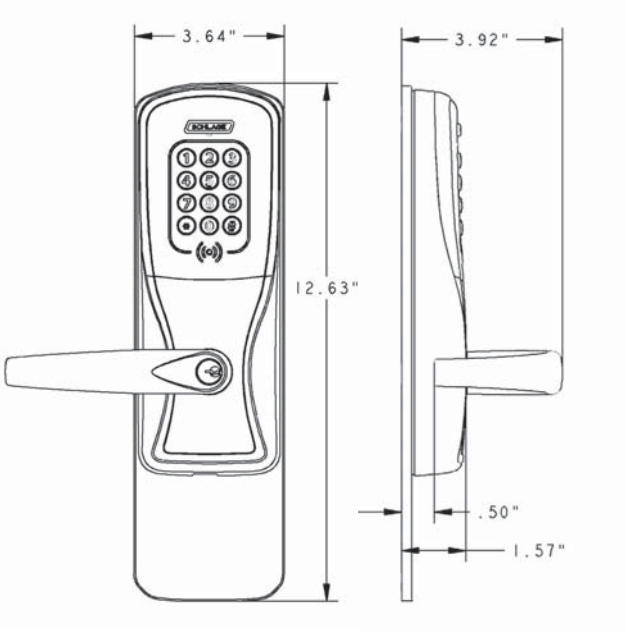


Exterior View

Profile View

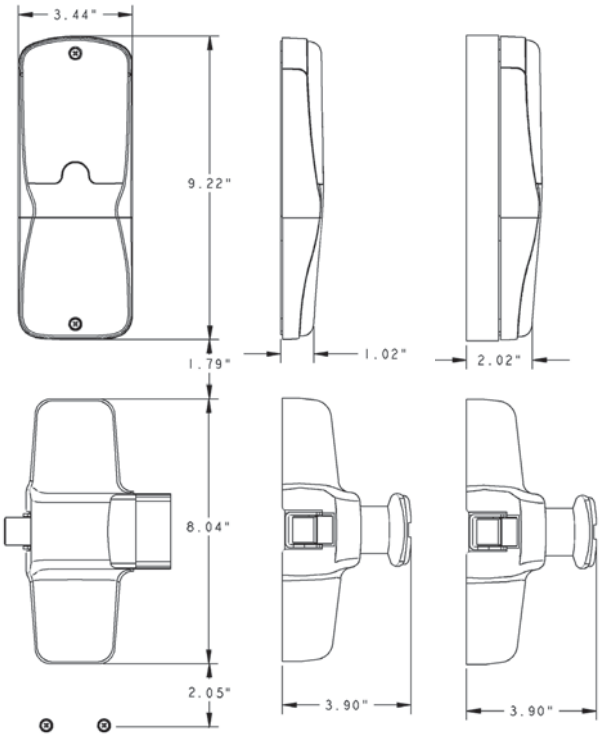
Available AD-Series Reader Modules

- Proximity (125 kHz)
- Smart Card (13.56 MHz)
- Multi-Technology (125 kHz proximity and 13.56 MHz smart card)
- Magnetic Stripe
- Keypad Only
- All credential readers available + Keypad
  - * unlike other AD-Series chassis styles, upgrading reader modules on the 993 Exit Trim requires the exterior escutcheon to be removed from the door

Available Communication Options

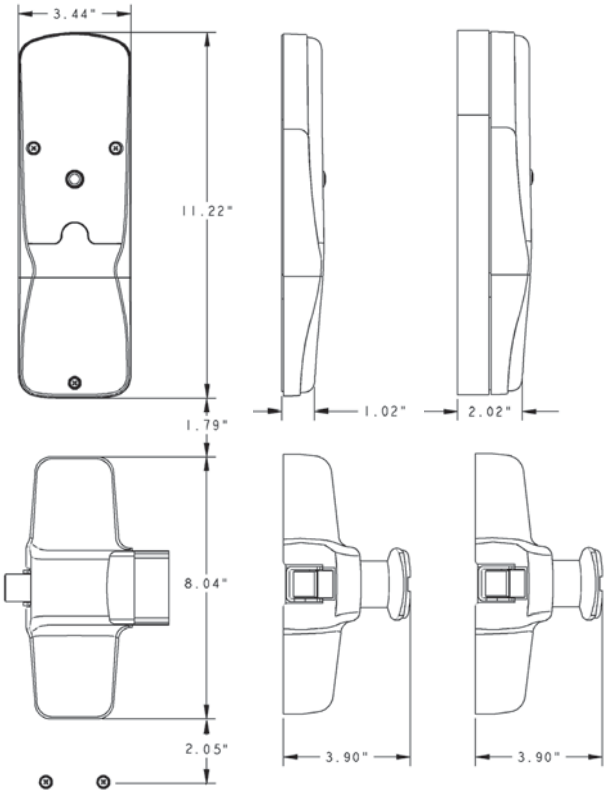
- AD-400: Networked Wireless Locks
- AD-300: Networked Hardwired Locks
- AD-250: Offline, access rights stored on the magnetic stripe credential
- AD-200: Offline, access rights stored on the lock

AD-Series - 993 Exit Trim



Interior View | **Side View** | **Side View**

AD-200/250/300 - all styles | AD-200/250/300 - RIM/CVR or Mortise | AD-200/250/300 SVR



Interior View | **Side View** | **Side View**

AD-400 all styles | AD-400 RIM/CVR or Mortise | AD-400 SVR

** AD-300 includes LED indicator*

Note: (2) #7 fasteners with decorative washers located 11.88″ below bottom edge of lock

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PS902

2 amp Power Supply

Overview

Schlage's comprehensive line of power supplies and option boards were designed to address the changing needs of the access control market.

Installation is simplified by utilizing a flat mounting design and polarized locking connectors for option boards. This new design eliminates the need for racks and side connectors. The flat mounting of the option boards also provides for easier access to the terminal blocks for connection of electrified devices (such as electrified strikes, electromagnetic locks, card readers, etc).

Common to the line of PS900 Series power supplies is a constant output rating at both 12v and 24v settings, universal 120 VAC to 240 VAC input, and polarized option board connectors. New fire alarm interface board mounting allows outputs to be configured as switched (power cut) or unswitched (power continues) when signal provided.

* All PS900 Series of power supplies and option boards have been tested and certified to meet UL294.

Features

- 2A @ 12/24 VDC output, field selectable with jumper
- Class 2 Rated power limited output
- Universal 120 -240 VAC input
- Low voltage DC, regulated and filtered
- Single polarized connector for distribution board
- Fused primary input
- AC input and DC output monitoring circuit w/ LED indicators
- Cover mounted AC input indication
- NEMA 1 enclosure
- Hinged cover w/ lock down screws
- High voltage protective cover

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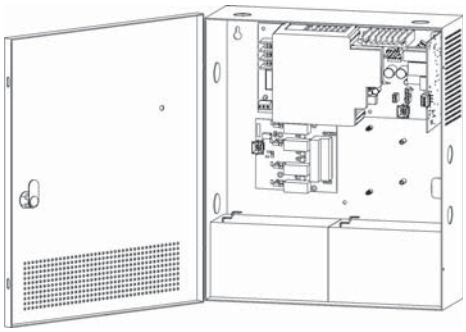
OPTIONS

- Emergency Interface Relay (FA)
- Battery Backup
- 2 relay QEL panic device control board
- 4 relay distribution board
- 4 relay distribution board with logic
  - Field configurable for:
    - Time delay function
    - Auto operator
    - Security interlock
- 8 fused output distribution board
- 8 PTC output distribution board



PS902

PS902 Power Supply Specifications	
Specification	**Description**
Input Voltage	120/240 VAC, 50/60 Hz, universal input
Output Voltage	2A @ 12 or 24 VDC Field selectable with jumper Switching supply, 5% regulation, 240mVpp max ripple
Enclosure	Grey / Baked enamel 14"H x 12"W x 4"D Eight 1/2" x 3/4" Knockouts NEMA Grade 1 Hinged cover with lock down screws
Operating Temperature	32º-120º F (0º-49º C)
Certifications	UL 294 Class 2 RoHS FCC Part 15
Option Board Compatibility	900-BB: Battery Backup 900-FA: Fire Alarm 900-2Q: 2 Relay QEL control Board 900-4R: 4 Relay Output Board 900-4RL: 4 Relay Logic Board 900-8F: Fused 8 Zone Distribution Board 900-8P: PTC 8 Zone Distribution Board
AC Primary Fuse Size	3.15A, 250v, 5 x 20mm SLOW-BLOW
Battery Fuse Size	7.5A 32v ATO blade style
DC Output Protection	Overload protection - current limited foldback circuit
Indicators	LED indicators: -AC input (visible on outside of enclosure) -DC output Isolated SPDT contacts to monitor AC power status
Weight (Power Supply)	Approx. 9.0 lbs
Weight (Each Battery)	4.0 lbs
AC Input Termination	3 position terminal block with protective cover Wire capacity: 10 AWG max.
DC Output Termination	2 position terminal block Wire capacity: 12 AWG max.
Distribution board connectors	1
Fire Alarm board connector	Yes
Keylock	Optional

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AD-Series
Exit Trim Compatibility

Overview

The AD-Series Electronic Lock is available in 993 Exit Trim for use on openings that require exit devices for either retrofit or new construction applications. Offline and networked solutions are available.

The 993 Exit Trim was designed to suite with AD-Series cylindrical and mortise locksets to ensure that the facility remains aesthetically consistent.

The AD-Series 993 Exit Trim utilizes universal hardware to simplify installation of offline trim to a variety of exit devices, including Rim style from Von Duprin, Falcon, Sargent®, Precision™ Corbin Russwin®, Dorma®, and Yale®.

Available Exit Trim Styles:

- 993R – Rim, Concealed Vertical Cable or Concealed Vertical Rod (CVC* and CVR for metal doors only)
- 993S – Surface Vertical Rod
- 993M – Mortise

Compatibility			
Devices	**AD-200/250**	**AD-300/301**	**AD-400/401**
Von Duprin 98/99 and 98/99XP Rim/SVR/CVR*/ CVC*/Mortise	X	X	X
Von Duprin 22/22F Rim/SVR	X	X	X
Falcon 25 Rim	X	X	X
Sargent® 80 Rim	X		
Precision™ 21 Rim (2100 converts to 21 with Precision's BP21 kit)	X		
Yale® 7000 Rim	X		
Corbin Russwin® 5000 Rim	X		
Dorma® 9300 Rim	X		

The proper low current request to exit switch (RX-LC) is required for AD-300/301 and AD-400/401.

Part Numbers for Request to Exit Switch:

- Von Duprin: 050281
- Falcon: 650359

Features and Benefits

- Multiple Credential Reader Options
- Offline and Networked Communication Options
- A wide variety of finishes and lever styles
- Power options that include hardwired (12 VDC or 24 VDC) or batteries (4AA or 8AA)
- Compatible with most Standard, FSIC or SFIC keyways from major brands of master key systems including Schlage, Sargent®, Corbin®, Medeco® and Yale®

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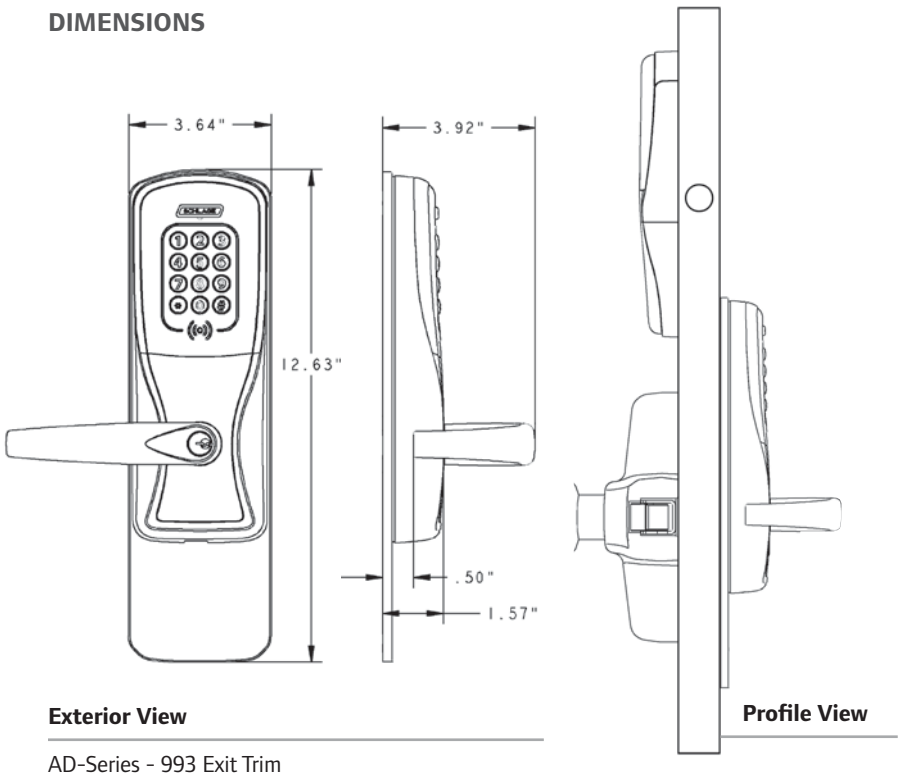
DIMENSIONS



Exterior View

Profile View

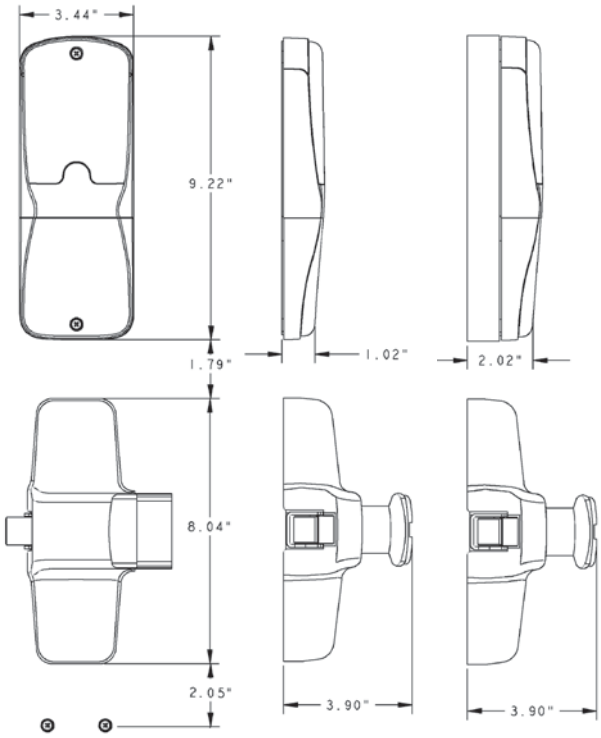
AD-Series - 993 Exit Trim

Available AD-Series Reader Modules

- Multi-Technology (125 kHz proximity and 13.56 MHz smart card)
- FIPS 201-1 Compliant Multi-Technology (125 kHz proximity and 13.56 MHz smart card) sold complete with AD-301 and AD-401 only
- Magnetic Stripe
- Keypad Only
- All credential readers available + Keypad
  - * unlike other AD-Series chassis styles, upgrading reader modules on the 993 Exit Trim requires the exterior escutcheon to be removed from the door

Available Communication Options

- AD-400: Networked Wireless Locks
- AD-401: Networked Wireless Locks - FIPS 201-1 compliant
- AD-300: Networked Hardwired Locks
- AD-301: Networked Hardwired Locks - FIPS 201-1 compliant
- AD-250: Offline, access rights stored on the magnetic stripe credential
- AD-200: Offline, access rights stored on the lock

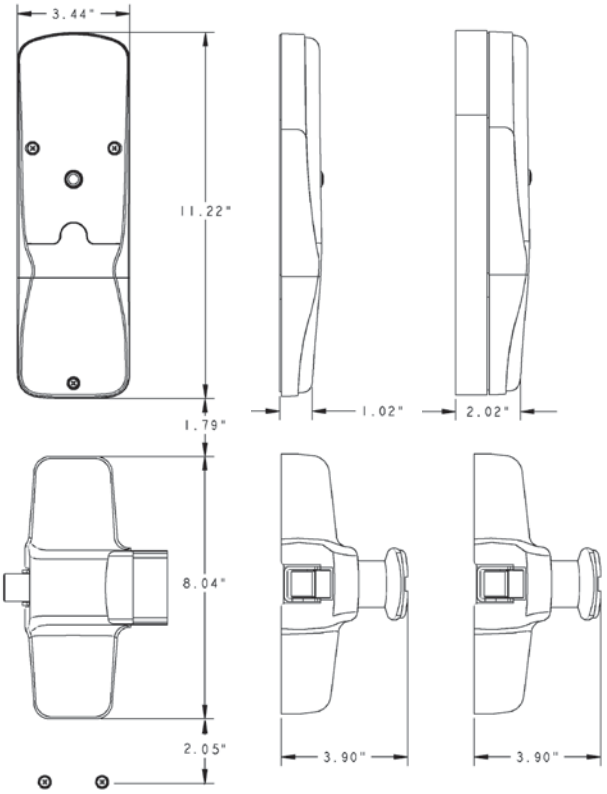


Interior View | **Side View** | **Side View**

AD-200/250/300*/301* - all styles

AD-200/250/300*/301* - RIM/CVR/CVC or Mortise

AD-200/250/300*/301* SVR



Interior View | **Side View** | **Side View**

AD-400/401 all styles

AD-400/401 RIM/CVR/CVC or Mortise

AD-400/401 SVR

** AD-300/301 includes LED indicator*

Note: (2) #7 fasteners with decorative washers located 11.88" below bottom edge of lock

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SCHLAGE

Security Management System

Model SMR10 and SMR20

Mercury Magnetic Stripe Readers

Overview

The SMR10 Mercury Magnetic Stripe Reader has a slim, mullion style design. The die cast metal housing makes it ideal for indoor or outdoor applications.

The SMR20 Mercury Magnetic Stripe Reader has a slim, mullion style design. The die cast metal housing makes it ideal for indoor or outdoor applications. The keypad is a 12 position membrane style.

FEATURES & BENEFITS

- Rugged Metal Housing
- All stainless steel hardware is standard
- Audiovisual indication provides Two LED's (red/green) and beeper sounds
- Static Discharge Protection
- Accepts low or high coercivity-magnetic cards
- Standard Track 2 encoding (Track 1 & 3 are available)
- One security screw mounting
- Supports Wiegand or Clock & Data interface formats via Dip Switches

SPECIFICATIONS:

- Dimensions: 1.95"W x 1.3"H x 5.5"L
- Power requirements: 5 or 12 VDC
- Power consumption 20 mA at 12 VDC
- Operating temperature: -40F to 170F
- Weight: 10 oz.
- Cable distance: 500' with 18AWG 6 conductor stranded with overall shield

ORDERING INFORMATION:

SMR10 - 5VDC Magnetic Stripe Card Reader (specify black or beige)

SMR10-12V - 12VDC Magnetic Stripe Card Reader (specify black or beige)

SMR20 - 5VDC Magnetic Stripe Card Reader w/keypad (specify black or beige)

SMR20-12V - 12VDC Magnetic Stripe Card Reader w/ keypad (specify black or beige)

Schlage
Electronic Security
575 Birch Street
Forestville, CT 06010 USA
Tel 860-584-9158/866-322-1237
Fax 860-584-2136/866-322-1233
Tel 800-950-4573 (Toll Free Canada)
www.schlage.com

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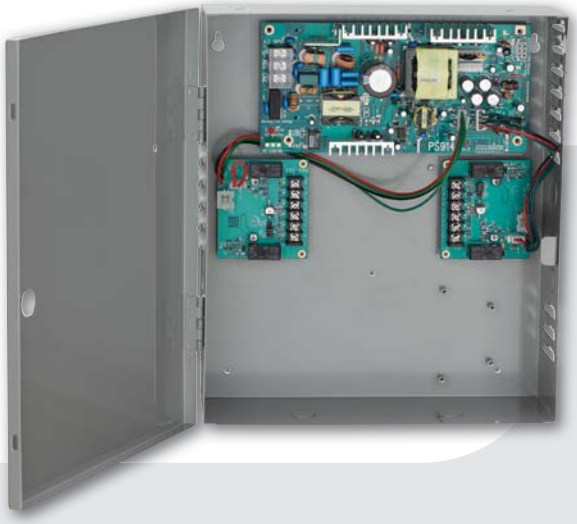
VON DUPRIN®

PS914

4 amp Power Supply
High Inrush model



Overview

Von Duprin's power supply and option boards were designed to meet the specific requirements of electrified panic devices.

Installation is simplified by utilizing a flat mounting design and polarized locking connectors for option boards. This new design eliminates the need for racks and side connectors. The flat mounting of the option boards also provides for easier access to the terminal blocks for connection of electrified devices (such as electrified panic devices, strikes, card readers, etc).

Common to the line of PS900 Series power supplies is a constant output rating at both 12v and 24v settings, universal 120 VAC to 240 VAC input, and polarized option board connectors. New fire alarm interface board mounting allows outputs to be configured as switched (power cut) or unswitched (power continues) when signal provided.

* All PS900 Series of power supplies and option boards have been tested and certified to meet UL294.

Features

- 4A @ 12/24 VDC output, field selectable with jumper
- Designed with high in rush current for powering electrified panic devices
- Universal 120 -240 VAC input
- Low voltage DC, regulated and filtered
- Electronic power limiting foldback circuit for AC current overload protection
- Two polarized connectors for distribution boards
- Fused primary input
- AC status monitor - isolated SPDT contacts
- AC input and DC output LED status indicators
- Cover mounted AC input indication
- Hinged cover w/ lock down screws
- High voltage protective cover

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OPTIONS

- Fire Alarm Relay (FA)
  - *Must be installed on distribution boards*
- Battery Backup
- 2 relay EL panic device control board
- 2 relay QEL panic device control board
- 4 relay distribution board
- 4 relay distribution board with logic
  - Field configurable for:
    - Time delay function
    - Auto operator
    - Security interlock
- 8 fused output distribution board
- 8 PTC output distribution board

PS914Power Supply Specifications	
Specification	**Description**
Input Voltage	120/240 VAC, 50/60 Hz, universal input
Output Voltage	4A @ 12 or 24 VDC Field selectable with jumper Switching supply, 5% regulation, 360mVpp max ripple
Enclosure	Grey / Baked enamel 14"H x 12"W x 4"D Eight 1/2" x 3/4" Knockouts Hinged cover with lock down screws
Operating Temperature	32º-120º F (0º-49º C)
Certifications	UL 294 RoHS FCC Part 15 Class 2
Option Board Compatibility	900-BB: Battery Backup 900-FA: Fire Alarm *(Must be installed on distribution boards)* 900-2RS: 2 Relay EL panic device control board 900-2Q: 2 Relay QEL panic device control Board 900-4R: 4 Relay Output Board 900-4RL: 4 Relay Logic Board 900-8F: Fused 8 Zone Distribution Board 900-8P: PTC 8 Zone Distribution Board
AC Primary Fuse Size	6.3A, 250v, 5 x 20mm SLOW-BLOW
Battery Fuse Size	7.5A 32v ATO blade style
DC Output Protection	Overload protection - current limited foldback circuit
Indicators	LED indicators: -AC input (visible on outside of enclosure) -DC output Isolated SPDT contacts to monitor AC power status
Weight (Power Supply)	Approx. 9.0 lbs
Weight (Each Battery)	4.0 lbs
AC Input Termination	3 position terminal block with protective cover Wire capacity: 10 AWG max.
DC Output Termination	2 position terminal block Wire capacity: 12 AWG max.
Distribution board connectors	2
Fire Alarm board connector	No
Keylock	Optional

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299 Strike

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).

The 98/99 devices are available in the following finishes: US3, US4, US10, US26, US26D, US28, 313AN, 315AN and US32D for the 98 device only. See page 52 for component finishes and the inside cover for finish chips.

Specifications

Device Functions	Device ships EO/DT/NL. Field selectable. For TP,K,or L remove NL drive screw from device		
Device Lengths	3'	2'4" to 3' (711mm to 914 mm) Door Size	
	4'	2'10" to 4' (864 mm to 1219 mm) Door Size	
Strikes	299 – Dull Black Optional Strikes – see page 39		
Dogging Feature	Hex key dogging standard		
Dogging Options	CD	Cylinder Dogging	see page 48
	SD	Special Center Case Dogging	see page 48
	LD	Less Dogging	see page 48
Electric Options	LX	Latchbolt Monitor Switch	see page 42
	RX	Pushpad Monitor Switch	see page 42
	RX2	Double Pushpad Monitor Switch	see page 42
	E	Electric Locking & 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
Miscellaneous Options	PN	Pneumatic Latch Retraction	see page 48
	-2	Double Cylinder	see page 48
	GBK	Glass Bead Kit	see page 49
Fasteners & Sex Bolts (SNB)	Includes 1 ¾" (19mm) – 2 ¼" (57mm) Wood & Metal Doors Optional SNB available for device, see next page for quantities		
Latch Bolt	Deadlocking, ¾" (19mm) throw		
Device Centerline from Finished Floor	39 13⁄16" (1011 mm) 39 11⁄16" (1008 mm) with Mullion		
Center Case Dimensions	8" x 2 ¾" x 2 ⅜" (203mm x 70mm x 60mm)		
Mechanism Case Dimensions	2 ¼" x 2 ¼" (57mm x 57mm)		
Projection	Pushbar Neutral – 3 13⁄16" (97 mm) Pushbar Depressed – 3 1⁄16" (78 mm)		

See page 53 for How to Order specification

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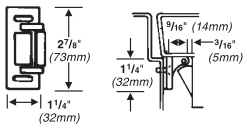
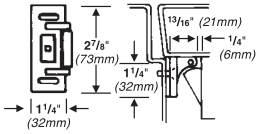
Strikes for rim devices

264



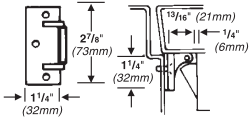
Projection 9/16" (14mm)

299



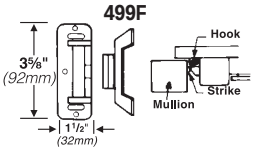
Projection 13/16" (21mm)

299F



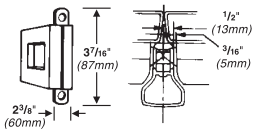
Projection 13/16" (21mm)

499F



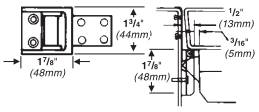
Projection 15/16" (24mm)

1408



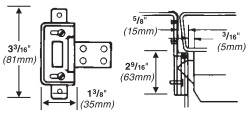
One per pair of doors

1439–Blade Stop



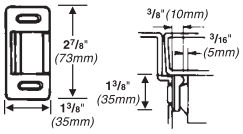
Projection 1/2" (13mm)

1410–Integral Stop



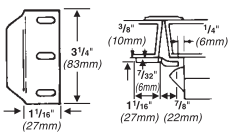
Projection 1/2" (13mm)

1606



Projection 3/8" (10mm)
Panic Devices Only

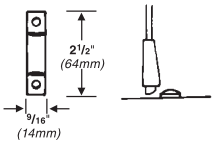
1609



- Requires Coordinator
- For Fire Rated Application, consult factory

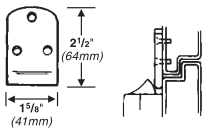
Strikes for vertical rod devices

248L-4



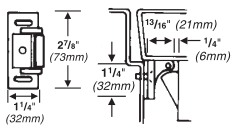
Projection 3/8" (10mm)

260U–Flush Transom Only



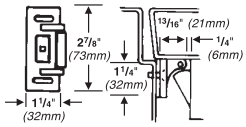
Projection 3/8" (10mm)
For Fire Rated Application, consult factory

299



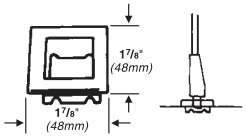
Projection 13/16" (21mm)

299F



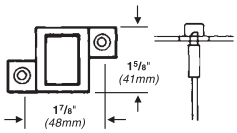
Projection 13/16" (21mm)

304L



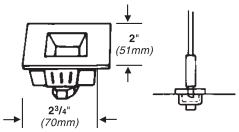
Mortise 13/16" (21mm)

338



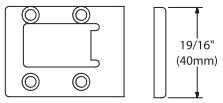
Mortise 5/8" (16mm)

385A



Mortise 2-1/2" (64mm)

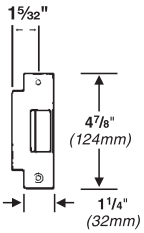
283



For use with WDC devices
when used with wood frames

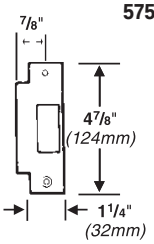
Strikes for mortise lock devices

575



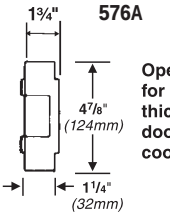
For use on 1 3/4" *(44mm)* or 2 1/4" *(57mm)* Single door and 2 1/4" *(57mm)* double door with coordinator.

575-2



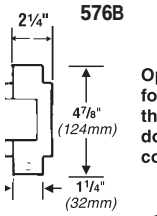
For use on 1 3/4" *(44mm)* thick double door with coordinator and astragal

576A



Open back strike for 1 3/4" *(44mm)* thick double doors without coordinator.

576B



Open back strike for 2 1/4" *(57mm)* thick double doors without coordinator.

- Not for use with astragals
- Not for use on wood doors
- Acceptable for 90 minute pair of hollow metal doors

	Exit only	**Dummy Trim** Pull when Dogged	**Night Latch** Key Retracts Latchbolt	**Night Latch** Key Retracts Latchbolt Optional Pull Required
Product Description	98EO 99EO	98DT 99DT	98NL 99NL	98NL-OP 99NL-OP
Trim Description	—	990DT	990NL-R/V	110NL-MD 110NL-WD
Escutcheon Plate Size	—	3" x 14³⁄₁₆" x ³⁄₃₂" *(76x360x2mm)*	3" x 14³⁄₁₆" x ³⁄₃₂" *(76x360x2mm)*	—
Pull Center to Center	—	5½" *(140mm)*	5½" *(140mm)*	—
Projection	—	2" *(51mm)*	2" *(51mm)*	—
ANSI Function	01	02	03	03
Cylinder Type	—	—	Rim	Rim
Optional Trim (See pages 32 – 34)	x990EO x992EO x994EO x996EO	x991K-DT x992L-DT x994L-DT x996L-DT x696DT x697DT	x991K-NL x992L-NL x994L-NL x996L-NL x696NL x697NL	
Optional #425 Sex Bolt Quantity for Device	6	2	2	6

	Lever Key Locks & Unlocks	**Lever – Night Latch** Key Retracts Latchbolt	**Lever – Blank Escutcheon** Always operable (No Cylinder)	**Lever Dummy Trim** Pull when Dogged
Product Description	98L 99L	98L-NL 99L-NL	98L-BE 99L-BE	98L-DT 99L-DT
Trim Description	996L-R/V	996L-NL-R/V	996L-BE-R/V	996L-DT-R/V
Escutcheon Plate Size	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*
Pull Center to Center	—	—	—	—
Projection	2⅞" *(73mm)*	2⅞" *(73mm)*	2⅞" *(73mm)*	2⅞" *(73mm)*
ANSI Function	08	09	—	02
Cylinder Type	Rim	Rim	—	—
Optional Trim (See pages 32 – 34)	x992L x994L	x992L-NL x994L-NL	x992L-BE x994L-BE	x992L-DT x994L-DT
Optional #425 Sex Bolt Quantity for Device	2	2	2	2

For optional trims and functions see pages 32-34

RX (request to exit) signal switch feature is used to signal the use of an opening from the push side. When the push pad is depressed, the switch is activated. These devices are equipped with an internal SPDT (single pole double throw) switch that monitors the touch bar. **See Low Current option for computer operated system applications.**

RX2 (double request to exit) features 2 RX switches.

LX (latchbolt monitoring) signal switch monitors both egress and access of an opening. When the latchbolt is retracted, the switch is activated. These devices are equipped with an internal SPDT (single pole double throw) switch that monitors the latchbolt position. **See Low Current option for computer operated system applications.**

LC (low current) option is available for RX and LX switches. **(Most commonly used in computer operated monitoring systems.)** The RX2 is not available in low current.

Signal Switches are available on 22, 33A, 35A, 55, 88, 98, 99 series devices. The low current version is not available with the 55 and 88 series devices.

The INPACT 94/95 series devices are only available with the LX switch option.

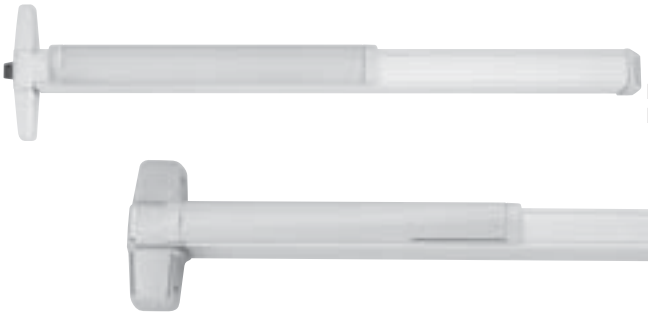
The device can be connected to a security console, or may be used as a single door alarm, when used with a horn and power supply. A continuous current electric transfer must be used for transferring the signal from the frame to the door.

Signal Switches can be used in combination with other electrical functions (EL, E).

- RX or RX2 may be combined with the E (electric unlocking) mortise lock device.
- For latchbolt monitoring on a mortise lock device, specify a SS7500 lock.
- LX and RX switches can be combined. Example: LX-RX99L.
- LX, RX or RX2 switches can be used in combination with EL (electric latch retraction) option.

RX, RX2 and LX switches are available for factory or field installation.

RX and LX switches should not be used to control a load, but as a signaling switch.



LX33A/LX35A
RX33A/RX35A

LX98/LX99
RX98/RX99

Rim device shown — Refer to 33A/35A or 98/99 series catalog for complete product information, mounting styles, outside trim, finishes, etc.

To Order, Specify:

For Factory Installed:

Prefix:	RX	Request to Exit
	RX2	Double Request to Exit
	LX	Latchbolt Monitoring
	LXRX	Latchbolt Monitoring/Request to Exit Combination
	RXLC	Low Current Request to Exit
	LXLC	Low Current Latchbolt Monitoring
	LXRXLC	Low Current Latchbolt Monitoring/Request to Exit Combination

Example: RX99L

For Field Installed:

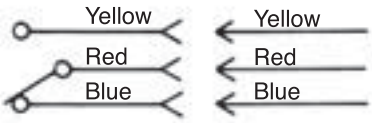
1. Specify switch option (RX, LX, RX-LC, LX-LC).
2. Specify "field".
3. For LX, specify device size 3′ or 4′.
4. For LX, specify if used with EL (electric latch retraction) option.
5. To convert an existing RX option to RX2, specify RX-AUX.

Example: LX 3′ Field

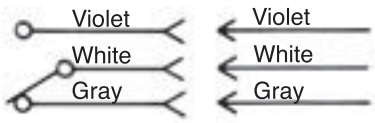
SPECIFICATIONS
RX or LX:
Switch rated 0.5 amperes @ 24VAC/DC resistive
Low Current RX or LX
Switch rated 0.05 amperes @ 24VAC/DC resistive

UL listed FVSR SA163 panic hardware and/or GXHX R4504(N) fire exit hardware — consult device catalog for complete device listing information.

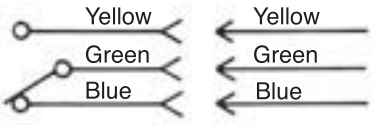
RX Wiring



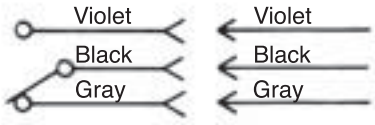
LX Wiring



RX-LC Wiring



LX-LC Wiring



299F Strike

499F Strike
With 9854/9954
Mullion

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.

The 98-F/99-F devices are available in the following finishes: US3, US4, US10, US26, US26D, US28, 313AN, 315AN and US32D for the 98-F device only. See page 52 for component finishes and the inside cover for finish chips.

Specifications

Device Functions	Device ships EO/DT/NL. Field selectable. For TP,K,or L remove NL drive screw from device	
Device Lengths	3' 2'4" to 3' (711mm to 914 mm) Door Size 4' 2'10" to 4' (864 mm to 1219 mm) Door Size	
Strikes	299F – Dull Black, 499F with Mullions Optional Strikes – see page 39	
Dogging Feature	No Mechanical Dogging, EL option available	
Electric Options	LX Latchbolt Monitor Switch RX Pushpad Monitor Switch RX2 Double Pushpad Monitor Switch E Electric Locking & Unlocking EL Electric Latch Retraction SS Signal Switch CX Chexit Delayed Exit ALK Alarm Exit Kit	see page 42 see page 42 see page 42 see page 44 see page 43 see page 43 see page 45 see page 42
Miscellaneous Options	PN Pneumatic Latch Retraction -2 Double Cylinder GBK Glass Bead Kit	see page 48 see page 48 see page 49
Fasteners & Sex Bolts (SNB)	Includes 1 ¾" (19mm) – 2 ¼" (57mm) Wood & 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	
Latch Bolt	Deadlocking, ¾" (19mm) throw	
Device Centerline from Finished Floor	39 13⁄16" (1011 mm) 39 11⁄16" (1008 mm) with Mullion	
Center Case Dimensions	8" x 2 ¾" x 2 ⅜" (203mm x 70mm x 60mm)	
Mechanism Case Dimensions	2 ¼" x 2 ¼" (57mm x 57mm)	
Projection	Pushbar Neutral – 3 13⁄16" (97 mm) Pushbar Depressed – 3 1⁄16" (78 mm)	

See page 53 for How to Order specification

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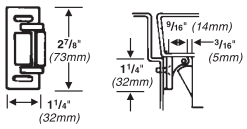
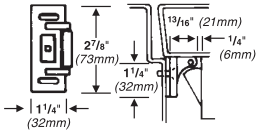
Strikes for rim devices

264



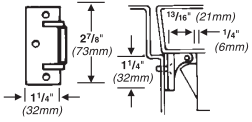
Projection 9/16" (14mm)

299



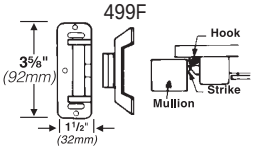
Projection 13/16" (21mm)

299F



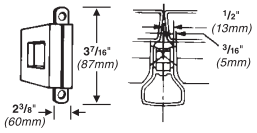
Projection 13/16" (21mm)

499F



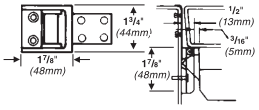
Projection 15/16" (24mm)

1408



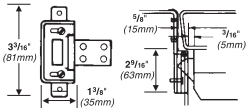
One per pair of doors

1439–Blade Stop



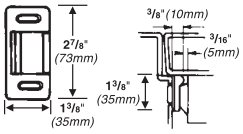
Projection 1/2" (13mm)

1410–Integral Stop



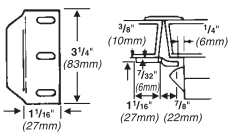
Projection 1/2" (13mm)

1606



Projection 3/8" (10mm)
Panic Devices Only

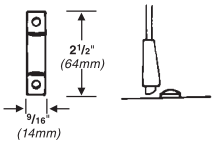
1609



- Requires Coordinator
- For Fire Rated Application, consult factory

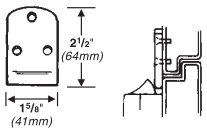
Strikes for vertical rod devices

248L-4



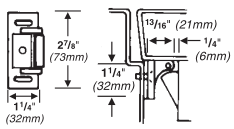
Projection 3/8" (10mm)

260U–Flush Transom Only



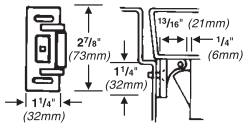
Projection 3/8" (10mm)
For Fire Rated Application, consult factory

299



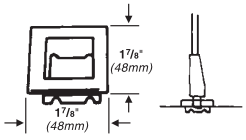
Projection 13/16" (21mm)

299F



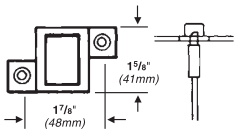
Projection 13/16" (21mm)

304L



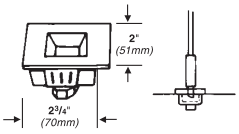
Mortise 13/16" (21mm)

338



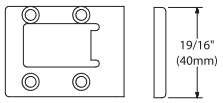
Mortise 5/8" (16mm)

385A



Mortise 2-1/2" (64mm)

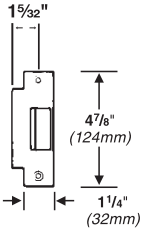
283



For use with WDC devices
when used with wood frames

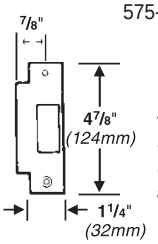
Strikes for mortise lock devices

575



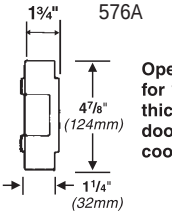
For use on 1 3/4" *(44mm)* or 2 1/4" *(57mm)* Single door and 2 1/4" *(57mm)* double door with coordinator.

575-2



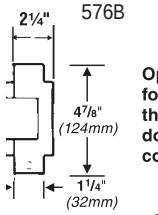
For use on 1 3/4" *(44mm)* thick double door with coordinator and astragal

576A



Open back strike for 1 3/4" *(44mm)* thick double doors without coordinator.

576B



Open back strike for 2 1/4" *(57mm)* thick double doors without coordinator.

- Not for use with astragals
- Not for use on wood doors
- Acceptable for 90 minute pair of hollow metal doors

	Exit only	Dummy Trim Pull when Dogged (Not recommened for Fire Device) 	Night Latch Key Retracts Latchbolt 	Night Latch Key Retracts Latchbolt Optional Pull Required
Product Description	98EO-F 99EO-F	— —	98NL-F 99NL-F	98NL-OP-F 99NL-OP-F
Trim Description	—	990DT	990NL-R/V	110NL-MD 110NL-WD
Escutcheon Plate Size	—	3" x 14³⁄₁₆" x ³⁄₃₂" *(76x360x2mm)*	3" x 14³⁄₁₆" x ³⁄₃₂" *(76x360x2mm)*	—
Pull Center to Center	—	5½" *(140mm)*	5½" *(140mm)*	—
Projection	—	2" *(51mm)*	2" *(51mm)*	—
ANSI Function	01	02	03	03
Cylinder Type	—	—	Rim	Rim
Optional Trim (See pages 32 – 34)	x990EO x992EO x994EO x996EO	x991K-DT x992L-DT x994L-DT x996L-DT x696DT x697DT	x991K-NL x992L-NL x994L-NL x996L-NL x696NL x697NL	
#425 SNB optional-HMD Req. WD w/o SLM Pkg.	6	2	2	6
#825 SNB Req. WD w/o SLM Pkg.	2	2	2	2
#425 SNB Req. w/ 499F	2	2	2	2

	Lever Key Locks & Unlocks 	Lever – Night Latch Key Retracts Latchbolt 	Lever – Blank Escutcheon Always operable (No Cylinder) 	Lever Dummy Trim Pull when Dogged (Not recommened for Fire Device)
Product Description	98L-F 99L-F	98L-NL-F 99L-NL-F	98L-BE-F 99L-BE-F	— —
Trim Description	996L-R/V	996L-NL-R/V	996L-BE-R/V	996L-DT-R/V
Escutcheon Plate Size	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*
Pull Center to Center	—	—	—	—
Projection	2⅞" *(73mm)*	2⅞" *(73mm)*	2⅞" *(73mm)*	2⅞" *(73mm)*
ANSI Function	08	09	—	02
Cylinder Type	Rim	Rim	—	—
Optional Trim (See pages 32 – 34)	x992L x994L	x992L-NL x994L-NL	x992L-BE x994L-BE	x992L-DT x994L-DT
#425 SNB optional-HMD Req. WD w/o SLM Pkg.	2	2	2	2
#825 SNB Req. WD w/o SLM Pkg.	2	2	2	2
#425 SNB Req. w/ 499F	2	2	2	2

For optional trims and functions see pages 32-34

RX (request to exit) signal switch feature is used to signal the use of an opening from the push side. When the push pad is depressed, the switch is activated. These devices are equipped with an internal SPDT (single pole double throw) switch that monitors the touch bar. **See Low Current option for computer operated system applications.**

RX2 (double request to exit) features 2 RX switches.

LX (latchbolt monitoring) signal switch monitors both egress and access of an opening. When the latchbolt is retracted, the switch is activated. These devices are equipped with an internal SPDT (single pole double throw) switch that monitors the latchbolt position. **See Low Current option for computer operated system applications.**

LC (low current) option is available for RX and LX switches. **(Most commonly used in computer operated monitoring systems.)** The RX2 is not available in low current.

Signal Switches are available on 22, 33A, 35A, 55, 88, 98, 99 series devices. The low current version is not available with the 55 and 88 series devices.

The INPACT 94/95 series devices are only available with the LX switch option.

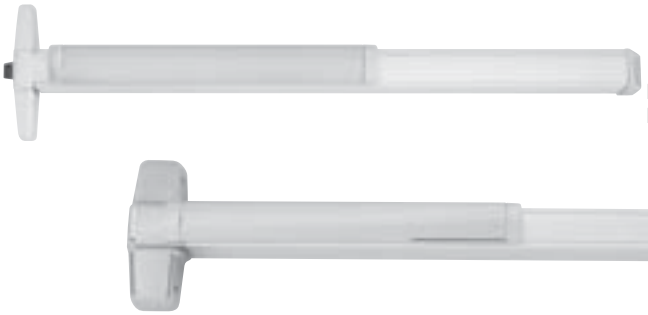
The device can be connected to a security console, or may be used as a single door alarm, when used with a horn and power supply. A continuous current electric transfer must be used for transferring the signal from the frame to the door.

Signal Switches can be used in combination with other electrical functions (EL, E).

- RX or RX2 may be combined with the E (electric unlocking) mortise lock device.
- For latchbolt monitoring on a mortise lock device, specify a SS7500 lock.
- LX and RX switches can be combined. Example: LX-RX99L.
- LX, RX or RX2 switches can be used in combination with EL (electric latch retraction) option.

RX, RX2 and LX switches are available for factory or field installation.

RX and LX switches should not be used to control a load, but as a signaling switch.



LX33A/LX35A
RX33A/RX35A

LX98/LX99
RX98/RX99

Rim device shown — Refer to 33A/35A or 98/99 series catalog for complete product information, mounting styles, outside trim, finishes, etc.

To Order, Specify:

For Factory Installed:

Prefix:	RX	Request to Exit
	RX2	Double Request to Exit
	LX	Latchbolt Monitoring
	LXRX	Latchbolt Monitoring/Request to Exit Combination
	RXLC	Low Current Request to Exit
	LXLC	Low Current Latchbolt Monitoring
	LXRXLC	Low Current Latchbolt Monitoring/Request to Exit Combination

Example: RX99L

For Field Installed:

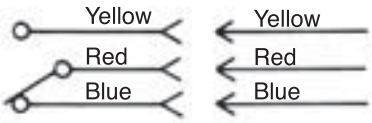
1. Specify switch option (RX, LX, RX-LC, LX-LC).
2. Specify "field".
3. For LX, specify device size 3′ or 4′.
4. For LX, specify if used with EL (electric latch retraction) option.
5. To convert an existing RX option to RX2, specify RX-AUX.

Example: LX 3′ Field

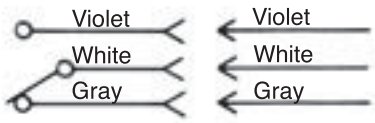
SPECIFICATIONS
RX or LX:
Switch rated 0.5 amperes @ 24VAC/DC resistive
Low Current RX or LX
Switch rated 0.05 amperes @ 24VAC/DC resistive

UL listed FVSR SA163 panic hardware and/or GXHX R4504(N) fire exit hardware — consult device catalog for complete device listing information.

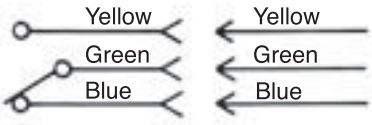
RX Wiring



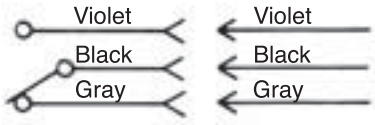
LX Wiring



RX-LC Wiring



LX-LC Wiring



299F Strike

499F Strike
With 9854/9954
Mullion

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.

The 98-F/99-F devices are available in the following finishes: US3, US4, US10, US26, US26D, US28, 313AN, 315AN and US32D for the 98-F device only. See page 52 for component finishes and the inside cover for finish chips.

Specifications

Device Functions	Device ships EO/DT/NL. Field selectable. For TP,K,or L remove NL drive screw from device	
Device Lengths	3' 2'4" to 3' (711mm to 914 mm) Door Size 4' 2'10" to 4' (864 mm to 1219 mm) Door Size	
Strikes	299F – Dull Black, 499F with Mullions Optional Strikes – see page 39	
Dogging Feature	No Mechanical Dogging, EL option available	
Electric Options	LX Latchbolt Monitor Switch RX Pushpad Monitor Switch RX2 Double Pushpad Monitor Switch E Electric Locking & Unlocking EL Electric Latch Retraction SS Signal Switch CX Chexit Delayed Exit ALK Alarm Exit Kit	see page 42 see page 42 see page 42 see page 44 see page 43 see page 43 see page 45 see page 42
Miscellaneous Options	PN Pneumatic Latch Retraction -2 Double Cylinder GBK Glass Bead Kit	see page 48 see page 48 see page 49
Fasteners & Sex Bolts (SNB)	Includes 1 ¾" (19mm) – 2 ¼" (57mm) Wood & 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	
Latch Bolt	Deadlocking, ¾" (19mm) throw	
Device Centerline from Finished Floor	39 13⁄16" (1011 mm) 39 11⁄16" (1008 mm) with Mullion	
Center Case Dimensions	8" x 2 ¾" x 2 ⅜" (203mm x 70mm x 60mm)	
Mechanism Case Dimensions	2 ¼" x 2 ¼" (57mm x 57mm)	
Projection	Pushbar Neutral – 3 13⁄16" (97 mm) Pushbar Depressed – 3 1⁄16" (78 mm)	

See page 53 for How to Order specification

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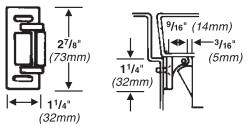
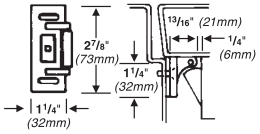
Strikes for rim devices

264



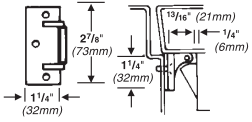
Projection 9/16" (14mm)

299



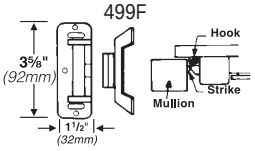
Projection 13/16" (21mm)

299F



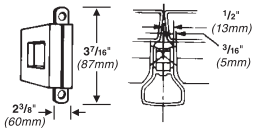
Projection 13/16" (21mm)

499F



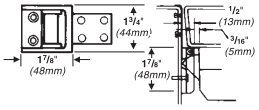
Projection 15/16" (24mm)

1408



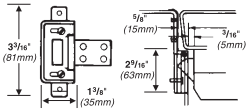
One per pair of doors

1439–Blade Stop



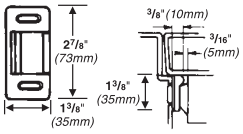
Projection 1/2" (13mm)

1410–Integral Stop



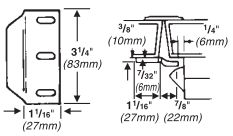
Projection 1/2" (13mm)

1606



Projection 3/8" (10mm)
Panic Devices Only

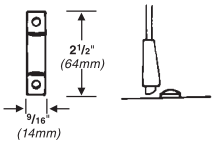
1609



- Requires Coordinator
- For Fire Rated Application, consult factory

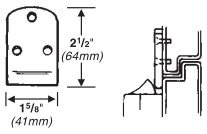
Strikes for vertical rod devices

248L-4



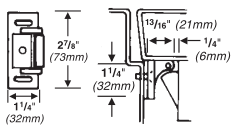
Projection 3/8" (10mm)

260U–Flush Transom Only



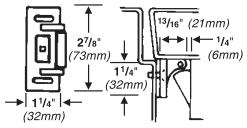
Projection 3/8" (10mm)
For Fire Rated Application, consult factory

299



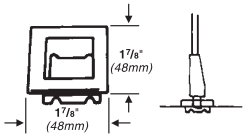
Projection 13/16" (21mm)

299F



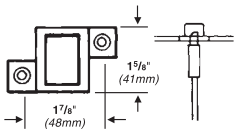
Projection 13/16" (21mm)

304L



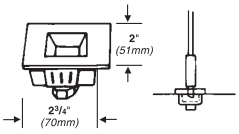
Mortise 13/16" (21mm)

338



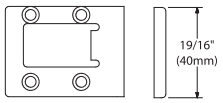
Mortise 5/8" (16mm)

385A



Mortise 2-1/2" (64mm)

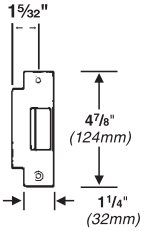
283



For use with WDC devices
when used with wood frames

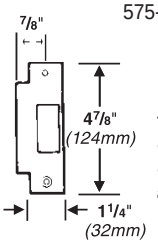
Strikes for mortise lock devices

575



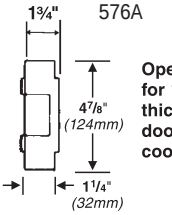
For use on 1 3/4" *(44mm)* or 2 1/4" *(57mm)* Single door and 2 1/4" *(57mm)* double door with coordinator.

575-2



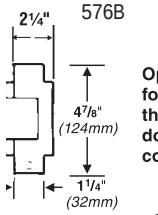
For use on 1 3/4" *(44mm)* thick double door with coordinator and astragal

576A



Open back strike for 1 3/4" *(44mm)* thick double doors without coordinator.

576B



Open back strike for 2 1/4" *(57mm)* thick double doors without coordinator.

- Not for use with astragals
- Not for use on wood doors
- Acceptable for 90 minute pair of hollow metal doors

	Exit only	Dummy Trim Pull when Dogged (Not recommened for Fire Device) 	Night Latch Key Retracts Latchbolt 	Night Latch Key Retracts Latchbolt Optional Pull Required
Product Description	98EO-F 99EO-F	— —	98NL-F 99NL-F	98NL-OP-F 99NL-OP-F
Trim Description	—	990DT	990NL-R/V	110NL-MD 110NL-WD
Escutcheon Plate Size	—	3" x 14³⁄₁₆" x ³⁄₃₂" *(76x360x2mm)*	3" x 14³⁄₁₆" x ³⁄₃₂" *(76x360x2mm)*	—
Pull Center to Center	—	5½" *(140mm)*	5½" *(140mm)*	—
Projection	—	2" *(51mm)*	2" *(51mm)*	—
ANSI Function	01	02	03	03
Cylinder Type	—	—	Rim	Rim
Optional Trim (See pages 32 – 34)	x990EO x992EO x994EO x996EO	x991K-DT x992L-DT x994L-DT x996L-DT x696DT x697DT	x991K-NL x992L-NL x994L-NL x996L-NL x696NL x697NL	
#425 SNB optional-HMD Req. WD w/o SLM Pkg.	6	2	2	6
#825 SNB Req. WD w/o SLM Pkg.	2	2	2	2
#425 SNB Req. w/ 499F	2	2	2	2

	Lever Key Locks & Unlocks 	Lever – Night Latch Key Retracts Latchbolt 	Lever – Blank Escutcheon Always operable (No Cylinder) 	Lever Dummy Trim Pull when Dogged (Not recommened for Fire Device)
Product Description	98L-F 99L-F	98L-NL-F 99L-NL-F	98L-BE-F 99L-BE-F	— —
Trim Description	996L-R/V	996L-NL-R/V	996L-BE-R/V	996L-DT-R/V
Escutcheon Plate Size	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*
Pull Center to Center	—	—	—	—
Projection	2⅞" *(73mm)*	2⅞" *(73mm)*	2⅞" *(73mm)*	2⅞" *(73mm)*
ANSI Function	08	09	—	02
Cylinder Type	Rim	Rim	—	—
Optional Trim (See pages 32 – 34)	x992L x994L	x992L-NL x994L-NL	x992L-BE x994L-BE	x992L-DT x994L-DT
#425 SNB optional-HMD Req. WD w/o SLM Pkg.	2	2	2	2
#825 SNB Req. WD w/o SLM Pkg.	2	2	2	2
#425 SNB Req. w/ 499F	2	2	2	2

For optional trims and functions see pages 32-34

RX (request to exit) signal switch feature is used to signal the use of an opening from the push side. When the push pad is depressed, the switch is activated. These devices are equipped with an internal SPDT (single pole double throw) switch that monitors the touch bar. **See Low Current option for computer operated system applications.**

RX2 (double request to exit) features 2 RX switches.

LX (latchbolt monitoring) signal switch monitors both egress and access of an opening. When the latchbolt is retracted, the switch is activated. These devices are equipped with an internal SPDT (single pole double throw) switch that monitors the latchbolt position. **See Low Current option for computer operated system applications.**

LC (low current) option is available for RX and LX switches. **(Most commonly used in computer operated monitoring systems.)** The RX2 is not available in low current.

Signal Switches are available on 22, 33A, 35A, 55, 88, 98, 99 series devices. The low current version is not available with the 55 and 88 series devices.

The INPACT 94/95 series devices are only available with the LX switch option.

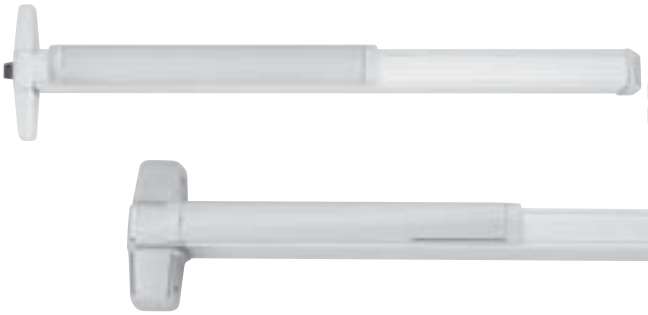
The device can be connected to a security console, or may be used as a single door alarm, when used with a horn and power supply. A continuous current electric transfer must be used for transferring the signal from the frame to the door.

Signal Switches can be used in combination with other electrical functions (EL, E).

- RX or RX2 may be combined with the E (electric unlocking) mortise lock device.
- For latchbolt monitoring on a mortise lock device, specify a SS7500 lock.
- LX and RX switches can be combined. Example: LX-RX99L.
- LX, RX or RX2 switches can be used in combination with EL (electric latch retraction) option.

RX, RX2 and LX switches are available for factory or field installation.

RX and LX switches should not be used to control a load, but as a signaling switch.



LX33A/LX35A
RX33A/RX35A

LX98/LX99
RX98/RX99

Rim device shown — Refer to 33A/35A or 98/99 series catalog for complete product information, mounting styles, outside trim, finishes, etc.

To Order, Specify:

For Factory Installed:

Prefix:	RX	Request to Exit
	RX2	Double Request to Exit
	LX	Latchbolt Monitoring
	LXRX	Latchbolt Monitoring/Request to Exit Combination
	RXLC	Low Current Request to Exit
	LXLC	Low Current Latchbolt Monitoring
	LXRXLC	Low Current Latchbolt Monitoring/Request to Exit Combination

Example: RX99L

For Field Installed:

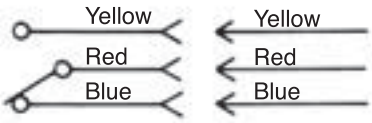
1. Specify switch option (RX, LX, RX-LC, LX-LC).
2. Specify "field".
3. For LX, specify device size 3′ or 4′.
4. For LX, specify if used with EL (electric latch retraction) option.
5. To convert an existing RX option to RX2, specify RX-AUX.

Example: LX 3′ Field

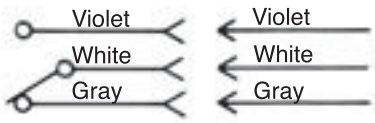
SPECIFICATIONS
RX or LX:
Switch rated 0.5 amperes @ 24VAC/DC resistive
Low Current RX or LX
Switch rated 0.05 amperes @ 24VAC/DC resistive

UL listed FVSR SA163 panic hardware and/or GXHX R4504(N) fire exit hardware — consult device catalog for complete device listing information.

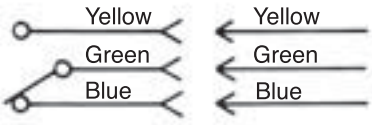
RX Wiring



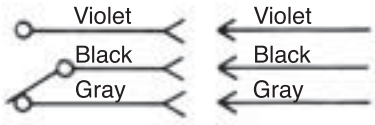
LX Wiring



RX-LC Wiring



LX-LC Wiring



Sex Bolts

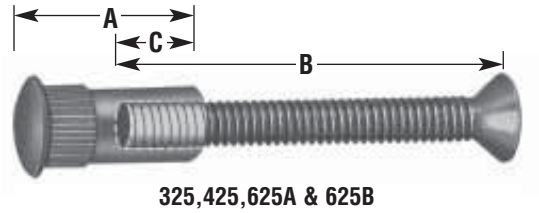
Sex Bolts when ordered with devices may be furnished with screw lengths different than shown in Column B. On page 7, Column B indicates popular sizes. Sex Bolts ordered separately are not furnished with screws. If screws are required refer to chart on page 7 and order screws by description as a separate item. Other screw lengths may be used based on minimum and maximum allowable thread engagement, shown in column "C." Quantity required — refer to device section, quantities differ depending on outside trim.

425 sex bolts are required for 22/88/98/99 series fire rated devices when used on wood door applications. When wood doors are specified for these devices, sex bolts will be added to the device application unless SLM blocking package is specified.

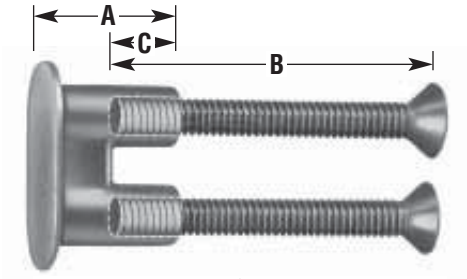
825 sex bolts are required with 98-F/99-F rim devices on wood door applications using EO, NL, TP, K and L outside trims. Two 825 sex bolts will be added to the device application unless SLM blocking package is specified.

To Order, Specify:

1. Model number
2. Quantity (2 per package)
3. Finish
4. Door thickness other than 1¾´´ *(44mm).*



325,425,625A & 625B



525

325

625A

425

625B

825

Refer to page 7 for A, B and C lengths

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Rim, Mortise and Concealed Vertical Rod

Device Type	Door Thickness	Center Case				Hinge Case			
		Sex Bolt No.	Sex Bolt A	B Screw	C Thread Engagement Min. – Max.	Sex Bolt No.	Sex Bolt A	B Screw	C Thread Engagement Min. – Max.
22	1¾″ (44mm)	425	1⁹⁄₁₆″	10-24 x 1″ PPHMS	⁹⁄₃₂″ – ⅝″	425	1⁹⁄₁₆″	10-24 x ¾″ PPHMS	⁹⁄₃₂″ – ⅝″
	2¼″ (57mm)	425	1⁹⁄₁₆″	10-24 x 1½″ PPHMS	⁹⁄₃₂″ – ⅝″	425	1⁹⁄₁₆″	10-24 x 1¼″ PPHMS	⁹⁄₃₂″ – ⅝″
33A, 3347A, 3347A-F 35A, 3547A, 3547A-F	1¾″ (44mm)	325	1³²⁄₃₂″	¼-20 x 1″ FPHMS	⅜″ – ¹¹⁄₁₆″	425	1⁹⁄₁₆″	10-24 x ¾″ PPHMS	⁹⁄₃₂″ – ⅝″
	2¼″ (57mm)	325	1³²⁄₃₂″	¼-20 x 1½″ FPHMS	⅜″ – ¹¹⁄₁₆″	425	1⁹⁄₁₆″	10-24 x 1¼″ PPHMS	⁹⁄₃₂″ – ⅝″
55	1¾″ (44mm)	625A	2⁵⁄₁₆″	12-24 x ¾″ OPHMS	¹¹⁄₃₂″ – ¹³⁄₁₆″	625A	2⁵⁄₁₆″	12-24 x ¾″ OPHMS	¹¹⁄₃₂″ – ¹³⁄₁₆″
	2¼″ (57mm)	625B	2¹³⁄₁₆″	12-24 x ¾″ OPHMS	¹¹⁄₃₂″ – 1″	625B	2¹³⁄₁₆″	12-24 x 1¼″ OPHMS	¹¹⁄₃₂″ – 1″
5575, 5575-F 5547, 5547-F	1¾″ (44mm)	—	—	—	—	625A	2⁵⁄₁₆″	12-24 x ¾″ OPHMS	¹¹⁄₃₂″ – ¹³⁄₁₆″
	2¼″ (57mm)	—	—	—	—	625B	2¹³⁄₁₆″	12-24 x 1¼″ OPHMS	¹¹⁄₃₂″ – 1″
88, 88-F, 8875, 8875-F	1¾″ (44mm)	425	1⁹⁄₁₆″	10-24 x 1½″ OPHMS	⁹⁄₃₂″ – ⅝″	425	1⁹⁄₁₆″	10-24 x 1½″ OPHMS	⁹⁄₃₂″ – ⅝″
	2¼″ (57mm)	425	1⁹⁄₁₆″	10-24 x 2″ OPHMS	⁹⁄₃₂″ – ⅝″	425	1⁹⁄₁₆″	10-24 x 2″ OPHMS	⁹⁄₃₂″ – ⅝″
8847-F	1¾″ (44mm)	—	—	—	—	425	1⁹⁄₁₆″	10-24 x 1½″ OPHMS	⁹⁄₃₂″ – ⅝″
	2¼″ (57mm)	—	—	—	—	425	1⁹⁄₁₆″	10-24 x 2″ OPHMS	⁹⁄₃₂″ – ⅝″
98, 9875, 9875-F, 9847, 9847-F, 99, 9975, 9975-F, 9947, 9947-F	1¾″ (44mm)	425	1⁹⁄₁₆″	10-24 x 1″ PPHMS	⁹⁄₃₂″ – ⅝″	425	1⁹⁄₁₆″	10-24 x 1″ PPHMS	⁹⁄₃₂″ – ⅝″
	2¼″ (57mm)	425	1⁹⁄₁₆″	10-24 x 1½″ PPHMS	⁹⁄₃₂″ – ⅝″	425	1⁹⁄₁₆″	10-24 x 1½″ PPHMS	⁹⁄₃₂″ – ⅝″
98-F, 99-F*	1¾″ (44mm)	425 825A*	1⁹⁄₁₆″ 1¹³⁄₁₆″	10-24 x 1″ PPHMS 10-24 x ¾″ PPHMS	⁹⁄₃₂″ – ⅝″ ⁹⁄₃₂″ – ⅝″	425	1⁹⁄₁₆″	10-24 x ¾″ PPHMS	⁹⁄₃₂″ – ⅝″
	2¼″ (57mm)	425 825B*	1⁹⁄₁₆″ 2⁵⁄₁₆″	10-24 x 1½″ PPHMS 10-24 x ¾″ PPHMS	⁹⁄₃₂″ – ⅝″ ⁹⁄₃₂″ – ⅝″	425	1⁹⁄₁₆″	10-24 x 1¼″ PPHMS	⁹⁄₃₂″ – ⅝″

* For use with outside trims, see page 6 for details

Surface Vertical Rod

Device Type	Door Thickness	Center Case				Hinge Case				Top & Bottom Latch Case			
		Sex Bolt No.	Sex Bolt A	B Screw	C Thread Engagement Min. – Max.	Sex Bolt No.	Sex Bolt A	B Screw	C Thread Engagement Min. – Max.	Sex Bolt No.	Sex Bolt A	B Screw	C Thread Engagement Min. – Max.
2227, 2227-F	1¾″ (44mm)	425	1⁹⁄₁₆″	10-24 x 1″ PPHMS	⁹⁄₃₂″ – ⅝″	425	1⁹⁄₁₆″	10-24 x ¾″ PPHMS	⁹⁄₃₂″ – ⅝″	325	1³²⁄₃₂″	¼ -20 x ¾″ UFPHMS	⅜″ – ¹¹⁄₁₆″
	2¼″ (57mm)	425	1⁹⁄₁₆″	10-24 x 1½″ PPHMS	⁹⁄₃₂″ – ⅝″	425	1⁹⁄₁₆″	10-24 x 1¼″ PPHMS	⁹⁄₃₂″ – ⅝″	325	1³²⁄₃₂″	¼ -20 x 1¼″ UFPHMS	⅜″ – ¹¹⁄₁₆″
3327A 3527A	1¾″ (44mm)	325	1³²⁄₃₂″	¼-20 x 1″ FPHMS	⅜″ – ¹¹⁄₁₆″	425	1⁹⁄₁₆″	10-24 x ¾″ PPHMS	⁹⁄₃₂″ – ⅝″	325 325	1³²⁄₃₂″	¼ -20 x ¾″ UFPHMS	⅜″ – ¹¹⁄₁₆″
	2¼″ (57mm)	325	1³²⁄₃₂″	¼-20 x 1½″ FPHMS	⅜″ – ¹¹⁄₁₆″	425	1⁹⁄₁₆″	10-24 x 1¼″ PPHMS	⁹⁄₃₂″ – ⅝″	325 325	1³²⁄₃₂″	¼ -20 x 1¼″ UFPHMS	⅜″ – ¹¹⁄₁₆″
8827, 8827-F	1¾″ (44mm)	425	1⁹⁄₁₆″	10-24 x 1½″ OPHMS	⁹⁄₃₂″ – ⅝″	425	1⁹⁄₁₆″	10-24 x 1½″ OPHMS	⁹⁄₃₂″ – ⅝″	425	1⁹⁄₁₆″	10-24 x ¾″ PPHMS	⁹⁄₃₂″ – ⅝″
	2¼″ (57mm)	425	1⁹⁄₁₆″	10-24 x 2″ OPHMS	⁹⁄₃₂″ – ⅝″	425	1⁹⁄₁₆″	10-24 x 2″ OPHMS	⁹⁄₃₂″ – ⅝″	425	1⁹⁄₁₆″	10-24 x 1¼″ PPHMS	⁹⁄₃₂″ – ⅝″
9827, 9827-F 9857 9857-F	1¾″ (44mm)	425	1⁹⁄₁₆″	10-24 x 1″ PPHMS	⁹⁄₃₂″ – ⅝″	425	1⁹⁄₁₆″	10-24 x ¾″ PPHMS	⁹⁄₃₂″ – ⅝″	325	1³²⁄₃₂″	¼ -20 x ¾″ UFPHMS	⅜″ – ¹¹⁄₁₆″
9927, 9927-F 9957 9957-F	2¼″ (57mm)	425	1⁹⁄₁₆″	10-24 x 1½″ PPHMS	⁹⁄₃₂″ – ⅝″	425	1⁹⁄₁₆″	10-24 x 1¼″ PPHMS	⁹⁄₃₂″ – ⅝″	325	1³²⁄₃₂″	¼ -20 x 1¼ ″ UFPHMS	⅜″ – ¹¹⁄₁₆″

(FPHMS — Flat Phillips Head Machine Screw; OPHMS — Oval Phillips Head Machine Screw; PPHMS — Pan Phillips Head Machine Screw UFPHMS — Undercut Flat Phillips Head Machine Screw)

338
Top Strike

385A
Bottom Strike

9847/9947 concealed vertical rod device for use on single or double metal doors, UL listed for Panic Exit Hardware. Devices are ANSI A156.3 – 2001 Grade 1. The 9847 device has a smooth mechanism case and the 9947 device has a grooved case. The concealed vertical rod device is non-handed except when the following device options are used: SD (Special Dogging), or SS (Signal Switch). See Opposite page for available outside trim and device functions.

The 9847/9947 devices are available in the following finishes: US3, US4, US10, US26, US26D, US28, 313AN, 315AN and US32D for the 9847 device only. See page 52 for component finishes and the inside cover for finish chips.

Specifications

Device Functions	Device ships EO/DT/NL. Field selectable. For TP,K,or L remove NL drive screw from device		
Device Lengths	3'	2'4" to 3' (711mm to 914 mm) Door Size	
	4'	2'10" to 4' (864 mm to 1219 mm) Door Size	
Strikes	Top - 338 – Unfinished, Bottom – 385A - Unfinished Optional Strikes – see page 39		
Dogging Feature	Hex key dogging standard		
Dogging Options	CD	Cylinder Dogging	see page 48
	SD	Special Center Case Dogging	see page 48
	LD	Less Dogging	see page 48
Electric Options	LX	Latchbolt Monitor Switch	see page 42
	RX	Pushpad Monitor Switch	see page 42
	RX2	Double Pushpad Monitor Switch	see page 42
	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
Miscellaneous Options	PN	Pneumatic Latch Retraction	see page 48
	LBR	Less Bottom Rod	see page 49
	GBK	Glass Bead Kit	see page 49
	PL	Pullman Latch	see page 49
Fasteners & Sex Bolts (SNB)	Includes 1 ¾" (19mm) – 2 ¼" (57mm) Wood & Metal Doors Optional SNB available for device, see next page for quantities		
Latch Bolt	Deadlocking Top & Bottom Bolt, ⅝" (16mm) throw		
Device Centerline from Finished Floor	39 ⅝" (1006 mm) Standard, Adjustable from 35 ⅝" (905mm) to 49 ⅝" (1260mm)		
Door Undercut	¼" (7mm) maximum		
Center Case Dimensions	8" x 2 ¾" x 2 ⅜" (203mm x 70mm x 60mm)		
Mechanism Case Dimensions	2 ¼" x 2 ¼" (57mm x 57mm)		
Top & Bottom Latch Case	4 ½" x 2 ⅛" x 1 ½" (114mm x 54mm x 38mm)		
Vertical Rods	Round 2 piece adjustable rods Top rod adjustable from 6'8" (2027mm) to 8'4"(2533mm) Bottom rod adjustable 35 ⅝" (905 mm) to 49 ⅝" (1260 mm) Extension rod kits available for doors over 8'4" (2533mm)		
Projection	Pushbar Neutral – 3 13⁄16" (97 mm) Pushbar Depressed – 3 1⁄16" (78 mm)		

See page 53 for How to Order specification

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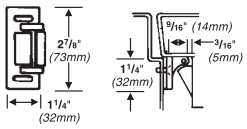
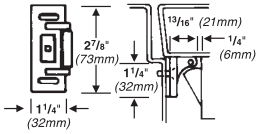
Strikes for rim devices

264



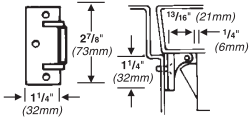
Projection 9/16" (14mm)

299



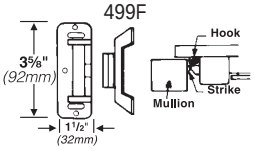
Projection 13/16" (21mm)

299F



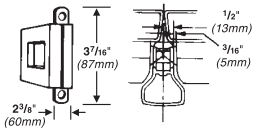
Projection 13/16" (21mm)

499F



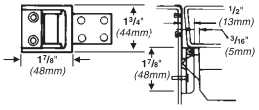
Projection 15/16" (24mm)

1408



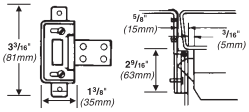
One per pair of doors

1439–Blade Stop



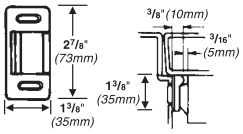
Projection 1/2" (13mm)

1410–Integral Stop



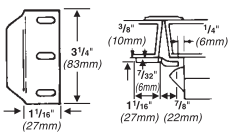
Projection 1/2" (13mm)

1606



Projection 3/8" (10mm)
Panic Devices Only

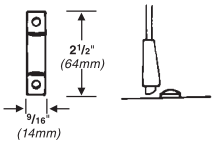
1609



- Requires Coordinator
- For Fire Rated Application, consult factory

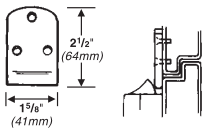
Strikes for vertical rod devices

248L-4



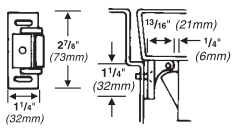
Projection 3/8" (10mm)

260U–Flush Transom Only



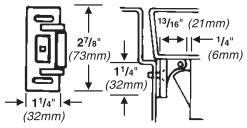
Projection 3/8" (10mm)
For Fire Rated Application, consult factory

299



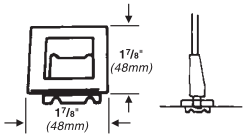
Projection 13/16" (21mm)

299F



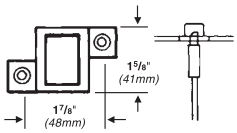
Projection 13/16" (21mm)

304L



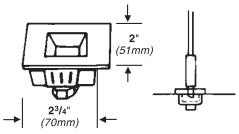
Mortise 13/16" (21mm)

338



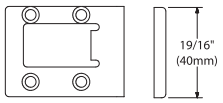
Mortise 5/8" (16mm)

385A



Mortise 2-1/2" (64mm)

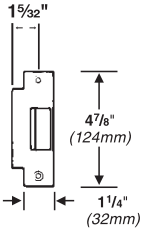
283



For use with WDC devices
when used with wood frames

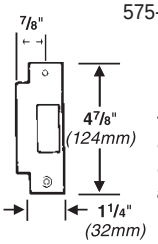
Strikes for mortise lock devices

575



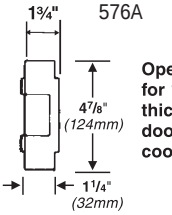
For use on 1 3/4" *(44mm)* or 2 1/4" *(57mm)* Single door and 2 1/4" *(57mm)* double door with coordinator.

575-2



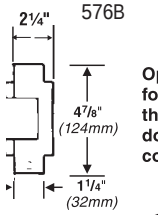
For use on 1 3/4" *(44mm)* thick double door with coordinator and astragal

576A



Open back strike for 1 3/4" *(44mm)* thick double doors without coordinator.

576B



Open back strike for 2 1/4" *(57mm)* thick double doors without coordinator.

- Not for use with astragals
- Not for use on wood doors
- Acceptable for 90 minute pair of hollow metal doors

	Exit only	Dummy Trim Pull when Dogged	Night Latch Key Retracts Latchbolt	Night Latch Key Retracts Latchbolt Optional Pull Required	Thumbturn Key Locks & Unlocks (Use with DT Trim)	Thumbturn Blank Escutcheon Always Operable (No Cylinder) (Use with DT Trim)
Product Description	9847EO 9947EO	9847DT 9947DT	9847NL 9947NL	9847NL-OP 9947NL-OP	9847TL 9947TL	9847TL-BE 9947TL-BE
Trim Description	—	990DT	990NL-R/V	110NL-MD	374T x 990DT	374T-BE x 990DT
Escutcheon Plate Size	—	3" x 14³⁄₁₆" x ³⁄₃₂" *(76x360x2mm)*	3" x 14³⁄₁₆" x ³⁄₃₂" *(76x360x2mm)*	—	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*
Pull Center to Center	—	5½" *(140mm)*	5½" *(140mm)*	—	—	—
Projection	—	2" *(51mm)*	2" *(51mm)*	—	3¼" *(83mm)*	3¼" *(83mm)*
ANSI Function	01	02	03	03	11	—
Cylinder Type	—	—	Rim	Rim	1¼" Mortise	—
Optional Trim (See pages 32 – 34)	x990EO x992EO x994EO x996EO	x991K-DT x992L-DT x994L-DT x996L-DT x696DT x697DT	x991K-NL x992L-NL x994L-NL x996L-NL x696NL x697NL			
Optional #425 Sex Bolt Quantity for Device	6	2	2	6	2	2

	Lever Key Locks & Unlocks	Lever – Night Latch Key Retracts Latchbolt	Lever – Blank Escutcheon Always operable (No Cylinder)	Lever Dummy Trim Pull when Dogged
Product Description	9847L 9947L	9847L-NL 9947L-NL	9847L-BE 9947L-BE	9847L-DT 9947L-DT
Trim Description	996L-CV	996L-NL-CV	996L-BE-CV	996L-DT-CV
Escutcheon Plate Size	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*	2¾" x 10¾" x ²⁷⁄₃₂" *(70x273x21mm)*
Pull Center to Center	—	—	—	—
Projection	2⅞" *(73mm)*	2⅞" *(73mm)*	2⅞" *(73mm)*	2⅞" *(73mm)*
ANSI Function	08	09	—	02
Cylinder Type	Rim	Rim	—	—
Optional Trim (See pages 32 – 34)	x992L x994L	x992L-NL x994L-NL	x992L-BE x994L-BE	x992L-DT x994L-DT
Optional #425 Sex Bolt Quantity for Device	2	2	2	2

For optional trims and functions see pages 32-34

RX (request to exit) signal switch feature is used to signal the use of an opening from the push side. When the push pad is depressed, the switch is activated. These devices are equipped with an internal SPDT (single pole double throw) switch that monitors the touch bar. **See Low Current option for computer operated system applications.**

RX2 (double request to exit) features 2 RX switches.

LX (latchbolt monitoring) signal switch monitors both egress and access of an opening. When the latchbolt is retracted, the switch is activated. These devices are equipped with an internal SPDT (single pole double throw) switch that monitors the latchbolt position. **See Low Current option for computer operated system applications.**

LC (low current) option is available for RX and LX switches. **(Most commonly used in computer operated monitoring systems.)** The RX2 is not available in low current.

Signal Switches are available on 22, 33A, 35A, 55, 88, 98, 99 series devices. The low current version is not available with the 55 and 88 series devices.

The INPACT 94/95 series devices are only available with the LX switch option.

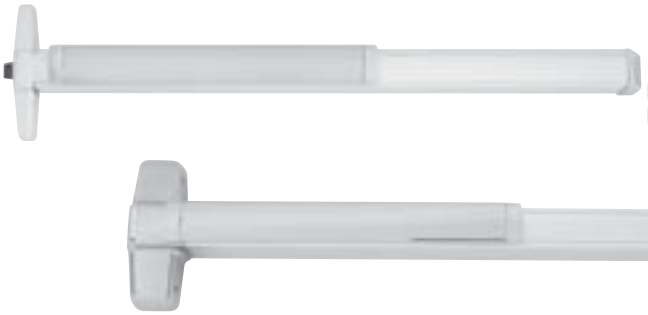
The device can be connected to a security console, or may be used as a single door alarm, when used with a horn and power supply. A continuous current electric transfer must be used for transferring the signal from the frame to the door.

Signal Switches can be used in combination with other electrical functions (EL, E).

- RX or RX2 may be combined with the E (electric unlocking) mortise lock device.
- For latchbolt monitoring on a mortise lock device, specify a SS7500 lock.
- LX and RX switches can be combined. Example: LX-RX99L.
- LX, RX or RX2 switches can be used in combination with EL (electric latch retraction) option.

RX, RX2 and LX switches are available for factory or field installation.

RX and LX switches should not be used to control a load, but as a signaling switch.



LX33A/LX35A
RX33A/RX35A

LX98/LX99
RX98/RX99

Rim device shown — Refer to 33A/35A or 98/99 series catalog for complete product information, mounting styles, outside trim, finishes, etc.

To Order, Specify:

For Factory Installed:

Prefix:	RX	Request to Exit
	RX2	Double Request to Exit
	LX	Latchbolt Monitoring
	LXRX	Latchbolt Monitoring/Request to Exit Combination
	RXLC	Low Current Request to Exit
	LXLC	Low Current Latchbolt Monitoring
	LXRXLC	Low Current Latchbolt Monitoring/Request to Exit Combination

Example: RX99L

For Field Installed:

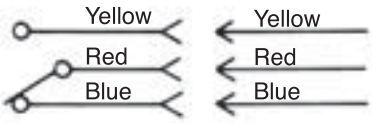
1. Specify switch option (RX, LX, RX-LC, LX-LC).
2. Specify "field".
3. For LX, specify device size 3′ or 4′.
4. For LX, specify if used with EL (electric latch retraction) option.
5. To convert an existing RX option to RX2, specify RX-AUX.

Example: LX 3′ Field

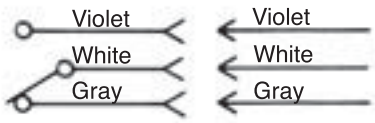
SPECIFICATIONS
RX or LX:
Switch rated 0.5 amperes @ 24VAC/DC resistive
Low Current RX or LX
Switch rated 0.05 amperes @ 24VAC/DC resistive

UL listed FVSR SA163 panic hardware and/or GXHX R4504(N) fire exit hardware — consult device catalog for complete device listing information.

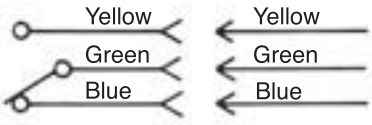
RX Wiring



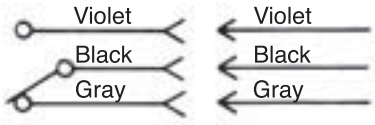
LX Wiring



RX-LC Wiring

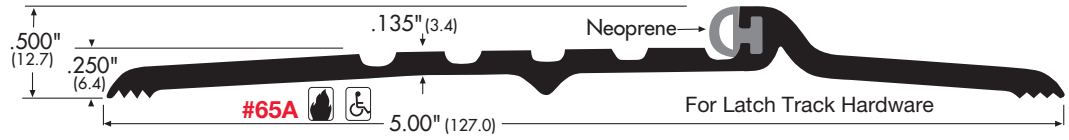


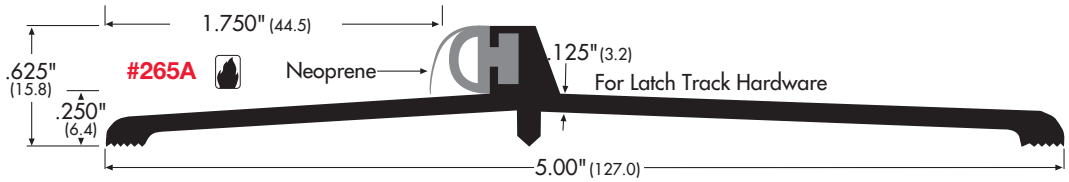
LX-LC Wiring

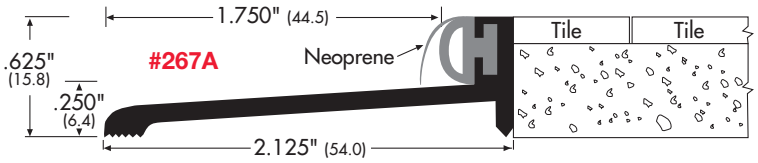


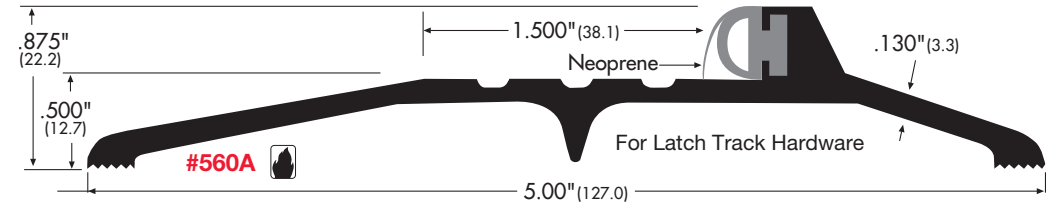
Rabbeted Saddles

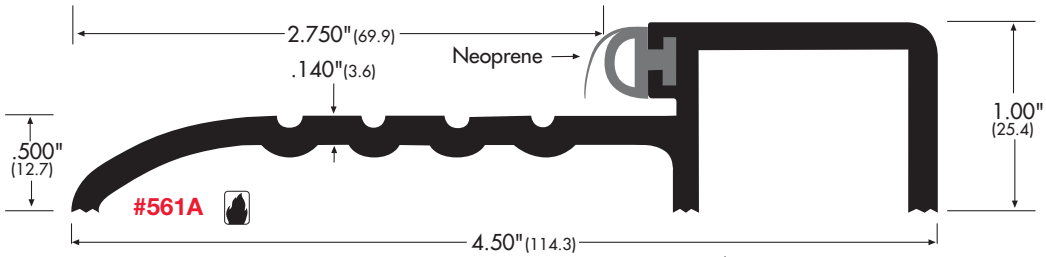
Note: A = Aluminum
B = Bronze

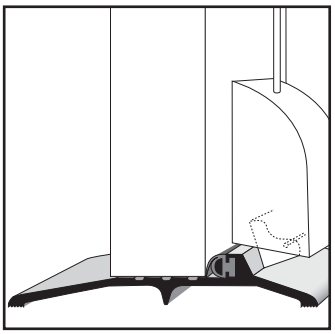




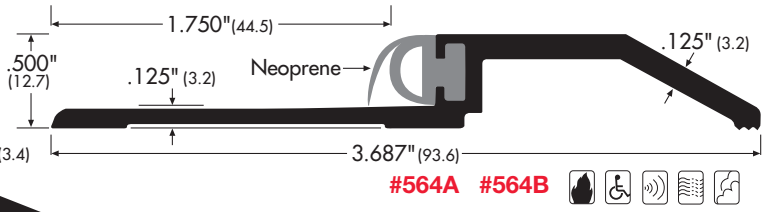


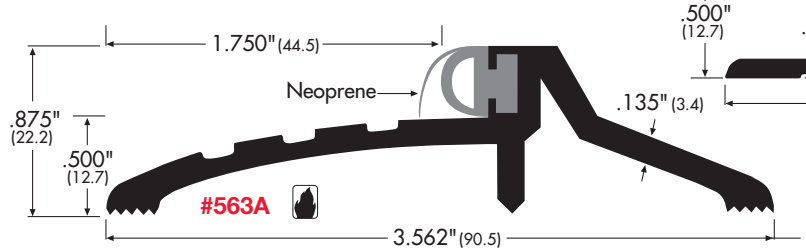


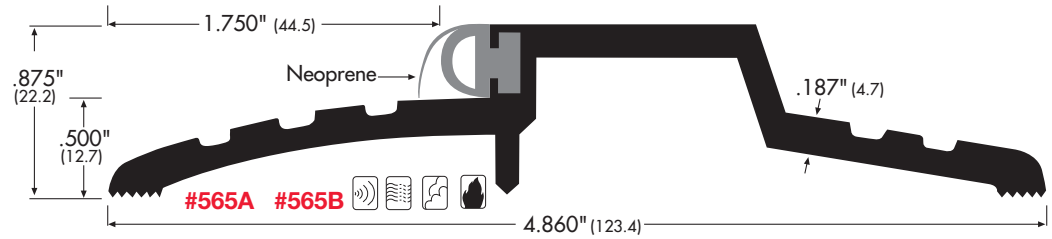


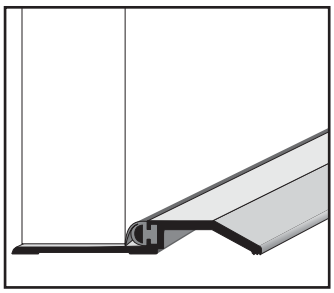


#65, 265, 560 TYPE
For Latch Track Hardware (Option)

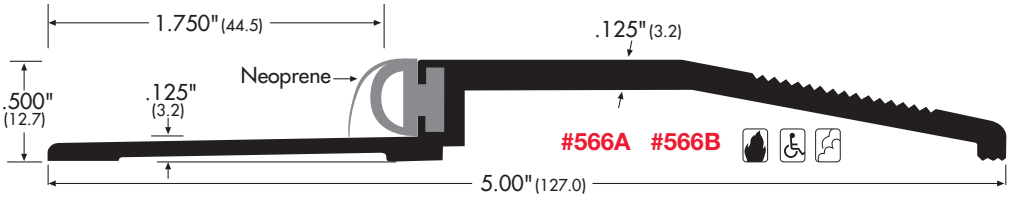


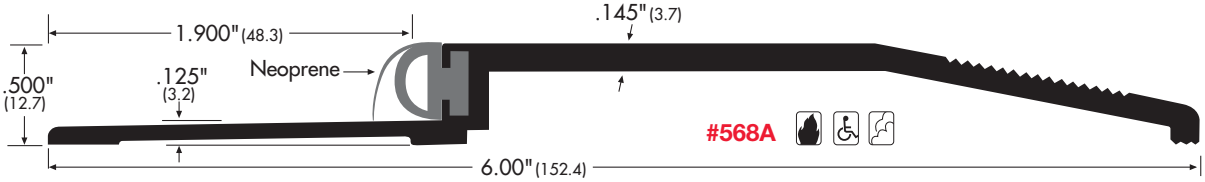






#563, 564, 565, 566 TYPE





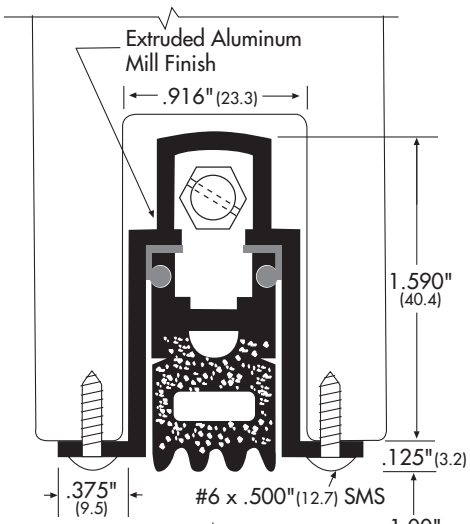
SPECIFY THIS SPECIAL FEATURE

The neoprene gasket is designed with an extra lip for double seal protection, and to compensate for any warping or misalignment during installation.

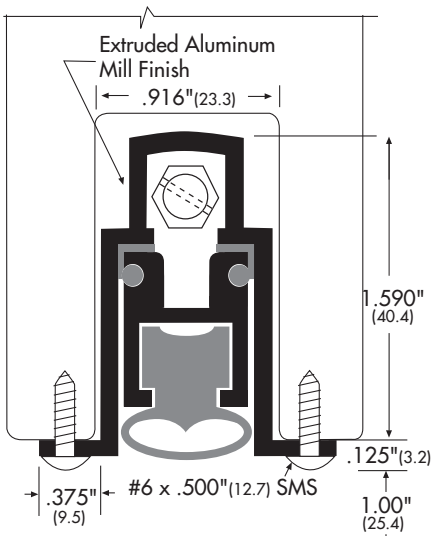
Compress-O-Matic®

Note: A = Aluminum AA = Anodized Aluminum
D = Dr. Bronze Anodized Bk = Black Anodized
G = Simulated Bronze Anodized

Heavy Duty



#360A
Mortised



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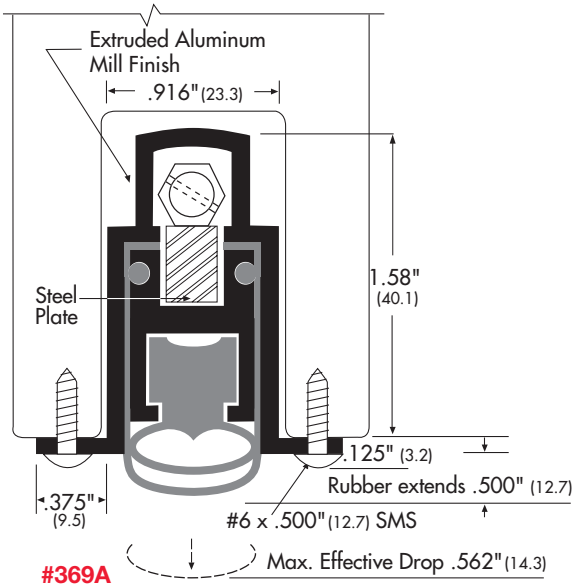

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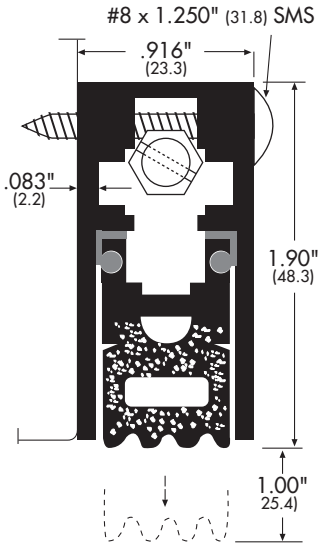
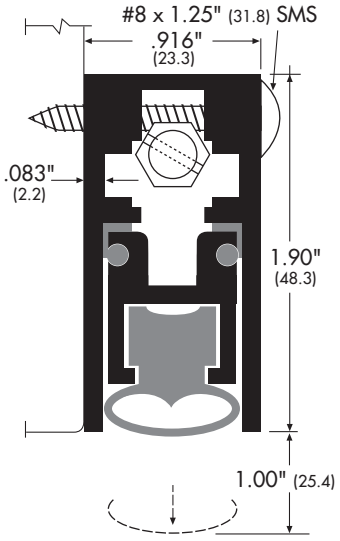


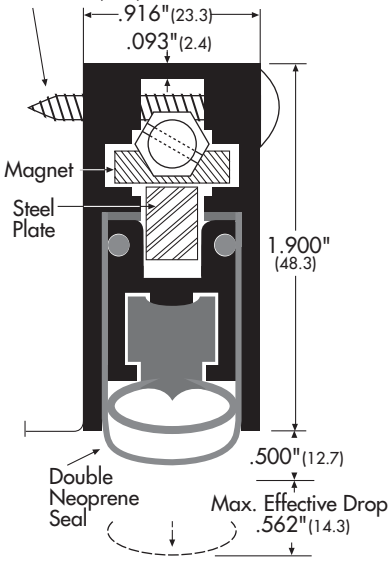
Surface-Mounted Semi-Mortised

#361AA **#362AA**
#361D **#362D**
#361G **#362G**



Surface-Mounted Semi-Mortised

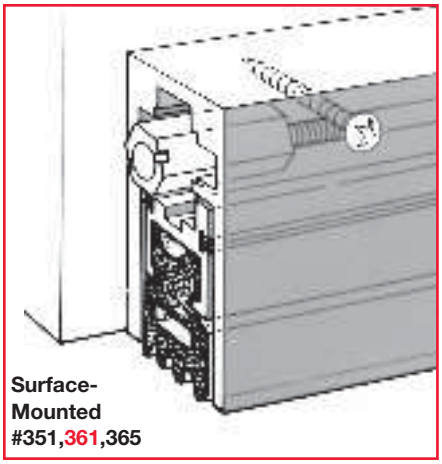
#365AA **#366AA**
#365D **#366D**
#365G **#366G**



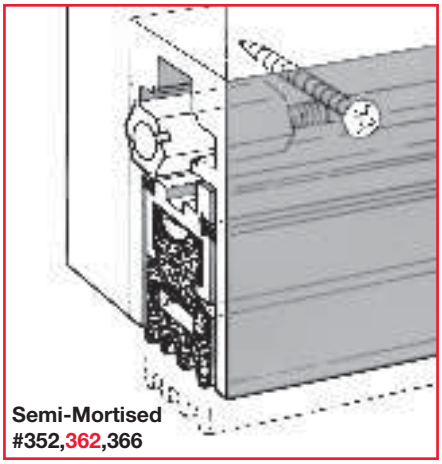
Surface-Mounted Semi-Mortised

#367AA **#368AA**
#367D **#368D**
#367G **#368G**

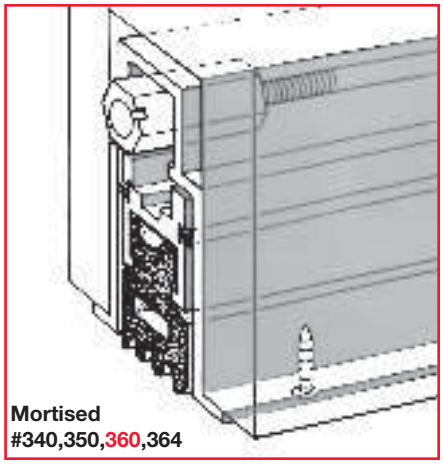
Can also be used with #950 Cam Lift Hinges



Surface-Mounted
#351,361,365



Semi-Mortised
#352,362,366

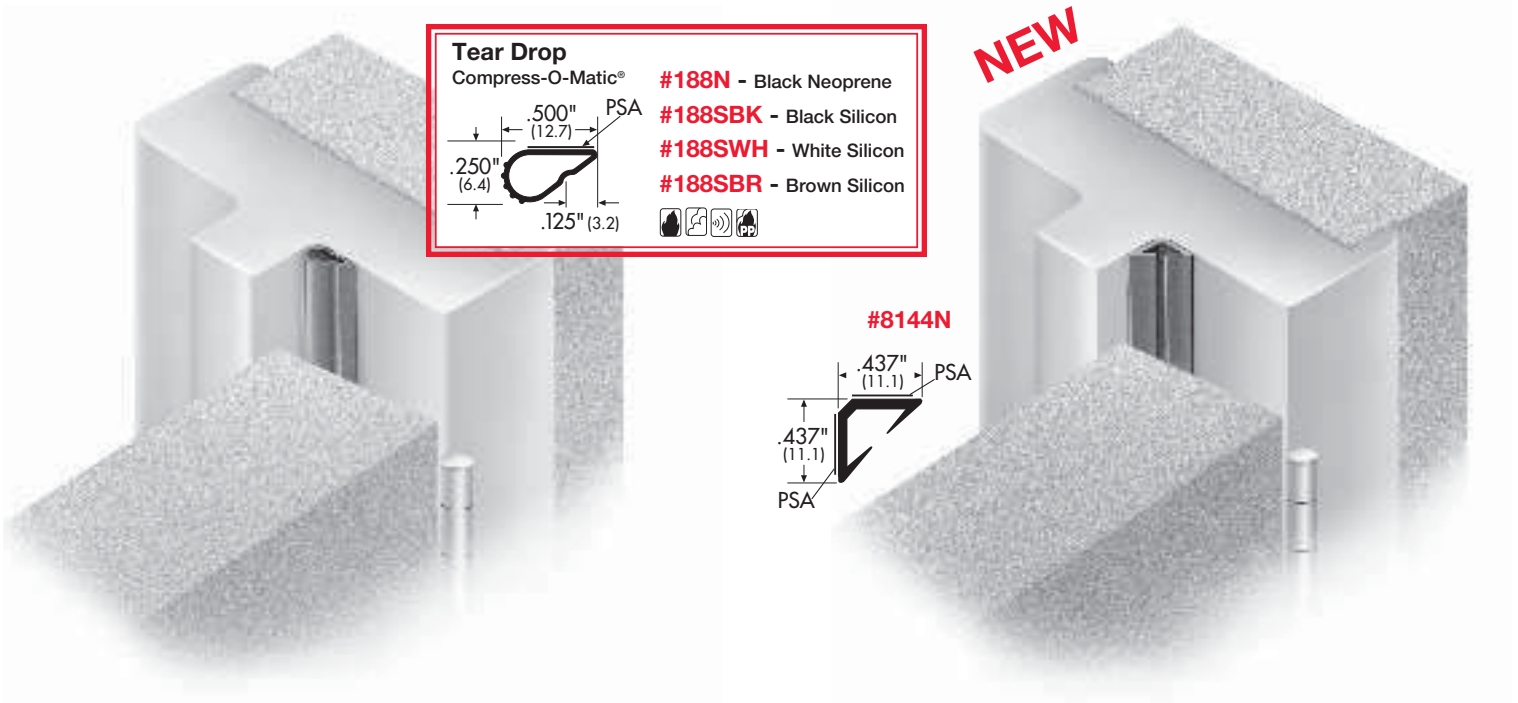


Mortised
#340,350,360,364

Self Adhesive & Kerf Frame Door Seals — Head & Jamb

See manufacturers' specifications for minimum required clearance between door and frame.

Most items shown are available in self-extinguishing, non-staining neoprene.
Contact us for custom materials, colors and shapes.

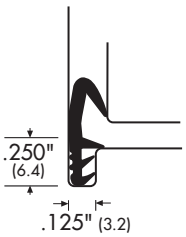


Tear Drop
Compress-O-Matic®

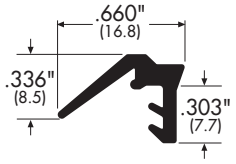
#188N - Black Neoprene
#188SBK - Black Silicon
#188SWH - White Silicon
#188SBR - Brown Silicon

NEW

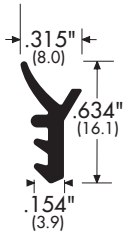
#8144N



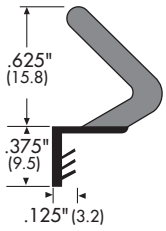
#8043N



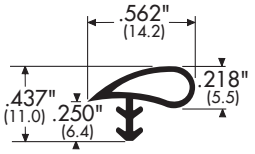
#8045N



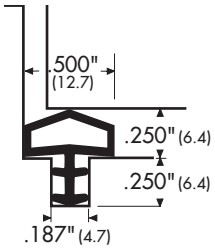
#8046N



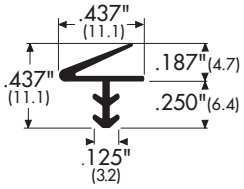
#8053Q



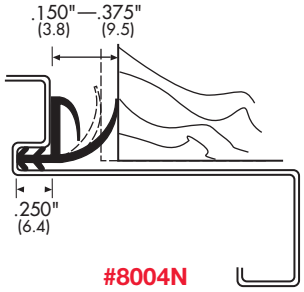
#8800N Compress-O-Matic®



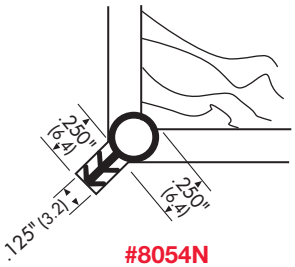
#8810N



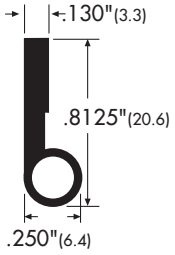
#8440N Compress-O-Matic®



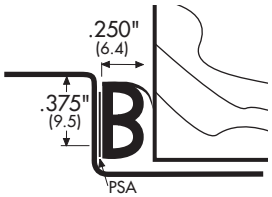
#8004N



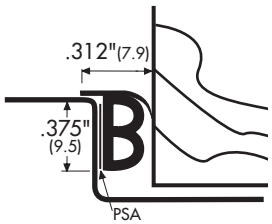
#8054N



#328N



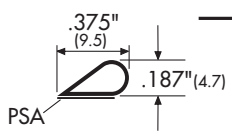
#824N



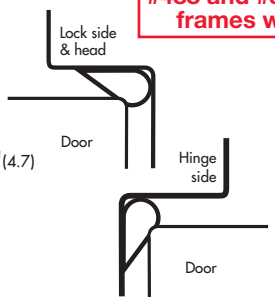
#824WN

NEW

#488 and #8148 are best for tighter frames with low closing force



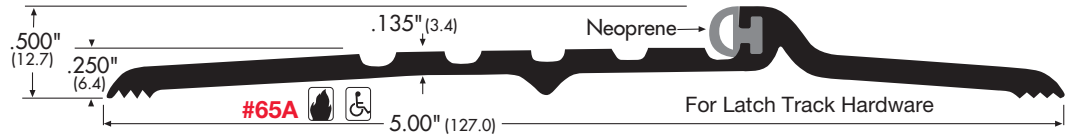
#488N

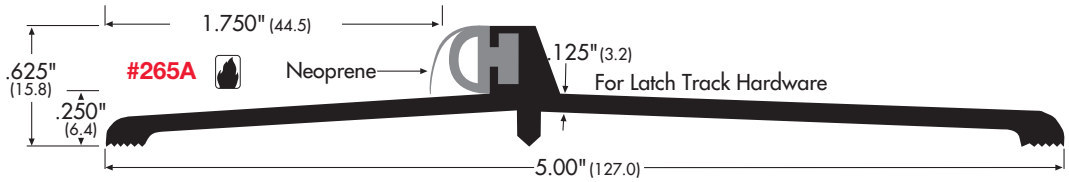


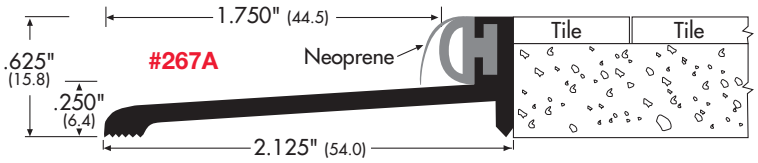
#8148N

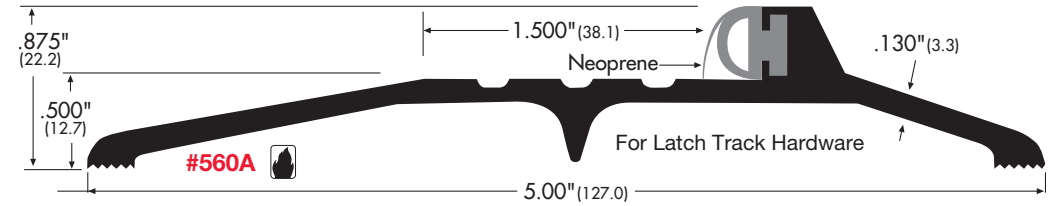
Rabbeted Saddles

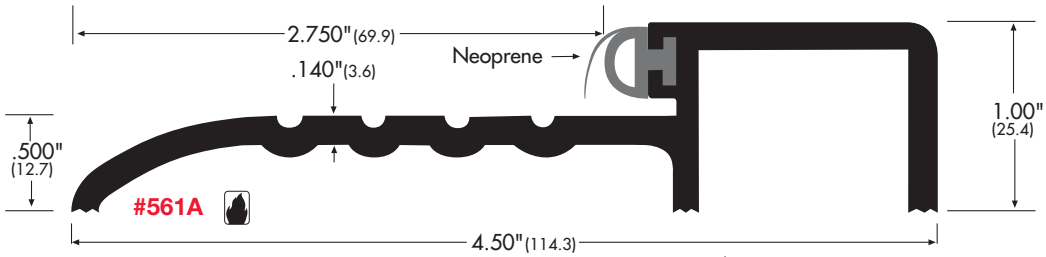
Note: A = Aluminum
B = Bronze

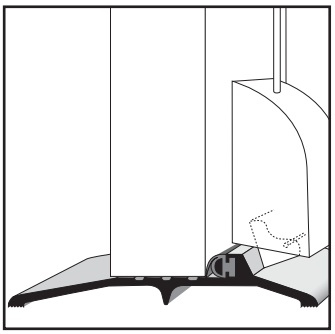




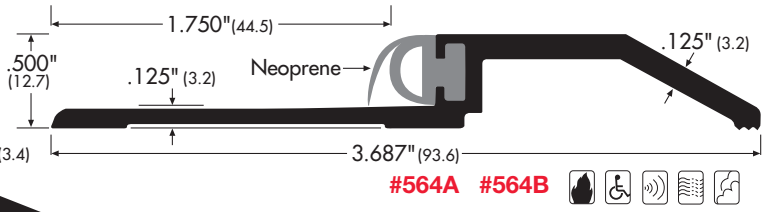


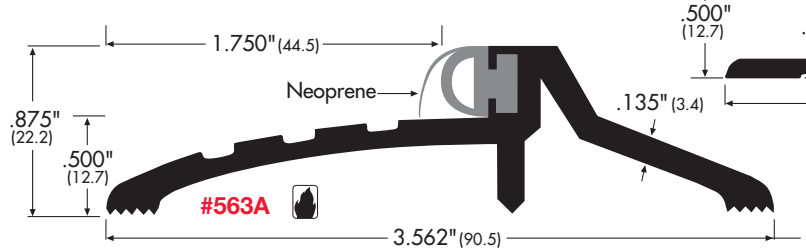


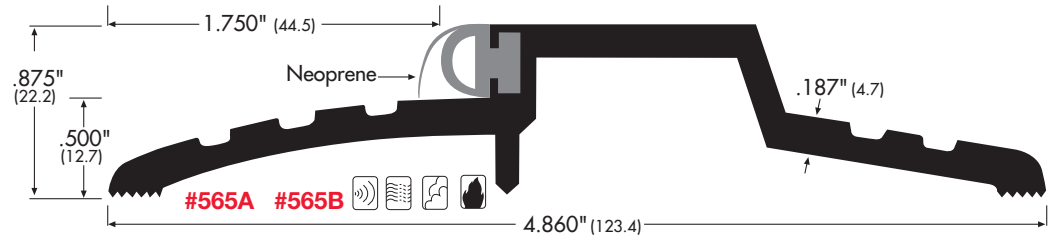


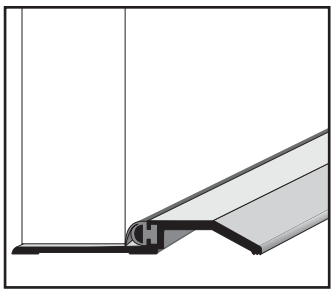


#65, 265, 560 TYPE
For Latch Track Hardware (Option)

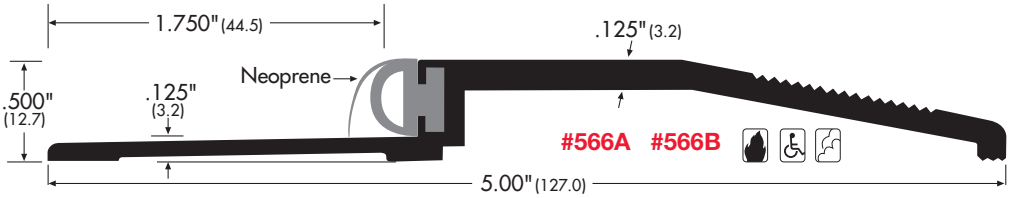


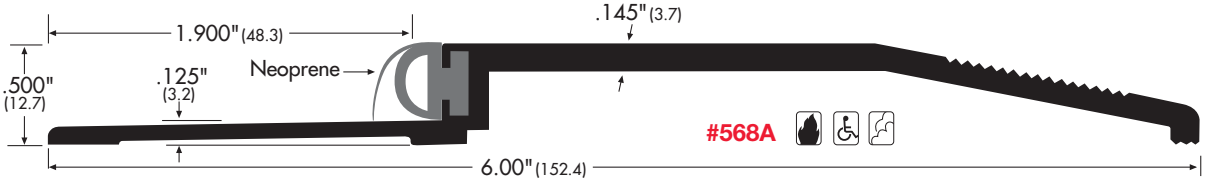






#563, 564, 565, 566 TYPE





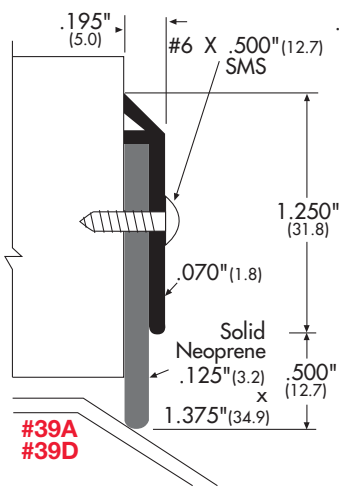
SPECIFY THIS SPECIAL FEATURE

The neoprene gasket is designed with an extra lip for double seal protection, and to compensate for any warping or misalignment during installation.

Compress-O-Matic®

Sill Protection Sweep

Note: A = Aluminum
B = Bronze
Bk = Black Anodized
D = Dr. Bronze Anodized
G = Simulated Bronze Anodized
AA = Anodized Aluminum



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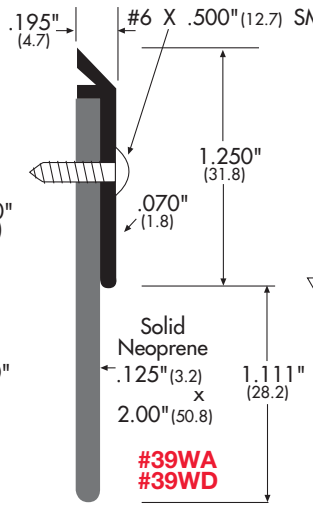
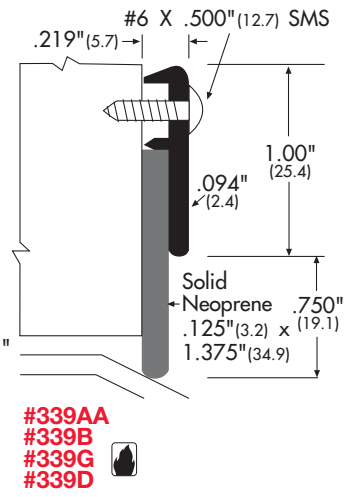
#39D



#39WA
#39WD



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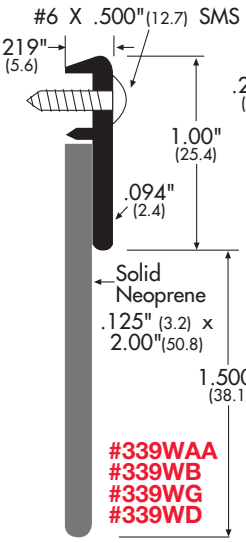

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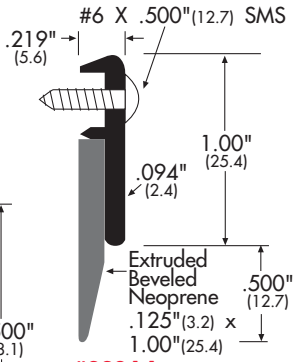

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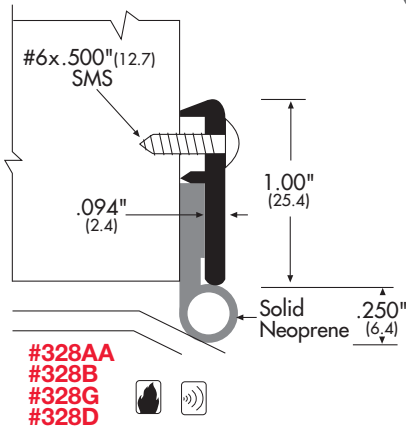

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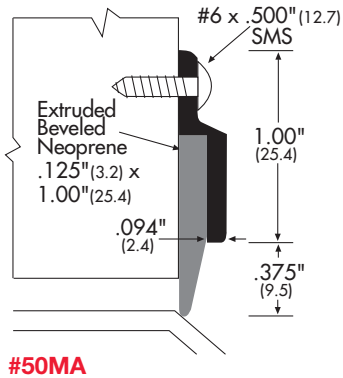
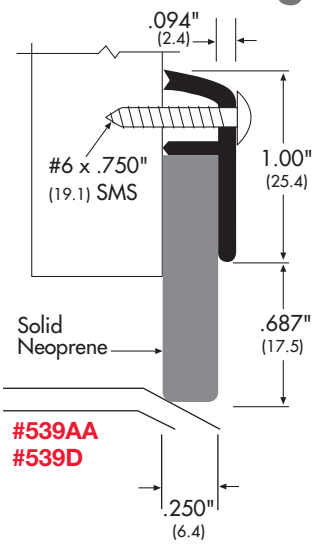


#50MA



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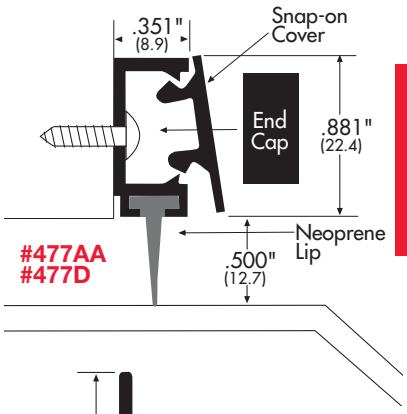

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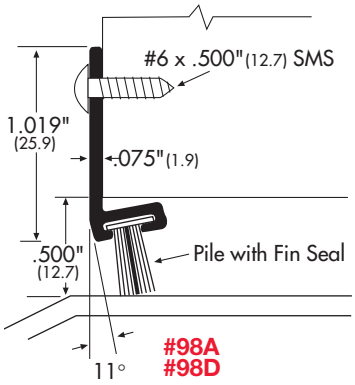

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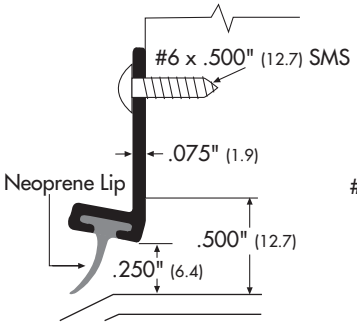
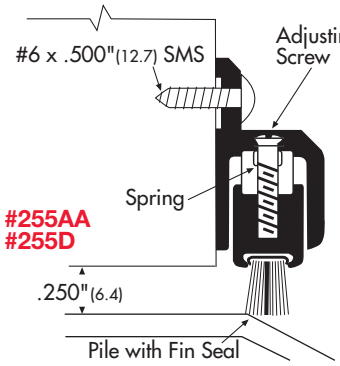


#100A #100D



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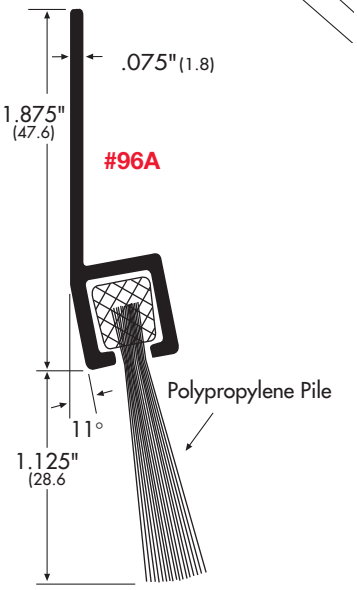

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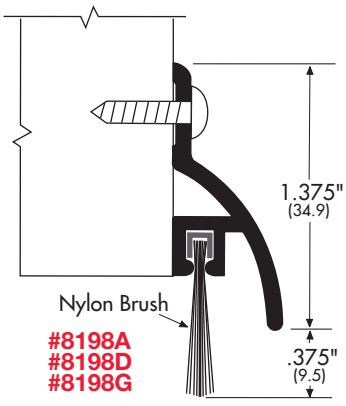
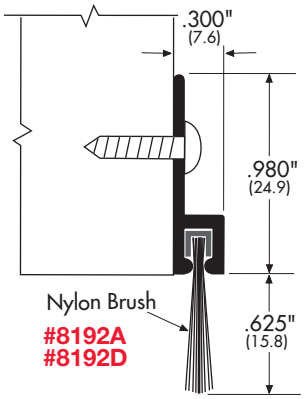


#8198A
#8198D
#8198G



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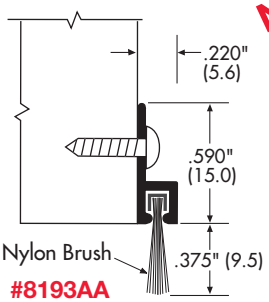
NEW



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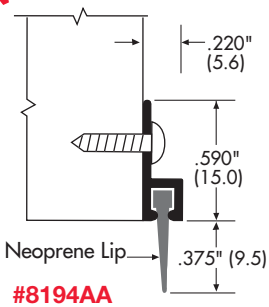
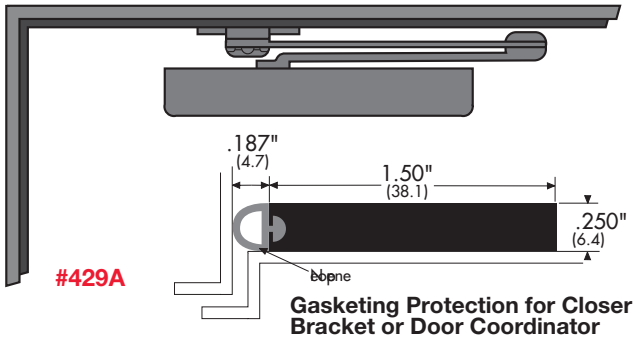


#8194AA

Door Sweeps

Head and Jamb Protection

Note: A = Aluminum SP = Steel Primed
D = Dr. Bronze Anodized B =Bronze
G = Simulated Bronze Anodized

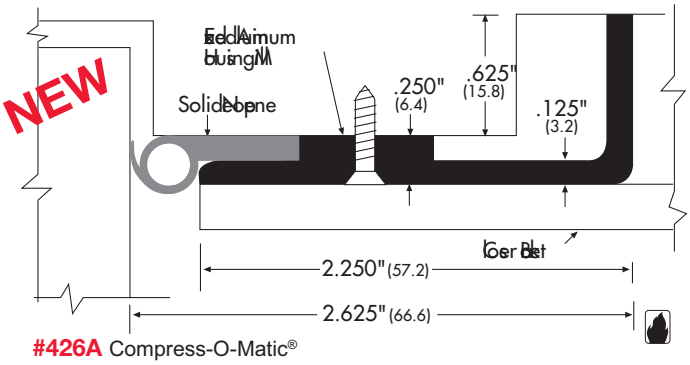


#429A

Gasketing Protection for Closer Bracket or Door Coordinator

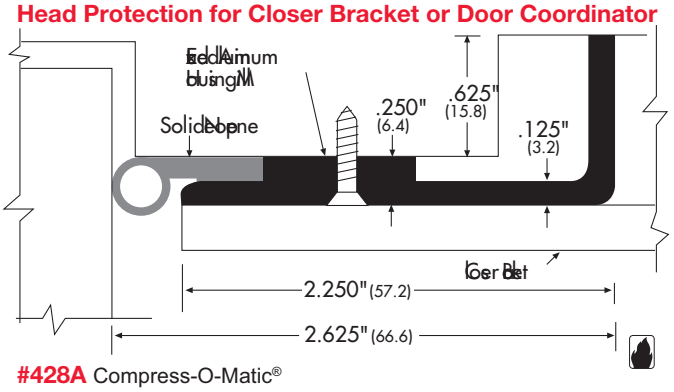
Head Protection for Closer Bracket or Door Coordinator

NEW

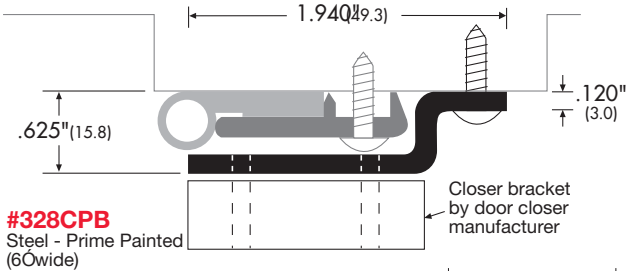


#426A Compress-O-Matic®

Head Protection for Closer Bracket or Door Coordinator

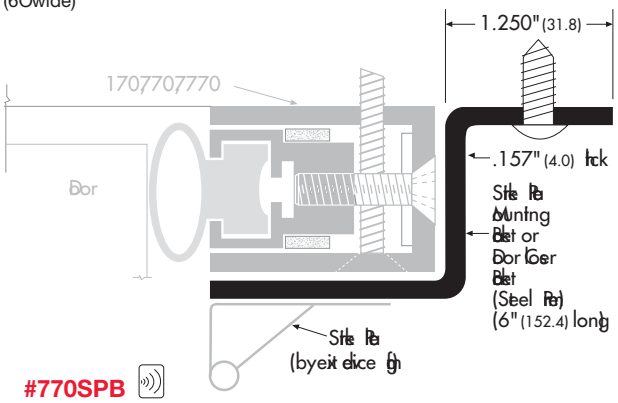


#428A Compress-O-Matic®



#328CPB
Steel - Prime Painted
(6" wide)

Closer bracket by door closer manufacturer

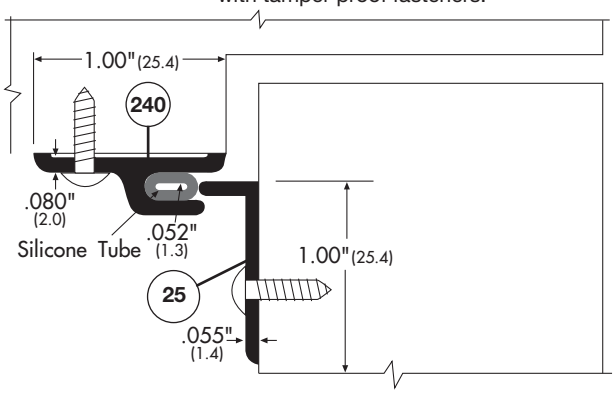


#770SPB

Available full width for use with door coordinator (optional).

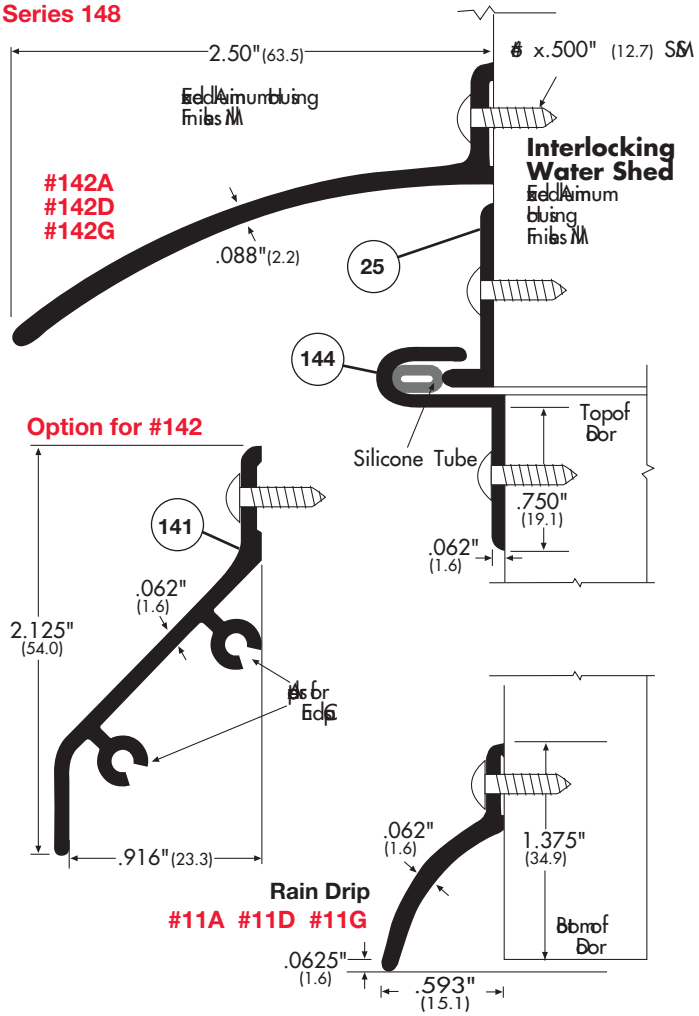
Series 42A

Security seal when installed with tamper proof fasteners.



INTERLOCKING WATER SHED For Outswinging Doors

Series 148

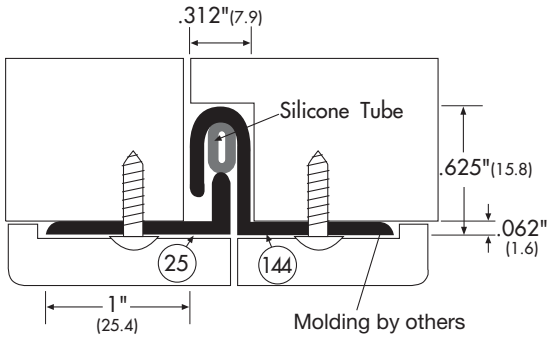


Option for #142

Rain Drip
#11A #11D #11G

Series 87

Meeting Stile
One Door Active.



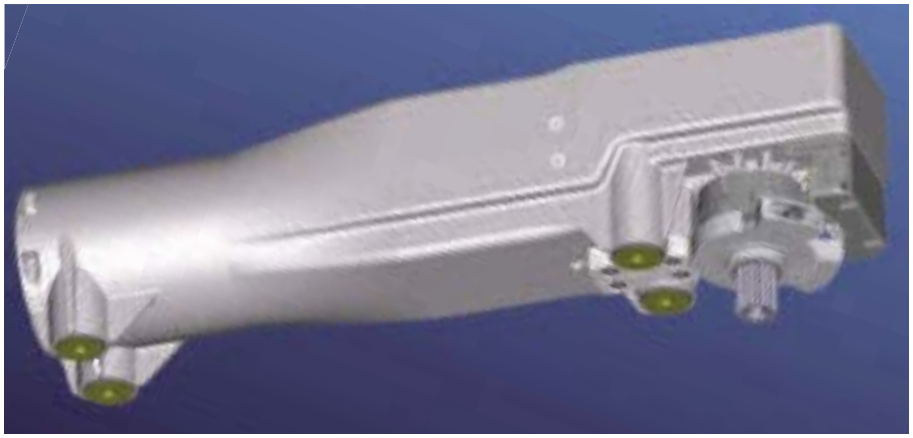
FACTORY TESTED & PROVEN PERFORMANCE

To make sure we could deliver the Magic-Force™ Operator with all the features to meet the demands of a continually changing market, we conducted the most extensive testing yet. In addition to testing the Magic-Force™ Operator to the industry standard number of cycles, we tested it to break it, then re-engineered it, and re-tested to break it again. Extensive field testing confirmed Stanley's lab test results to prove the Magic-Force™ performance.

The Magic-Force™ Operator meets:

- UL Listing - UL 325
- cUL Listing - CSA 22.2 No. 247
- UL Listed Fire Door Operator
- BOCA Listing - 1017.4.3
- ICBO Report - UBC 10-1
- NFPA101 Life Safety Code - Section 5-2.1.9
- ANSI 156.10-1998, Full Energy
- ANSI 156.19-1997, Low Energy
- CSFM - CA State Fire Marshal

As the market demands change, the Magic-Force™ Operator is designed to change right along with them. This operator is setting a new standard in the industry and taking our customers into the 21st century.



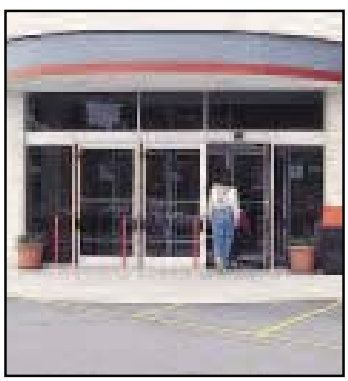
The Versatile Magic-Force™ Operator

- Unique innovative design offers an all-in-one system.
- Non-handed, In-Swing or Out-Swing, Visible or Concealed mounting.
- Configurable for Full Energy & Low Energy applications.
- Simplified Installation & Service.
- Smooth operation, low audible noise.
- Will interface with existing installed products.
- Heavy duty compression spring for unparalleled door control & durability.
- Field adjustable to overcome environmental or facility changes.

Stanley's Magic-Force™ Operator works in both Full Energy and Low Energy applications. Meets the demands for use in Supermarkets, Department Stores, Hospitals, Airports, Office Buildings, Public Buildings, Schools, Universities and more!

ADA

HEALTHCARE



GROCERY