

- 1) Doors 110 & 110A appear to be Overhead Coiling doors. Need a spec for them or direction on how to bid them? **The doors are overhead coiling doors, noted as OH at the Action column of the Door Schedule and A-801, and elevated as door type "D". Head details are also referenced from the Door Schedule as 17/A-821, which shows the "D" Type hood, with Jamb to 18/A-821 and Sill to 19/A-821. Cornell is noted as manufacturer at 17/A-821. Cookson and Overhead Door Company are also acceptable manufacturers. Doors are to be Manually Operated, not electrically.**
- 2) Regarding the acoustical ceiling. The specs have lists two options ACT1-1942 & ACT2-8371, the drawings reflect ACT only. Please advise which one to use? **Use ACT-1**
- 3) Sheet A-801 door schedule still shows 18 hardware sets and sheets 503 & 504 in the specs only show 7 hardware sets. Is there an updated hardware spec ? Please advise how to proceed. **See updated spec 08 7100 Door Hardwar and revise door schedule A-801.**
- 4) Is there wire mesh at exterior stair railings (see detail 18 & 24/A-513). If so is it woven or welded? **We call out 8 ga and 2" square wire mesh, but do not specify welded or woven. Whatever is most cost competitive is fine.**
- 5) What finish are the exterior stairs? There are no specifications, please advise. **Proceed with galvanized no paint.**

SECTION 08 71 00 – DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
  - 1. Door Hardware Campus Standards
  - 2. Campus Keying System
  - 3. Key Schedule Requirements

PART 2 - PRODUCTS

2.1 Keying System:

- A. University Facility Services Campus Key Coordinator designs keying system.
- B. Contractor:
  - 1. General: Submit proposed keying system to Architect for review and written approval by Trustees, and copy of Best Access (Stanley Security Solutions) Purchase Order Number to Architect for Trustees Records.
  - 2. Closeout Submittal: Submit three hard copies and one electronic copy of final keying schedule.
  - 3. Products: Key locks and cores at factory and maintain permanent records of information.
  - 4. Execution: After submittal and approval of keying system by Trustees, submit manufacturer's Purchase Order Number for Trustees to order cores and keys. Manufacturer shall deliver permanent keys, control keys and cylinder cores to Trustees Representative.
  - 5. Coordinate installation of permanent cores by University Lock Shop with Trustees Representative.

2.2 Keys:

- A. Material: Nickel-silver. Stamp keys "Do Not Duplicate."
- B. Quantity: Cylinder Keys (3 per core); and Extra Blank Keys (1 per core or lock).
- C. Keying:
  - 1. Telecommunication Spaces (Rooms): Use 112-series key lock. (Coordinate with Division 27 – Communications.)
  - 2. Master Padlocks: Use where less security is required. Coordinate with Trustees Representative during design process for specific Campus Project requirements, and Divisions 21, 22, 23, 26 (Electrical Panels), 27, and 32 (Bollards). Key alike to Campus Specifications #2359, and provide 2 keys per panel, etc.
  - 3. State Padlocks: Use where higher security is required, such as Electrical Yards and Switches, HVAC Yards and Equipment, etc. Coordinate with Trustees Representative during design process for specific Campus Project requirements, and Divisions 21, 22, 23 (HVAC Air Handling Units), 26 (Electrical Switchgear, Transformers), 27, and 32. Requires interchangeable cores complying with Campus Cylinders and Keying Standards. Interchangeable core.

2.3 Hinges:

- A. Campus Preferred Manufacturers:
  - 1. Hager Companies: Exterior -- Stainless Steel, Ball Bearing Part #BB1191; Interior – Plated with 626 Finish, #BB1279BB
  - 2. McKinney Products Company, Division of Assa Abloy
  - 3. Stanley.

2.4 Pivots and Pivot Hinges:

- A. Campus Preferred Manufacturers:
  - 1. Ives; Division of Allegion
  - 2. Rixson-Firemark, Inc.; Div. of Assa Abloy
  - 3. National Manufacturing 101 Retro Kit

2.5 Continuous Pin and Barrel Hinges:

- A. Campus Preferred Manufacturers:
  - 1. Pemko
  - 2. Markar Products, Inc.
  - 3. McKinney Products Company; Div. of Assa Abloy

2.6 Mechanical Locks and Latches:

A. Campus Preferred Manufacturers:

1. Best Access Systems – 45H Series
2. Corbin Russwin – ML2000 Series
3. Schlage Lock Company; an Ingersoll-Rand Company – L94 Series
4. Assa Abloy 8200 Series mortise locks

2.7 Electric Mortise Locksets:

A. Campus Preferred Manufacturer:

1. Best Access Systems – 45H Series.

2.8 Surface Bolt:

A. Campus Preferred Manufacturer:

1. Door Controls International
2. Don-Jo Manufacturing
3. Hager Companies
4. Ives: H.B. Ives
5. Rockwood Manufacturing Company
6. Triangle Brass Manufacturing Company, Inc.

2.9 Flush Bolts:

A. Campus Preferred Manufacturers:

1. Door Controls International
2. Don-Jo Manufacturing
3. Hager Companies
4. Ives: H.B. Ives
5. Rockwood Manufacturing Company
6. Triangle Brass Manufacturing Company, Inc.

2.10 Exit Devices:

A. Prefer rim device over vertical rods.

B. Preferred Manufacturer:

1. Von Duprin, Division of Allegion – Series 98 or 99.
2. Corbin Russwin – Series ED5000.

3. Not Allowed: Adams Rite Manufacturing Co. – Products are low quality and don't hold up.

2.11 Cylinders:

- A. Small format interchangeable core type, constructed from brass or bronze, stainless steel, or nickel silver.
- B. Number of Pins: Seven
- C. Mortise Type: Threaded cylinders with rings and appropriate cam to suit lock function and type.
- D. Function: D-Storage; R-Classroom; N-Passage, A-Office, TA-Dormitory.
- E. Required Manufacturer:
  1. Best Access Systems.
  2. Medeco Keymark

2.12 Door Cylinders:

- A. Best Model 1E Series or equivalent (Arrow, general).

2.13 Construction Keying:

- A. Construction Master Keys:
  1. Provide temporary construction master keys (20 construction master keys and 2 control keys).
  2. See Key Schedule below.

2.14 Construction Cylinders:

- A. Provide construction cores.
- B. Permanent Keying: University installs permanent cores.

2.15 Electric Strikes:

- A. Campus Preferred Manufacturers:
  1. Hes Innovations (1006, 9600)
  2. Von Duprin

2.16 Operating Trim (push/pulls):

- A. Campus Preferred Manufacturers:
  1. Don-Jo Manufacturing
  2. Forms & Surfaces

3. Triangle Brass Manufacturing Company, Inc.

2.17 Accessories for Pairs of Doors:

A. Campus Preferred Manufacturers:

1. Coordinators:
  - Don-Jo Manufacturing
  - Hager Companies
  - Ives: H.B. Ives
  - Door Controls Internationals
2. Removable Mullions:
  - Von Duprin, Division of Allegion
  - Corbin Russwin Architectural Hardware, Division of Assa Abloy.
  - Note: "Key Removable" when needed.
3. Astragals:
  - National Guard Products, Inc.
  - Pemko Manufacturing Company, Inc.
  - Reese Enterprises, Inc.

2.18 Closers:

A. Campus Preferred Manufacturers:

1. Surface-Mounted Closers:
  - LCN, Division of Ingersol-Rand, 4040 Series, mounting: inside of door, parallel arm preferred.
  - Corbin Russwin, DC6200 Series.
2. Electromechanical Closers:
  - LCN, Division of Allegion, 4041 Series
  - Norton, Division of Assa Abloy
3. Concealed Floor Closers: Not preferred because replacement is expensive and difficult.
4. Closer Holder Release Devices:
  - Not preferred because of wear and tear on top hinge.
  - Corbin Russwin Architectural Hardware, Division of Assa Abloy.
  - Rixson-Firemark, Inc., Division of Assa Abloy.
5. Overhead Stops: Not allowed because pull hinges out causing door to sag, and damages door jambs.

2.19 Protective Trim Units:

- A. Campus Preferred Manufacturers:
- B. Metal Protective Trim Units:
  - 1. Don-Jo Manufacturing
  - 2. IPC Door and Wall Protection Systems, Inc.
  - 3. Triangle Brass Manufacturing Company, Inc.

2.20 Stops and Holders:

- A. Preferred Manufacturers:
  - 1. Don-Jo Manufacturing
  - 2. Ives: H.B. Ives
  - 3. Norton Door Controls, Division of Assa Abloy.
  - 4. Rixson-Firemark, Inc., Division of Assa Abloy.
  - 5. Triangle Brass Manufacturing Company, Inc.

2.21 Door Gasketing:

- A. Campus Preferred Manufacturers:
  - 1. National Guard Products, Inc.
  - 2. Pemko Manufacturing Company, Inc.

2.22 Door Bottoms:

- A. Campus Preferred Manufacturers:
  - 1. National Guard Products, Inc.
  - 2. Pemko Manufacturing Company, Inc.

2.23 Thresholds:

- A. Meet ADA Access requirements
- B. Campus Preferred Manufacturers:
  - 1. National Guard Products, Inc.
  - 2. Pemko Manufacturing Company, Inc.
  - 3. Rixson-Firemark, Inc., Division of Assa Abloy.

2.24 Key Schedule

- A. Closeout Submittal: Key Schedule – Provide hard copies and one electronic copy of completed Key Schedule along with keys separated and labeled.
- B. Use this form to list all keys provided on project referencing appropriate Sections. The Campus prefers to have one listing for all keys.

<b>Key Schedule for {Crandall Gym Renovation} {Building 60}</b>						
<b>Purpose / Location</b>	<b>Room Number</b>	<b>Keys Required</b>	<b>Total Keys</b>	<b>Model Number</b>	<b>Manufacturer</b>	<b>Section Reference</b>
Toilet Accessories		2/ each building restroom/ accessory keyed differently				10 28 00 Toilet, and Bath Accessories
Plumbing		2/ each, where applies				22 00 00 – Plumbing
Plumbing Padlocks		2/ each Padlock (SFIC cores)				22 00 00 – Plumbing
HVAC Equipment Panels		2/ each Panel				23 00 00 – HVAC
Electrical Panels		2/ each				26 00 00 – Electrical
Lighting Control Panels		2/ each Panel				26 00 00 – Electrical

















<b>Key Schedule for {Crandall Gym Renovation} {Building 60}</b>						
<b>Purpose / Location</b>	<b>Room Number</b>	<b>Keys Required</b>	<b>Total Keys</b>	<b>Model Number</b>	<b>Manufacturer</b>	<b>Section Reference</b>
Lighting Switches		2/ each switch				26 00 00 – Electrical
Electrical Yard, Equipment, & Switches Padlocks		2/ each Padlock (SFIC cores)				26 00 00 – Electrical
Communications Equipment Padlocks		2/ each Padlock (IC cores)				27 00 00 - Communications
Electronic Safety and Security Panels		2/ each				28 00 00 – Electronic Safety and Security

HARDWARE LISTINGS  
 Opt. #: OPT0309866-V2

HARDWARE GROUP NO. 01

Provide each PR door(s) with the following:

2	EA	PIVOT SET	7215 SET		626	IVE
2	EA	POWER TRANSFER	EPT10 CON		689	VON
1	EA	ELEC PANIC HARDWARE	RX-QELX-PA-AX-9949-EO-LBL		626	VON
1	EA	ELEC PANIC HARDWARE	RX-QELX-PA-AX-9949-NL-OP-110MD-LBL-CON		626	VON
1	EA	RIM CYLINDER	12E72 L/C		626	BES
1	EA	PERMANENT CORE	COREMAX		626	BES
2	EA	LONG DOOR PULL	9264F 36" 20" O		630-316	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	PA MOUNTING PLATE	4040XP-18PA SRT (AS REQUIRED)		689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 SRT (AS REQUIRED)		689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 SRT (AS REQUIRED)		689	LCN
1	EA	RAIN DRIP	142AA (OMIT @ OVERHANG)		AA	ZER
2	EA	SEAL	WEATHER SEALS BY DOOR/FRAME MANUFACTURER/SUPPLIER			B/O
2	EA	DOOR SWEEP	8192AA		AA	ZER
1	EA	THRESHOLD	547A-223(OR AS REQ'D. OR PER DETAIL/CONDITIONS)		A	ZER
4	EA	WIRE HARNESS	CON X LENGTH AS REQ'D			VON
1	EA	CARD READER	CARD READER AND WIRING BY DIV. 28			B/O
2	EA	DOOR CONTACT	7764 OR BY DIV. 28		628	SCE
1	EA	POWER SUPPLY	PS902 900-2RS 900-BBK 120/240 VAC			VON
1	EA	WIRING DIAGRAM	PROVIDE FACTORY POINT-TO-POINT WIRING DIAGRAM			VON

HARDWARE GROUP NO. 02

Provide each SGL door(s) with the following:














3	EA	HINGE	5BB1HW SH 4.5 X 4.5 NRP	630	IVE
1	EA	POWER TRANSFER	EPT10 CON	689	VON
1	EA	ELECTRIFIED MORTISE LOCK	45HW-7-DEU-15-J-RQE-DS	626	BES
1	EA	PERMANENT CORE	COREMAX	626	BES
1	EA	LOCK GUARD	LG12	630	IVE
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	RAIN DRIP	142AA (OMIT @ OVERHANG)	AA	ZER
1	SET	SET SEAL	429AA-S (@ HEAD & JAMBS)	AA	ZER
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	547A-223(OR AS REQ'D. OR PER DETAIL/CONDITIONS)	A	ZER
2	EA	WIRE HARNESS	CON X LENGTH AS REQ'D		VON
1	EA	CARD READER	CARD READER AND WIRING BY DIV. 28		B/O
1	EA	DOOR CONTACT	7764 OR BY DIV. 28	628	SCE
1	EA	POWER SUPPLY	PS902 900-4R 900-BBK 120/240 VAC OR BY DIV. 28		VON
1	EA	WIRING DIAGRAM	PROVIDE FACTORY POINT-TO- POINT WIRING DIAGRAM		VON

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HARDWARE GROUP NO. 03

Provide each SGL door(s) with the following:
















3	EA	HINGE	5BB1HW SH 4.5 X 4.5 NRP		630	IVE
1	EA	POWER TRANSFER	EPT10 CON		689	VON
1	EA	ELEC PANIC HARDWARE	RX-QELX-PA-AX-99-NL-OP-110MD-CON		626	VON
1	EA	RIM CYLINDER	12E72 L/C		626	BES
1	EA	PERMANENT CORE	COREMAX		626	BES
1	EA	DOOR PULL	VR910 NL SNB		630	IVE
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	FLOOR STOP	FS18L/FS18S (AS REQUIRED)		BLK	IVE
1	EA	RAIN DRIP	142AA (OMIT @ OVERHANG)		AA	ZER
1	SET	SET SEAL	429AA-S (@ HEAD & JAMBS)		AA	ZER
1	EA	DOOR SWEEP	39A		A	ZER
1	EA	THRESHOLD	547A-223(OR AS REQ'D. OR PER DETAIL/CONDITIONS)		A	ZER
2	EA	WIRE HARNESS	CON X LENGTH AS REQ'D			VON
1	EA	CARD READER	CARD READER AND WIRING BY DIV. 28			B/O
1	EA	DOOR CONTACT	7764 OR BY DIV. 28		628	SCE
1	EA	POWER SUPPLY	PS902 900-2RS 900-BBK 120/240 VAC			VON
1	EA	WIRING DIAGRAM	PROVIDE FACTORY POINT-TO- POINT WIRING DIAGRAM			VON

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HARDWARE GROUP NO. 04

Provide each PR door(s) with the following:

2	EA	PIVOT SET	7215 SET		626	IVE
2	EA	POWER TRANSFER	EPT10 CON		689	VON
1	EA	ELEC PANIC HARDWARE	RX-QELX-PA-AX-9949-EO-LBL		626	VON
1	EA	ELEC PANIC HARDWARE	RX-QELX-PA-AX-9949-NL-OP-110MD-LBL-CON		626	VON
1	EA	RIM CYLINDER	12E72 L/C		626	BES
1	EA	PERMANENT CORE	COREMAX		626	BES
2	EA	LONG DOOR PULL	9264F 36" 20" O		630-316	IVE
2	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	PA MOUNTING PLATE	4040XP-18PA SRT (AS REQUIRED)		689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 SRT (AS REQUIRED)		689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 SRT (AS REQUIRED)		689	LCN
2	EA	FLOOR STOP	FS18L/FS18S (AS REQUIRED)		BLK	IVE
1	EA	RAIN DRIP	142AA (OMIT @ OVERHANG)		AA	ZER
2	EA	SEAL	WEATHER SEALS BY DOOR/FRAME MANUFACTURER/SUPPLIER			B/O
2	EA	DOOR SWEEP	8192AA		AA	ZER
1	EA	THRESHOLD	547A-223(OR AS REQ'D. OR PER DETAIL/CONDITIONS)		A	ZER
4	EA	WIRE HARNESS	CON X LENGTH AS REQ'D			VON
1	EA	CARD READER	CARD READER AND WIRING BY DIV. 28			B/O
2	EA	DOOR CONTACT	7764 OR BY DIV. 28		628	SCE
1	EA	POWER SUPPLY	PS902 900-2RS 900-BBK 120/240 VAC			VON
1	EA	WIRING DIAGRAM	PROVIDE FACTORY POINT-TO-POINT WIRING DIAGRAM			VON

HARDWARE GROUP NO. 05

Provide each SGL door(s) with the following:








3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	PRIVACY LOCK	45H-7-LT-15-J-VIB		626	BES
1	EA	SURFACE CLOSER	4040XP		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	MOP PLATE	8400 4" X 1" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV AS REQ'D		630	IVE
1	EA	GASKETING	188SBK PSA		BK	ZER

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HARDWARE GROUP NO. 06

Provide each SGL door(s) with the following:

3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	CLASSROOM DEADLOCK	45H-7-RD		626	BES
1	EA	PERMANENT CORE	COREMAX		626	BES
1	EA	SURFACE CLOSER	4040XP		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	MOP PLATE	8400 4" X 1" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV AS REQ'D		630	IVE
1	EA	GASKETING	188SBK PSA		BK	ZER







HARDWARE GROUP NO. 07

Provide each RU door(s) with the following:

1	SET	NOTE	ALL HARDWARE BY ROLL UP DOOR MANUFACTURER/SUPPLIER			B/O
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HARDWARE GROUP NO. 08

Provide each SGL door(s) with the following:

3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	OFFICE LOCK	45H-7-A-15-J-VIT		626	BES
1	EA	PERMANENT CORE	COREMAX		626	BES
1	EA	SURFACE CLOSER	4040XP		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	FLOOR STOP	FS439		630	IVE
1	EA	GASKETING	188SBK PSA		BK	ZER













HARDWARE GROUP NO. 09

Provide each SGL door(s) with the following:

3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	POWER TRANSFER	EPT10 CON		689	VON
1	EA	ELECTRIFIED MORTISE LOCK	45HW-7-DEU-15-J-RQE-DS		626	BES
1	EA	PERMANENT CORE	COREMAX		626	BES
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	GASKETING	188SBK PSA		BK	ZER
2	EA	WIRE HARNESS	CON X LENGTH AS REQ'D			VON
1	EA	CARD READER	CARD READER AND WIRING BY DIV. 28			B/O
1	EA	DOOR CONTACT	7764 OR BY DIV. 28		628	SCE
1	EA	POWER SUPPLY	PS902 900-4R 900-BBK 120/240 VAC OR BY DIV. 28			VON
1	EA	WIRING DIAGRAM	PROVIDE FACTORY POINT-TO-POINT WIRING DIAGRAM			VON








HARDWARE GROUP NO. 10

Provide each SGL door(s) with the following:

3	EA	HINGE	5BB1HW SH 4.5 X 4.5 NRP		630	IVE
1	EA	POWER TRANSFER	EPT10 CON		689	VON
1	EA	ELEC PANIC HARDWARE	RX2-QEL-PA-99-NL-OP-110MD 24 VDC		626	VON
1	EA	RIM CYLINDER	12E72 L/C		626	BES
1	EA	PERMANENT CORE	COREMAX		626	BES
1	EA	DOOR PULL	VR910 NL SNB		630	IVE
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	RAIN DRIP	142AA (OMIT @ OVERHANG)		AA	ZER
1	SET	SET SEAL	429AA-S (@ HEAD & JAMBS)		AA	ZER
1	EA	DOOR SWEEP	39A		A	ZER
1	EA	THRESHOLD	547A-223(OR AS REQ'D. OR PER DETAIL/CONDITIONS)		A	ZER
2	EA	WIRE HARNESS	CON X LENGTH AS REQ'D			VON
1	EA	CARD READER	CARD READER AND WIRING BY DIV. 28			B/O
1	EA	DOOR CONTACT	7764 OR BY DIV. 28		628	SCE
1	EA	POWER SUPPLY	PS902 900-2RS 900-BBK 120/240 VAC			VON
1	EA	WIRING DIAGRAM	PROVIDE FACTORY POINT-TO-POINT WIRING DIAGRAM			VON






**HARDWARE GROUP NO. 11**

Provide each SGL door(s) with the following:

3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	OFFICE LOCK	45H-7-A-15-J-VIT		626	BES
1	EA	PERMANENT CORE	COREMAX		626	BES
1	EA	OH STOP	100S ADJ		630	GLY
1	EA	SURFACE CLOSER	4040XP ST-1630		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ SRT		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	GASKETING	188SBK PSA		BK	ZER





**HARDWARE GROUP NO. 12**

Provide each SGL door(s) with the following:

3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	STOREROOM LOCK	45H-7-D-15-J		626	BES
1	EA	PERMANENT CORE	COREMAX		626	BES
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV AS REQ'D		630	IVE
1	EA	GASKETING	188SBK PSA		BK	ZER






**HARDWARE GROUP NO. 13**

Provide each SGL door(s) with the following:

3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	OFFICE LOCK	45H-7-A-15-J-VIT		626	BES
1	EA	PERMANENT CORE	COREMAX		626	BES
1	EA	FLOOR STOP	FS439		630	IVE
1	EA	GASKETING	188SBK PSA		BK	ZER

**HARDWARE GROUP NO. 14**






Provide each SGL door(s) with the following:

3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	OFFICE LOCK	45H-7-A-15-J-VIT		626	BES
1	EA	PERMANENT CORE	COREMAX		626	BES
1	EA	OH STOP	100S ADJ		630	GLY
1	EA	SURFACE CLOSER	4040XP ST-1630		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ SRT		689	LCN
1	EA	SEAL	DOOR SEALS BY DOOR/FRAME MANUFACTURER/SUPPLIER			B/O














HARDWARE GROUP NO. 15

Provide each SGL door(s) with the following:

3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	OFFICE LOCK	45H-7-A-15-J-VIT		626	BES
1	EA	PERMANENT CORE	COREMAX		626	BES
1	EA	SURFACE CLOSER	4040XP		689	LCN
1	EA	MOUNTING PLATE	4040XP-18 SRT (AS REQUIRED)		689	LCN
1	EA	FLOOR STOP	FS439		630	IVE
1	EA	SEAL	DOOR SEALS BY DOOR/FRAME MANUFACTURER/SUPPLIER			B/O

HARDWARE GROUP NO. 16

Provide each SGL door(s) with the following:

3	EA	HINGE	5BB1HW SH 4.5 X 4.5 NRP		630	IVE
1	EA	OFFICE LOCK	45H-7-A-15-J-VIT		626	BES
1	EA	PERMANENT CORE	COREMAX		626	BES
1	EA	LOCK GUARD	LG12		630	IVE
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	PA MOUNTING PLATE	4040XP-18PA SRT (AS REQUIRED)		689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 SRT (AS REQUIRED)		689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 SRT (AS REQUIRED)		689	LCN
1	EA	FLOOR STOP	FS18L/FS18S (AS REQUIRED)		BLK	IVE
1	EA	SEAL	WEATHER SEALS BY DOOR/FRAME MANUFACTURER/SUPPLIER			B/O
1	EA	DOOR SWEEP	8192AA		AA	ZER
1	EA	THRESHOLD	547A-223(OR AS REQ'D. OR PER DETAIL/CONDITIONS)		A	ZER
1	EA	DOOR CONTACT	7764 OR BY DIV. 28		628	SCE

Cal Poly University, San Luis Obispo  
 Technology Park Phase 2  
 Design Development

April 2023

HARDWARE GROUP NO. 17

Provide each SGL door(s) with the following:

1	EA	PIVOT SET	7215 SET		626	IVE
1	EA	POWER TRANSFER	EPT10 CON		689	VON
1	EA	RIM CYLINDER	12E72 L/C		626	BES
1	EA	ELEC PANIC HARDWARE	RX-QELX-PA-AX-99-NL-OP-110MD-CON		626	VON
1	EA	PERMANENT CORE	COREMAX		626	BES
1	EA	LONG DOOR PULL	9264F 36" 20" O		630-316	IVE
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	PA MOUNTING PLATE	4040XP-18PA SRT (AS REQUIRED)		689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 SRT (AS REQUIRED)		689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 SRT (AS REQUIRED)		689	LCN
1	EA	SEAL	WEATHER SEALS BY DOOR/FRAME MANUFACTURER/SUPPLIER			B/O
1	EA	DOOR SWEEP	8192AA		AA	ZER
1	EA	THRESHOLD	547A-223(OR AS REQ'D. OR PER DETAIL/CONDITIONS)		A	ZER
2	EA	WIRE HARNESS	CON X LENGTH AS REQ'D			VON
1	EA	CARD READER	CARD READER AND WIRING BY DIV. 28			B/O
1	EA	DOOR CONTACT	7764 OR BY DIV. 28		628	SCE
1	EA	POWER SUPPLY	PS902 900-2RS 900-BBK 120/240 VAC			VON
1	EA	WIRING DIAGRAM	PROVIDE FACTORY POINT-TO-POINT WIRING DIAGRAM			VON

HARDWARE GROUP NO. 18

Provide each SGL door(s) with the following:









3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	STOREROOM LOCK	45H-7-D-15-J		626	BES
1	EA	PERMANENT CORE	COREMAX		626	BES
1	EA	OH STOP	90S		630	GLY
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	GASKETING	188SBK PSA		BK	ZER

Cal Poly University, San Luis Obispo  
 Technology Park Phase 2  
 Design Development

April 2023










HARDWARE GROUP NO. 19

Provide each SGL door(s) with the following:

3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	POWER TRANSFER	EPT10 CON		689	VON
1	EA	ELECTRIFIED MORTISE LOCK	45HW-7-DEU-15-J-RQE-DS		626	BES
1	EA	PERMANENT CORE	COREMAX		626	BES
1	EA	OH STOP	100S ADJ		630	GLY
1	EA	SURFACE CLOSER	4040XP ST-1630		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ SRT		689	LCN
1	EA	SEAL	DOOR SEALS BY DOOR/FRAME MANUFACTURER/SUPPLIER			B/O
2	EA	WIRE HARNESS	CON X LENGTH AS REQ'D			VON
1	EA	CARD READER	CARD READER AND WIRING BY DIV. 28			B/O
1	EA	DOOR CONTACT	7764 OR BY DIV. 28		628	SCE
1	EA	POWER SUPPLY	PS902 900-4R 900-BBK 120/240 VAC OR BY DIV. 28			VON
1	EA	WIRING DIAGRAM	PROVIDE FACTORY POINT-TO-POINT WIRING DIAGRAM			VON

HARDWARE GROUP NO. 20

Provide each SGL door(s) with the following:

3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	POWER TRANSFER	EPT10 CON		689	VON
1	EA	ELECTRIFIED MORTISE LOCK	45HW-7-DEU-15-J-RQE-DS		626	BES
1	EA	PERMANENT CORE	COREMAX		626	BES
1	EA	SURFACE CLOSER	4040XP		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	FLOOR STOP	FS439		630	IVE
1	EA	GASKETING	188SBK PSA		BK	ZER
2	EA	WIRE HARNESS	CON X LENGTH AS REQ'D			VON
1	EA	CARD READER	CARD READER AND WIRING BY DIV. 28			B/O
1	EA	DOOR CONTACT	7764 OR BY DIV. 28		628	SCE
1	EA	POWER SUPPLY	PS902 900-4R 900-BBK 120/240 VAC OR BY DIV. 28			VON
1	EA	WIRING DIAGRAM	PROVIDE FACTORY POINT-TO-POINT WIRING DIAGRAM			VON

END OF SECTION 08 71 00

# **Catalog Cuts**

For

**Cal Poly Tech Park - Phase 2**

**Sorted By DHI Sequence**

**Prepared By**

**David E Harder**

**Created On 5/2/2023**

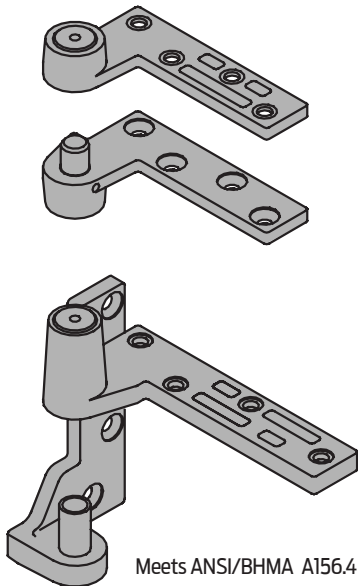
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Mfr	Catalog Number	Description	ItemID	Page #
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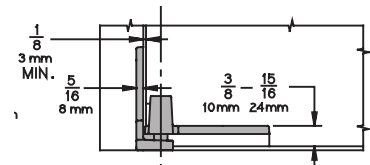
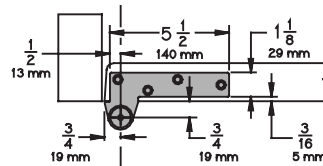
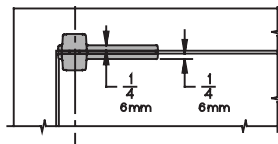
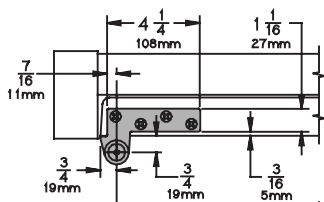
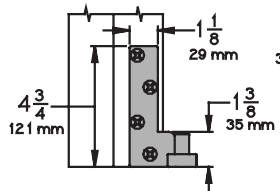
Meets ANSI/BHMA A156.4 C07131

7215 - UL Listed 20 minute fire doors  
7215F - UL Listed 3 hour fire doors

**7215**  
**7215F 3/4" Offset Pivot**

- Handed
- Top, header mount
- Bottom, jamb mount
- Use with 1-3/4" minimum door thickness, with 1/8" bevel in 2"
- Maximum door load 500 pounds
- Vertical adjustment range 3/16", with positive locking
- WP - optional weather resistant bottom pivot is modified for improved corrosion resistance. Available in US26D (626) or US32D (630) only.

Optional 7215-7226-7227 or 7215F-7226F-7227F Intermediate Pivot (handed) for each additional 100 pounds or doors over 7'. See page A47.  
Optional 7215PT Power Transfer, non-load bearing. See page A49



**7215**

**Plated Finishes brass**

US Number	US3	US4	US10	US10B	US26	US26D
BHMA Number	605	606	612	613	625	626

**Painted Finishes brass**

US Number	SP4	SP10	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622

**7215F**

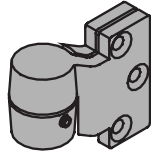
**Plated Finishes steel**

US Number	US3	US10	US32	US32D
BHMA Number	632	639	629	630

**Painted Finishes steel**

US Number	SP4	SP10	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622

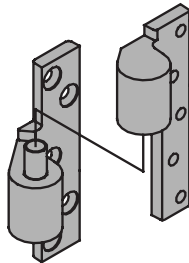
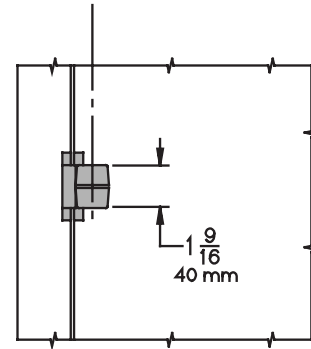
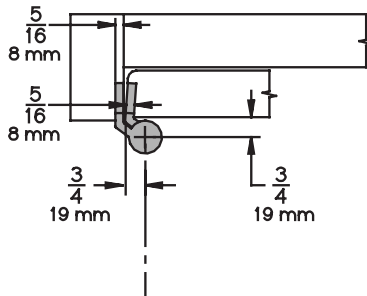
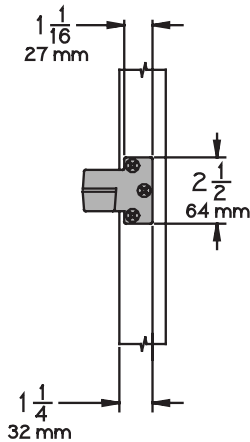
NFPA 80, Section 3-3.8 requires intermediate pivot on some fire door applications, consult factory. Use for door heights over 7'0" and one every 2'6" or . Use for door weight over the pivot set limit. One additional for every additional 100 pounds. Door thickness 1-3/4" minimum with 1/8" bevel in 2".



Meets ANSI/BHMA A156.4 C07382

### 7212-7212V-7222 INT

- Use with 7212, 7212V or 7222 3/4 Offset Pivot
- Handed
- Vertical adjustment 3/16", include positive locking.



7215-7226-7227 INT:  
UL listed 20 minute fire doors  
Meets ANSI/BHMA A156.4 C07321

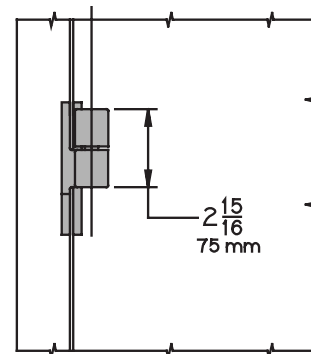
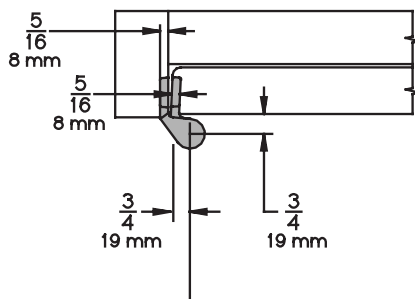
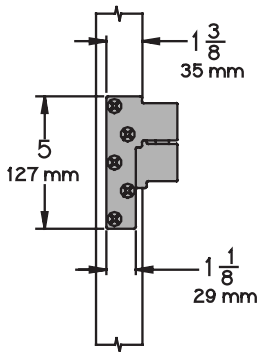
### 7215-7226-7227 INT

- Use with 7215, 7226 or 7227 3/4 Offset Pivot
- Handed
- Vertical adjustment 3/16", include positive locking.

7215F-7226F-7227F INT:  
UL listed 3 hour fire doors  
Meets ANSI/BHMA A156.4 C07371

### 7215F-7226F-7227F INT

- Use with 7215F, 7226F or 7227F 3/4 Offset Pivot
- Handed
- Vertical adjustment 3/16", include positive locking.







Meets ANSI/BHMA A156.1  
 A8111 – Steel  
 A5111 – Stainless Steel  
 A2111 – Brass

### 5BB1HW

### 5 Knuckle, Ball Bearing, Heavy Weight Full Mortise Hinge

- For heavy weight doors
- High frequency usage
- 4 ball bearing
- Packed with wood and metal screws

#### Options

- NRP, Non-Removable Pin
- SH, Security Stud
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fastners - Pin-in-Socket

#### Dimensions

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



Meets ANSI/BHMA A156.1  
 A8111 – Steel

### 5BB1WT

### 5 Knuckle, Ball Bearing, Wide Throw Full Mortise Hinge

- For medium weight doors
- Medium frequency usage
- 2 ball bearing
- Packed with wood and metal screws

#### Options

- NRP, Non-Removable Pin
- SH, Security Stud
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fastners - Pin-in-Socket

#### Dimensions

Size (Inches)	Size (mm)	Gauge
4.5 x 5	114 x 127	0.134
4.5 x 6	114 x 152	0.134
5 x 6	127 x 152	0.146
5 x 7	127 x 178	0.146
5 x 8	127 x 203	0.146

#### Finishes *brass*

Ives Finish	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	605	606	612	613	614	616	619	625	626

#### Finishes *steel*

Ives Finish	USP	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	600	632	633	639	640	641	643	646	651	652

#### Finishes *stainless steel*

Ives Finish	US32	US32D
BHMA	629	630

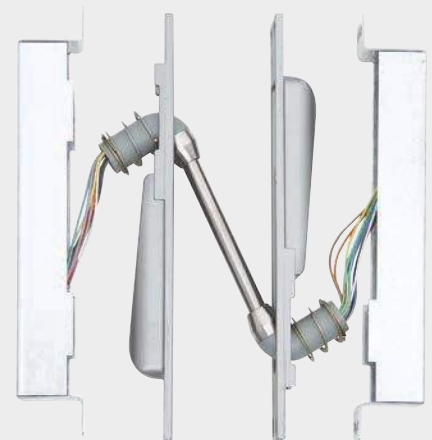
VON DUPRIN®

## Electrical power transfer

### Overview

Electric power transfer provides a means of transferring electrical power from a door frame to the edge of a swinging door. The units are completely concealed when the door is in the closed position, and are ideally suited for installations involving abuse or heavy traffic.

Two models are available; EPT-2, two 18 gauge wires and EPT-10, ten 24 gauge wires.



### Features and benefits

- UL Listed for use on fire doors
- UL listed as Miscellaneous Door Accessory
- Ball-and-socket joint construction provides cut and pinch protection for wiring
- Built for heavy traffic and high abuse openings

## Door applications

- Up to 5" butt hinges – 180° swing.
- 5 1/2" butt hinges – 130° swing.
- 6" butt hinges – 110° swing.
- 3/4" offset pivots – 180° swing.

Not for use with swing clear hinges, center-hung pivots, pocket pivots or balanced doors.

Door applications shown are for 1 3/4" door thickness, for all other applications contact Technical Support to confirm compatibility.

## Finishes

- SP28 (sprayed aluminum)
- SP313 (sprayed duranodic)

---

### Dimensions

---

Housing	9" X 1 1/4" X 1 5/8" (229mm X 32mm X 38mm)
EPT-2	Two 18 gauge wires, up to 2 AMPS @ 24VDC, with a 16 AMPS maximum surge
EPT-10	Ten 24 gauge wires, up to 1 AMPS @ 24VDC, with a 16 AMPS maximum surge
PNT-1	5/32" tubing

---

### To order, specify

- **EPT-2, EPT-10 or PNT-1.**
- **Finish, SP28 or SP313.**

## About Allegion

Allegion (NYSE: ALLE) is a global pioneer in safety and security, with leading brands like CISA®, Interflex®, LCN®, Schlage® and Von Duprin®. Focusing on security around the door and adjacent areas, Allegion produces a range of solutions for homes, businesses, schools and other institutions. Allegion is a \$2 billion company, with products sold in almost 130 countries. For more, visit [www.allegion.com](http://www.allegion.com).

*aptiQ* ■ LCN ■ **SCHLAGE** ■ STEELCRAFT ■ VON DUPRIN

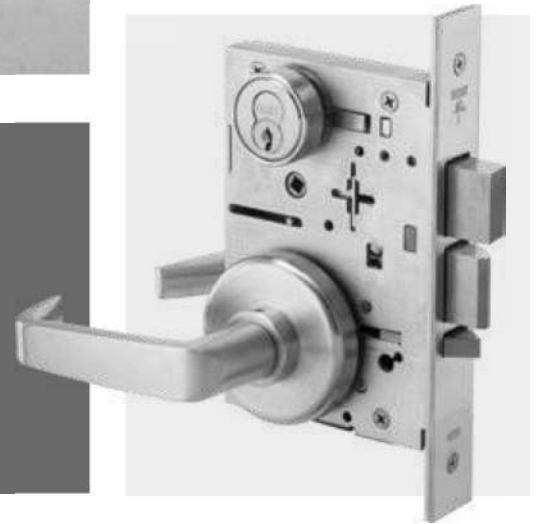


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[www.allegion.com/us](http://www.allegion.com/us)



**BEST**   
dormakaba Group

# 40H Series Heavy Duty Mortise Locks by BEST



BEST: Setting the Standard for Security

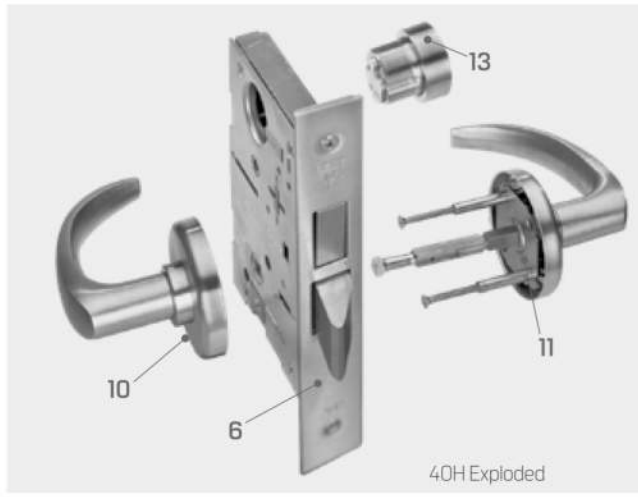
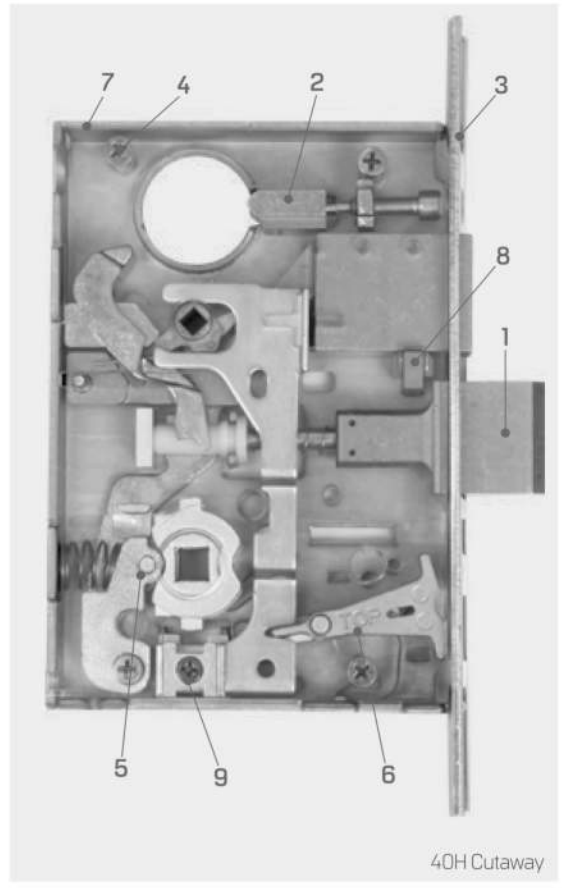
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## 40H Series – Features

1. Solid one-piece stainless steel anti-friction latch provides 50% more surface contact with strike for superior strength and security. Reversible latch rotates 180 degrees for easy handing change without opening case. Precision-engineered curve provides enhanced cycle life with reduced wear to the strike.
2. Non-handed cylinder retainer.
3. Armored front completely surrounds latch and deadbolt providing increased lateral strength. Staked assembly design allows the armored front to self-align with the door bevel during installation.
4. Enhanced case integrity achieved through four case cover screws (one at each corner), plus interlocking armored front and cover design at the latch.
5. Roller bearing hub mechanism provides smooth, wear resistant operation.
6. Locking toggle includes clear indication of "locked" and "unlocked" states. 7. 40H case, cover, and armored front manufactured from 0.095" cold rolled steel for strength and durability.
8. Fusible link.
9. Four position hub toggle design determines whether each hub is always locked, always unlocked, or locked by key for easy handing change without opening case.
10. Lever return spring mechanism located in trim for enhanced protection against lever droop, providing a firm, positive return of the lever to the horizontal position.
11. Self-aligning trim mechanism for fast, easy, and accurate installation.
12. Curved lip strike and strike box assembly provides an aesthetic, non-handed solution to complement field reversible case.
13. Solid machined cylinder rings with wavy washer provides resistance to wrenching of cylinder. Cylinder security screw prevents removal of cylinder without first removing interchangeable core.
14. Visual indicator options show a padlock icon open for unlocked and padlock icon closed and painted red for locked.
15. Non-handed stainless steel auxiliary bolt for ease of changing hand. (not shown)



## Specifications

### ADA-Americans With Disabilities Act:

**45H Series** – The design and operation of the BEST® mortise lock meets the intent of the standard for ANSI A117.1 section 404.2.6.



### Builders Hardware Manufacturers Association:

**45H Series** – ANSI A156.13, Series 1000, Grade 1 Operation and Strength, Grade 2 Security. To meet Grade 1 Security, a drill resistant core (ICD, ICDP, ICDP, or ICDX) must be used with escutcheon trims, and 1EK7K4 high security cylinder must be used with sectional trims.

**47H Series** – ANSI A156.13, Series 1000, Grade 1 Operational, Strength, and Security.

**Underwriters Laboratories®** – The 40H series is listed by Underwriters Laboratories for use on a 3 hour A label doors. These locks also carry the C-UL mark which is officially accepted in all of Canada, indicating compliance with appropriate Canadian standards and codes. The 47H series locks conform to UL437 standard for key locks, referencing door locks. The 1EJ7J4 cylinder used in the 47H series also conforms to UL437 standard for key locks, referencing high security cylinders, and is listed for Canada as well as the United States.

**Florida Building Code (FBC) Listed** – See certification listing for all 40H series lock functions that are certified for use in applications requiring a design pressure rating as specified.

Description	Model	Single Door	Double Door
PSF w/o DeadBolt	45H and 47H	+60	+35
PSF w/ DeadBolt	45H and 47H	+60	+35
PSF w/ DeadBolt	48H and 49H	+40.5	+40.5

**Auxiliary bolt** – Stainless steel, non-handed.

**Backset** – 2-3/4"

**Case** – 0.095" cold rolled steel, 5- 7/8" H x 7/8" D x 4-1/16" W. Steel is zinc dichromate plated for corrosion protection.

**Deadbolt** – Stainless steel, 1" throw.

**Latchbolt** – Solid stainless steel, 3/4" throw. Latch is oil-impregnated for anti-friction operation. Reversible without opening case.

**Strike** – For complete strike package spec's see page 5.

**Door Thickness** – Standard lock configuration designed for doors 1-3/4" thick. Thick door configuration available for doors up to 5" thick (specify thickness when ordering).

**Faceplate** – Stainless steel, brass or bronze material, 8" H x 1-1/4" W x 1/16" T. Lock face automatically adjusts to proper bevel during installation.

**Products protected by one or more of the following patents:** 4,873,853 5,590,555 5,794,472

### Finishes –

- 605 – bright brass, clear coated
- 606 – satin brass, clear coated
- 611 – bright bronze, clear coated
- 612 – satin bronze, clear coated
- 613\* – oxidized satin bronze, oil rubbed
- 618 – bright nickel plated, clear coated (brass base material)
- 619 – satin nickel plated, clear coated (brass base material)
- 622 – flat black coated (brass base material)
- 625 – bright chromium plated (brass base material)
- 626 – satin chromium plated (brass base material)
- 629 – bright stainless steel
- 630 – satin stainless steel
- 690\* – dark bronze coated (brass base material)

\*613 finish is designed to wear over time, providing an "antique" appearance.

\*690 finish will continue as a dark brown appearance over time.

### Antimicrobial Finish –

- 626AM – satin chrome plated with UltraShield™ antimicrobial protected coating
- 630AM – satin stainless steel with UltraShield™ antimicrobial protected coating



The BEST UltraShield finish inhibits the growth of bacteria and other microbes on the surface of the hardware.

NOTE: BEST UltraShield™ option is recommended for use on any hardware application where product cleanliness is a high priority, i.e.; Hospital/Healthcare, Elderly Care, Education, Transportation, Food-Service, Hospitality.

## Specifications

**#4 Knob** – Diameter – 2-1/8" ; Projection on door – 2-7/8" Material machined from solid brass or bronze.

**Decorative and Special Order Lever Handles** – Stainless steel base material with applied finish.

**Standard Lever Handles** – Brass, bronze, or stainless steel base material for standard lever designs. Lever styles #3, #14, and #15 return to a minimum of 1/2" of door surface. Lever styles #3 and #14 conform to California Titles 19 and 24. Lever styles 12, 16 and 17 do not return. Levers project 2-15/16" from door surface with H, J, R and S trim. Levers project 3-1/64" with M and N trim.

**Roses** – Wrought brass, bronze, or stainless steel base material.

H – Flat w/ round edge, 2-3/4" diameter.

R – Contoured w/ round edge, 2-3/4" diameter.

S – Flat w/ beveled edge, 3-1/2" diameter.

**Escutcheons** – J – Wrought brass, bronze, or stainless steel base material, 7-1/2" H x 2-9/32" W x 17/32" T. M & N – Forged brass or bronze, 8" H x 2-1/8" W x 37/64" T, through bolt mounted (no exposed screws outside). M – Standard cylinder; N – Concealed cylinder.

**Vandal Trim** –VT– Vandal trim is available in standard finish for H, J, M, N, R, and S trims in either #14 or #15 levers.

NOTE: Not available in single or dummy trim functions. If compliance to California Building Code Title 19 & 24 is required, the #14 lever design must be specified.

**Visual Indicators** –VIN– Visual indication uses an unlocked padlock or locked padlock image with red background to indicate lock state. VIT–Visual indication uses a thumb-turn with color coded locked and unlocked icons – red indicates door is secure and green indicates door is insecure.

## Universal Lock Design Concept

Strength, Durability...and now Flexibility. Sure, a mortise lock is one of the strongest and longest lasting locks available. But who says it has to be the most complex to order and install? When designing the 40H mortise lock, BEST® decided to focus on things that would make the lock easier to use, while at the same time maintaining the strength, durability, and dependability you would expect in a BEST® mortise lock.

In addition to the ability to quickly change the lock handing, the universal case design of the 40H provides the ability to reconfigure a lock into many different functions easily and quickly, often by rearranging existing parts without disassembling the lock case. The efficiency of the design enables over 12 of the most commonly used lock functions to be included in just 3 case configurations.

The 40H provides the ability to postpone decisions on how the lock will be configured all the way up to the point of installation, making it one of the most flexible and user-friendly mortise locks available. This translates into value for anyone involved in the process, whether they're an architect, specification writer, distributor, or end-user.



## Flexibility in Ordering

BEST offers three ways in which to order the 40H mortise lock. YOU get to choose which method meets your needs.

**Function Specific Lock** - If you know exactly what you need in a mortise lock, and are confident that your needs won't change, then order your 40H locks in the traditional way by specifying the exact function, trim, finish, and handing. BEST® will build the locks to work exactly as specified, so they may or may not have the ability to be converted to another function in the future.

**Universal Lock** - If you want to keep your options open, this method of ordering the 40H is for you. BEST® has developed three "universal" functions that can be configured to a variety of common functions, all without opening the lock case. When any of the universal functions are ordered as a complete lock, all the necessary parts (including trim) are provided to configure any of the functions in that group. Universal locks can only be ordered with sectional trim. If escutcheon trim is needed, order a three-part lock.

UNR	ANSI	UNT	ANSI	UNAB	ANSI
A – office	F04	L – privacy	F19	AB – office	F20
AT – office	F04	T – dormitory	F13	TA – dormitory	F12
D – storeroom	F07			TD – dormitory	
N – passage	F01				
NX – exit	F31				
R – classroom	F05				

**Four-Part Lock** – For the maximum flexibility in ordering a mortise FOUR-PART LOCK lock, BEST® provides a way to order your 4OH lock in four parts: Inside Trim, Case Only, Outside Trim and Strike Packages. The kits that make up these four parts have been carefully designed so that when all three are combined you have everything found in a complete 4OH lock. This order method is ideal for customers wanting to stock a variety of trim designs with a minimal number of lock cases.

**Parts Ordering Made Easy** – No more searching through service manuals or calling technical support for the right part numbers. BEST® has developed a variety of kits you can order when you only need part of a 4OH mortise, rather than the whole lock.

**Case Only** – A Case Only lock includes all parts normally included with a complete lock that are not specifically associated with either the inside or outside trim, including: lock case, face plate, strike and strike box, fasteners (for case and strike), and installation instructions. Case Only mortise locks will be shipped in the standard mortise packaging, allowing trim kits to be included at a future date to make a complete lock.

**Trim Kit** – A 4OH Trim Kit is simply one half of a complete trim package. An Outside Trim Kit must always be matched up with an Inside Trim Kit to operate with a lock. Each kit includes all the necessary parts (including fasteners) required for installation that are associated with just the one side of the door.

**Lever Set** – A lever set kit provides the inside lever assembly (with set screw) and outside lever assembly (with spindle attached). Thick Door and Tactile Lever options are available for this kit.

**Faceplate Kit** – Face Plate kit includes a finished faceplate and the appropriate screws. Security Head screws are an option for this kit.

**Replacement Spindle** – As a security feature, the outside spindle on the 4OH is designed to twist off during abuse before any internal damage to the lock occurs. The Replacement Spindle kit is a quick, easy, and inexpensive way to replace any spindles damaged by attack or abuse. This kit includes the inside and outside spindles, plus the pin to attach the outside lever.

**Screw Kit** – Nothing's more frustrating than spending time searching for the part number of a single screw. With the 4OH Screw Kits, you don't have to worry about that anymore. These kits have been designed to provide all the necessary fasteners for one lock in a single bag. All you need to know is the trim style and finish, and you're set. Security head screws are an option for this kit.



#### Function Letter Chart

UNR	ANSI	ANSI	UNAB
	IDT	F19	L
	2DT	F02	LB
F04	A		LT
F20	AB	F01	N
F04	AT	F31	NX
F21	B	F05	R
	B5	F06	RHB
	B7	F35	S
F08/F10	BA	F13	T
	BW	F12	TA
F09	C		TD
	CHB	F30	W
F07	D	F17	AD
F14	G	F29	RD
F15	H	F16	WD
F15	HJ	F18	YD
F34	INA		UNR
F33	IND		UNT
F32	INL		UNAB

## Strike Packages

### S1 – Standard strike:

4-7/8" x 1-1/4" x 3/32", nonhanded, curved lip, 1-1/4" lip to center strike. Fits standard door frame ANSI A115.1, and comes with plastic strike box.



### S5 – Latchbolt-only strike:

4-7/8" x 1-1/4" x 3/32", handed, curved lip, 1-1/4" lip to center strike. Fits standard door frame ANSI A115.1, and comes with wrought steel strike box.



### S6 – Latchbolt/Deadbolt strike:

4-7/8" x 1-1/4" x 3/32", handed, curved lip, 1-1/4" lip to center strike. Fits standard door frame ANSI A115.1, and comes with wrought steel strike box.





How to order: 45H

45H	7	R	14	H	626	RH
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Series	Core Housing	Function Code	Lever Style	Trim Style	Finishes	Door Hand	Options
45H – standard mortise lock	0 – keyless 7 – 7-pin housing accepts all Best cores	A – office	<b>Standard Levers:</b>	H – 2 3/4" dia.	618 626	RH	LL – lead lined
		D – storeroom	3 – solid tube/return	R – 2 3/4" dia.	630 690	RHRB	SH – security head screws
		L – privacy	12 – solid tube/no return	S – 3 1/2" dia.	<b>Satin</b> 606 612 613 619	LH	Thick Door – [specify thickness if other than 1-3/4"]
		N – passage	14 – curved return	J – wrought	<b>Bright</b> 605 611 622 625 629	LHRB	TAC – tactile lever/knob
		R – classroom	15 – contour/angle return	M – forged	<b>Antimicrobial</b> 626AM 630AM		7/8 LTC – 7/8" lip-to-center strike
		T – dormitory etc.	16 – curved/no return	N – forged (concealed cyl)			VIN – visual indicator
			17 – gull wing				SI – standard strike
			<b>Knobs:</b> 4 – round				S5 – latchbolt-only strike
							S6 – latchbolt/deadbolt strike
							VT – vandal trim
							VIT – visual indicator thumbturn
							VIB – double visual indicator
							WS – windstorm label
		pages 15-18			page 3	page 9	

How to order: 47H

47H	7	R	14	M	626	RH
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Series	Core Housing	Function Code	Lever Style	Trim Style	Finishes	Door Hand	Options
47H – lever / knob high security mortise lock	7 – 7 pin housing, must use 5C cores and long blade keys	A – office	<b>Standard Levers:</b>	H – 2 3/4" dia.	626 630	RH	K – non UL cylinder
		D – storeroom	3 – solid tube/return	R – 2 3/4" dia.	<b>Antimicrobial</b> 626AM 630AM	RHRB	LL – lead lined
		R – classroom	12 – solid tube/no return	S – 3 1/2" dia.		LH	Thick Door – [specify thickness if other than 1-3/4"]
		T – dormitory etc.	14 – curved return	M – forged		LHRB	TAC – tactile lever/knob
			15 – contour/angle return				7/8 LTC – 7/8" lip-to-center strike
			16 – curved/no return				VIN – visual indicator
			17 – gull wing				SI – standard strike
			<b>Knobs:</b> 4 – round				S5 – latchbolt-only strike
							S6 – latchbolt/deadbolt strike
							VT – vandal trim
							WS – windstorm label
		pages 15-18			page 3	page 9	

\*VIT option only compatible with H, R, S, J & M trim styles. VIN & VIB options only compatible with H, R & J trim styles.

How to order: 45H Case Only

45HCA		R			626	RH
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Series	Function Code	Finishes	Door Hand	Options
47H – lever / knob high security mortise lock	A – office	605 606 611	RH	SH – security head screws
	D – storeroom	612 613 618	RHRB	7/8 LTC – 7/8" lip-to-center strike
	R – classroom	619 622 625	LH	
	T – dormitory etc.	626 629 630 690	LHRB	
	pages 15-18	page 3	page 9	

**How to order: 40H Trim Kits**

40HTK	OS2	14	H	626
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Series Backset	Function Code	Lever/Knob Style	Trim Style	Finishes	Options
40HTK– trim kit	IS1– inside lever only	<b>Standard Levers:</b>	H– 2-3/4" dia.	605 606	D– double cylinder
	IS2– inside lever x thumb turn	3– solid tube/ return	R– 2-3/4" dia.	611 612	Thick Door– (specify thickness if other than 1-3/4" )
	IS3– inside lever x cylinder	12– solid tube/ no return	S– 3-1/2" dia.	613 618	SH– security head screws
	IS4*– inside cylinder only	14– curved return	J– wrought	619 622	TAC– tactile lever/knob
	IS5– inside thumb turn only	15– contour/ angle return	M– forged	625 626	
	IS6– inside lever x cylinder x VIN	16– curved/ no return	N– forged	629 630	
	OS1– outside lever only	17– gull wing	(concealed cyl.)	690	
	OS2– outside lever x cylinder	<b>Knobs:</b>			
	OS3– outside lever x emergency plate	4– round			
	OS4*– outside cylinder only				
	OS5– outside lever x VIN				
	OS6– inside lever x cylinder x VIN				
	NOTE: VIN– visual indicator				
	pages 15-18				page 3

\* Only works with H, R, S, M and N trim.

**How to order: 40H Strike Packages**

40HST	SI	626
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Series	Kit Number	Finishes	Options
40HST– strike package	SI– standard strike	605 606 611	Thick Door– (specify thickness if other than 1-3/4" )
	S5– latchbolt-only strike	612 613 618	7/8LTC– 7/8" lip-to-center strike
	S6– latchbolt/deadbolt strike	619 622 625	SH– security head screws
	4– strike box only	626 629 630	
	page 5	690	page 3

**How to order: 40H lever sets**

40HLS	14	626
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Series	Kit Number	Finishes	Options
40HLS– lever set	<b>Standard Levers:</b>	605 606 611	Thick Door– (specify thickness if other than 1-3/4" )
	3– solid tube/ return	612 613 618	SH– security head screws
	12– solid tube/ no return	619 622 625	VT– vandal trim
	14– curved return	626 629 630	
	15– contour/ angle return	690	
	16– curved/ no return		
	17RH– gull wing-right hand		
	17LH– gull wing-left hand		
	<b>Knobs:</b>		
	4– round		
Decorative & special order levers: pages 12-14	page 3		
page 5			

**How to order: 40H Faceplate Kits**

40HFP	3	626
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Series	Kit Number	Finishes	Options
40HFP– faceplate kit	0– AB	6– blank	605 606 611
	1– BW, TD, H, HJ	7– BA, S, TA	612 613 618
	2– A	8– B, G, IND, L, LB, T	619 622 625
	3– AT, D, C, INL, NX, R, W	9– CHB, RHB	626 629 630
	4– N, LT	10– blank (without logo)	690
	5– AD, RD, YD, WD		
page 5		page 3	

### How to order: 40H Replacement Spindles

40HRS	2	
Series	Function Code	Options
40HRS – replacement spindle kits	2– 40H split spindle (standard) 4– 40H hook spindle* page 5	Thick Door– (specify thickness if other than 1-3/4")

\*Hook spindle is available for 1 3/4" thick door only.

### How to order: 40H Vandal Trim Retrofit Kit

40HSK	14	626	
Series	Kit Number	Finishes	Options
40HVTK – vandal trim	<b>Standard Levers:</b> ♿ 14– curved return ♿ 15– contour/ angle return	605 606 611 612 613 618 619 622 625 626 629 630 690	Thick Door– (specify thickness if other than 1-3/4")

\*Complies with California Building Code Title 10 and Title 24, part 12

### How to order: 40H Screw Kits

40HSK	1	626	
Series	Kit Number	Finishes	Options
40HSK – screw kits	1– H, R, S, J trim screw kit 2– M, N trim screw kit 3– special purpose fasteners screw kit 4– surface mounted trim screw kit 5– VIN trim screw kit page 5	606 612 613 622 626	Thick Door– (specify thickness if other than 1-3/4") SH– security head screws

### How to order: 40H Visual Indicator Laminate & Thumb-turn

Part Description	Part Number	Series	Trim Style	Finishes	Options
Indicator Laminate	86329	Indicator Thumb-turn 40HVIT	H– 2 3/4" Dia.	605 606 611	Thick Door– (specify thickness if other than 1-3/4")
Thumb-turn Indicator Kit	86829		R– 2 3/4" Dia.	612 613 618	
Thumb-turn Escutcheon Indicator Kit			S– 3 1/2" Dia.	619 622 625	
			M– forged	626 629 630	
			J– wrought	690 626AM 630AM	

## Special Features

#### Lead Lined Feature

The 40H mortise lock can be lead lined to protect against x-rays. Since the majority of lead lined doors contain the lead in the surface of the door, the 40H provides lead lining for the holes cut in the door when preparing the door for the trim. The cylinder hole is lead lined.

**To order:** designate "LL" on order procedure (page 6-7)

#### Security Head Screws

Security head screws.

**To order:** designate "SH" on 45H/47H in order procedure (page 6-7).

#### Tactile Feature Knob/Lever

This option is for use in applications where special notice is needed to warn the blind about safety or accessibility environments. Depending on the style ordered, the knob or lever will receive either grooves or knurling as the tactile feature.

**To order:** designate "TL" on 45H/47H knobs/levers in order procedure (page 6-7).

#### Visual Indicator Feature

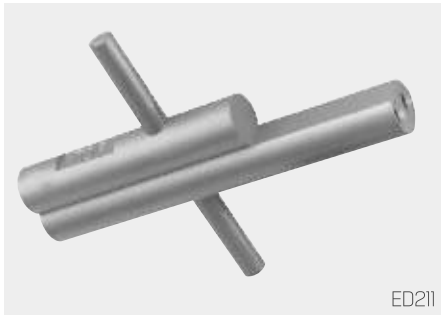
This option adds a visual indicator for certain functions that visually reflects whether the lockset is in the locked or unlocked state.

This option is available for the following functions: TD– Dormitory, IND– Intruder, INL– Intruder, L– Privacy, LT– Privacy, S– Storeroom. Visual indicator feature is standard on the H– Hotel function (page 2).

#### Vandal Trim

VT–Vandal trim is available in standard finish for H, J, M, N, R, and S trims in either #14 or #15 levers.

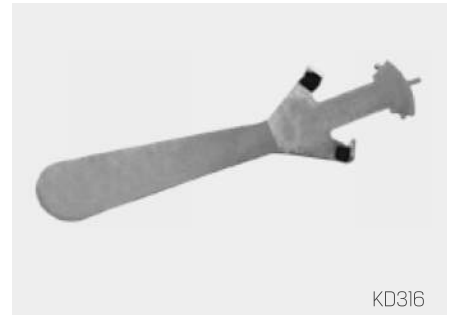
Note: Not available in single or dummy trim functions. If compliance to California Building Code Title 19 & 24 is required, the #14 lever design must be specified.



ED211



ED212



KD316

## Service Equipment

### ED211 Mortise Cylinder Wrench

The BEST mortise cylinder wrench and test handle is an essential dual-purpose tool. It is used primarily to install or remove BEST mortise cylinders without marring the cylinder surface finish. The single end may be used to test the lock operation, as well as aligning the throw pins.

**To order specify:** ED211 mortise cylinder wrench.

### ED212 Mortise Cylinder Cam Assembly Tool

Mortise cylinder cams are quickly changed with the use of this tool. Approx. length 1-3/4".

**To order specify:** ED212 assembly tool.

### ED221 Mortise Cylinder Thread Repair Die

Tool for rethreading 1-5/32" diameter cylinders. To order specify: ED221 thread repair die. ED225 Hole Tap for 1-5/32" Mortise Cylinder Tap tool used to rethread housing threads for IE Mortise Cylinders.

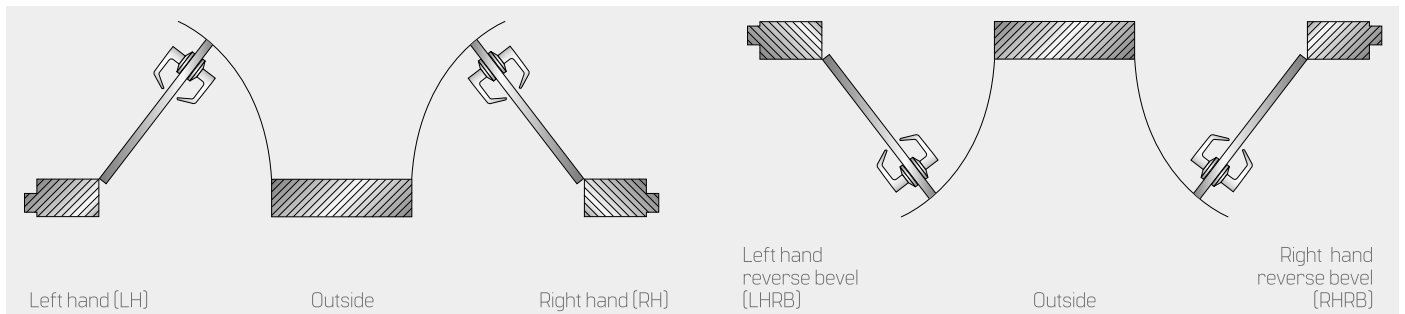
**To order specify:** ED225 hole tap.

### KD316 Spanner Wrench (C54466)

All "H" locksets require the use of the KD316 spanner wrench for door mounting. This tool is include with every (10) locksets ordered.

**To order specify:** KD316 spanner wrench.

## Hand of Door



## Mortise Sample Specifications

### A. Locksets and Latchsets:

[BEST] - [\_\_\_\_\_] [\_\_\_\_\_]

1. Base Specification: BEST components as listed in Hardware Schedule per Article 3.05.
2. Locksets and latchsets of other acceptable manufacturers must conform to the requirements of Subparagraphs 3 and 4.
3. Mortise Type:
  - A. Locksets shall be tested and approved by BHMA for ANSI A156.13, Series 1000, Operational Grade 1, Extra-Heavy Duty, Security Grade 2 and be UL10C
  - B. Locksets shall be mortise type with solid 3/4 inch throw one-piece radiused latchbolt made of self-lubricating stainless steel. Deadbolt functions shall be one inch projection stainless steel construction. Both deadbolt and latchbolt to extend into lock case with reinforcing a minimum of 3/8 inch when fully extended.
  - C. Knobs to be [\_\_\_\_\_] design.  
Levers to be [\_\_\_\_\_] design.
  - D. Furnish locksets and latchsets with sufficient strike lip to protect door trim.

- E. Provide locksets with 7 pin [BEST] interchangeable core cylinders. [All mortise cylinders shall have a concealed internal set screw for securing the cylinder to the lockset. The internal set screw will be accessible only by removing the core from the cylinder body with a control key]
- F. All mortise locksets and latchsets must conform to ANSI A156.13, Series 1000, Operational Grade 1 [Security Grade 2 for locksets in security areas] and be listed by UL. [High Security Option: All mortise locksets must conform to ANSI A156.13, Series 1000, Operational Grade 1, Security Grade 1 and listed by UL, and must include interchangeable core cylinders which conform to High Security Cylinder requirements of UL 437.]
- G. Locksets must fit ANSI A115.1 door preparation.
- H. Locksets and latchsets to have self-aligning through-bolted trim.
- I. Locksets and latchsets must have the ability to change handing without opening case.
- J. Auxiliary latch to be made of one-piece self-lubricating stainless steel.
- K. Locksets must be available with tactile or knurled knobs or levers for identification of hazardous areas.
- L. Lever handles must be of forged or cast brass, bronze or stainless steel construction and conform to ANSI A117.1.

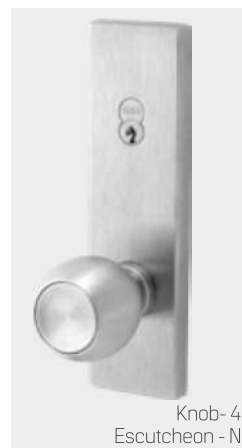
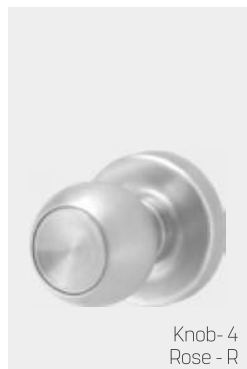
**Subparagraphs m through r describe quality features of BEST mortise locksets which may or may not be available from other lock manufacturers. Edit accordingly.**

- M. [Spindle to be such that if forced it will twist first, then break, thus preventing forced entry.]
- N. [Knobs and levers to be operated with a roller bearing spindle hub mechanism.]
- O. [Permanent core face must be the same finish as the lockset finish.]
- P. Cylinder retaining screw, auxiliary latch, and strike must be non-handed.]
- Q. [Locking toggle on face of door must clearly indicate whether mortise lock is in the "locked" or "unlocked" state.]
- R. [Cover and armored front must interlock at the latch, preventing the cover from spreading or bowing while under duress.]

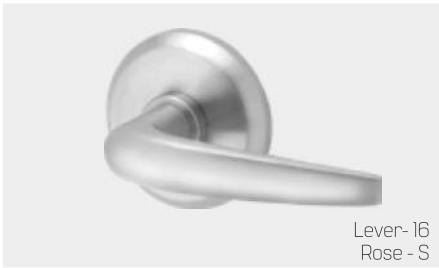
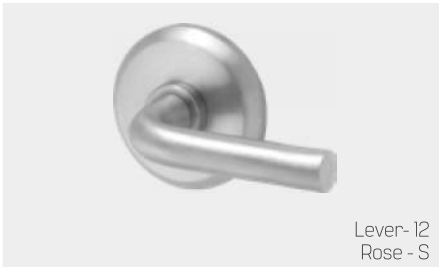
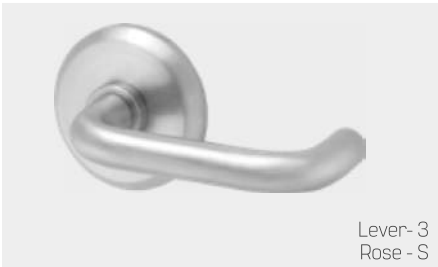
**Subparagraphs s through x describe quality features of BEST mortise locksets which may or may not be available from other lock manufacturers. Subparagraphs s, t, and u should remain as a group, and subparagraphs v, w, and x should remain as a group. Choose either s-u or v-x, but not both groups.**

- S. [Mortise lock to offer a complete lock [including trim] with the ability to be configured in the field to any of the following ANSI functions: F01, F04, F05, F07, F31.]
- T. [Mortise lock to offer a complete lock [including trim] with the ability to be configured in the field to any of the following ANSI functions: F19, F13.]
- U. [Mortise lock to offer a complete lock [including trim] with the ability to be configured in the field to any of the following ANSI functions: F12, F20.]
- V. [Mortise lock to offer a multi-function case with the ability to be configured in the field to any of the following ANSI functions: F01, F04, F05, F07, F09, F30, F31, F32.]
- W. [Mortise lock to offer a multi-function case with the ability to be configured in the field to any of the following ANSI functions: F13, F19, F33.]
- X. [Mortise lock to offer a multi-function case with the ability to be configured in the field to any of the following ANSI functions: F12, F15, F20.]

## 40H Series - Standard Knob & Trims



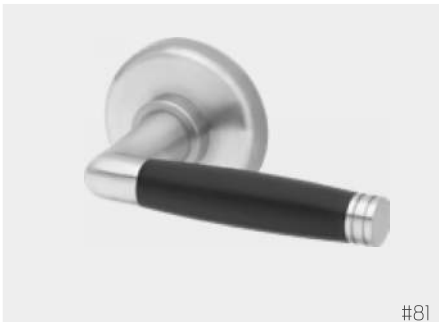
# 40H Series - Standard Lever & Trims



# 40H Series - Standard Lever & Trims

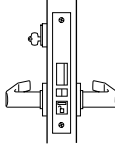
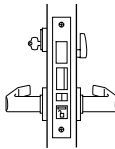
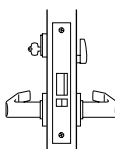
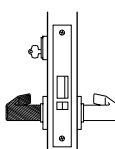
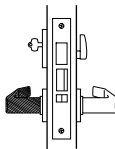
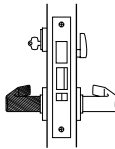
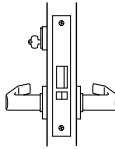


# 40H Series - Standard Lever & Trims



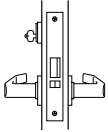
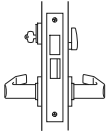
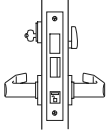
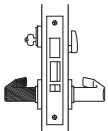
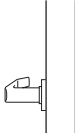
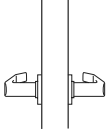
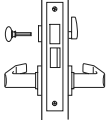


**Functions**

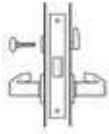
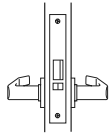

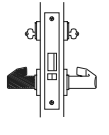
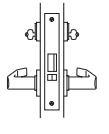
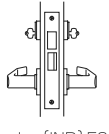
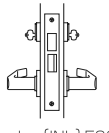
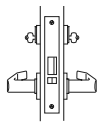
Function & Diag (ANSI No.)	Description	Outside Lever or Knob		Inside Knob/Lever		
		Latch operated by	Deadbolt operated by	Locked by	Unlocked by	Locked by
<b>Single keyed</b>						
Office (A) F04 	Rotating inside lever Rotating outside lever—only when locking toggle is in unlocked position Turning key in outside cylinder.	N/A	Placing locking toggle in locked position	Placing locking toggle in unlocked position	Cannot be locked	Always unlocked
Office (AB) F20 	Rotating inside lever, Rotating outside lever—only when locking toggle is in unlocked position, Turning key in outside cylinder.	Turning key in outside cylinder Inside turn lever Inside lever retracts deadbolt and latch simultaneously.	Placing locking toggle in locked position, Projecting dead-bolt by key or turning inside turn lever.	Turning key in outside cylinder and placing locking toggle in unlocked position	Cannot be locked	Always unlocked
Office (AT) F04 	Rotating inside lever, Rotating outside lever only when unlocked by key or turn lever, Turning key in outside cylinder.	N/A	Turning inside turn lever Turn key in outside cylinder.	Turning inside turn lever Turning key in outside cylinder	Cannot be locked	Always unlocked
Storeroom (D) F07 	Rotating inside lever Turning key in outside cylinder.	N/A	Always locked	Cannot be unlocked	Cannot be locked	Always unlocked
Hotel (H) F15 	Rotating inside lever, Turning key in outside cylinder.	Turning inside turn lever Turning emergency key in O/S cylinder. (Rotating inside lever retracts deadbolt and latch simultaneously.)	Always locked	Cannot be unlocked	Cannot be locked	Always unlocked
Hotel (HJ) F15 	Rotating inside lever Turning key in outside cylinder.	Turning inside turn lever Turning emergency key in O/S cylinder. (Rotating inside lever retracts deadbolt and latch simultaneously.)	Always locked	Cannot be unlocked	Cannot be locked	Always unlocked
Classroom (R) F05 	Rotating inside lever Rotating outside lever only when unlocked by key Turning key in outside cylinder.	N/A	Turning key in outside cylinder	Turning key in outside cylinder	Cannot be locked	Always unlocked

NOTE: The latchbolt is deadlocked with an auxiliary deadlatch. (H) F15 & (HJ) F15 - Throwing deadbolt blocks out all keys except "ER" key.

**Functions**

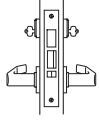
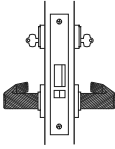
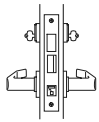
Function & Diag. [ANSI No.]	Description	Outside Lever or Knob		Inside Knob/Lever		
		Latch operated by	Deadbolt operated by	Locked by	Unlocked by	Locked by
<b>Single keyed (continued)</b>						
Classroom Holdback (RHB) F06 	Rotating inside lever Turning key in outside cylinder O/S lever except when locked by outside key Latchbolt held retracted by turning O/S key while holding up I/S lever. The latchbolt is deadlocked with an auxiliary deadlatch	N/A	Turning key in outside cylinder	Turning key in outside cylinder	Cannot be locked	Always unlocked
Dormitory (T) F13 	Rotating inside lever Rotating outside lever—only when deadbolt is retracted Turning key in outside cylinder.	Turning key in outside cylinder, Inside turn lever Inside lever retracts deadbolt and latch simultaneously.	Turning key in outside cylinder Turning inside turn lever.	Turning key in outside cylinder Turning inside turn lever. Rotating inside lever	Cannot be locked	Always unlocked
Dormitory (TA) F12 	Rotating inside lever Rotating O/S lever only when locking toggle is in unlocked position and deadbolt is retracted, Turning key in outside cylinder	Turning key in outside cylinder Turning inside turn lever. [Rotating inside lever retracts deadbolt and latch simultaneously.]	Placing locking toggle in locked position Projecting deadbolt by key or turning inside turn lever.	Turning key in outside cylinder and placing locking toggle in unlocked position	Cannot be locked	Always unlocked
Dormitory (TD) 	Rotating inside lever Turning key in outside cylinder.  The latchbolt is deadlocked with an auxiliary deadlatch	Turning inside turn lever Rotating inside lever retracts deadbolt and latch simultaneously.) Turning key in outside cylinder.	Always locked	Cannot be unlocked	Cannot be locked	Always unlocked
<b>Non-keyed</b>						
Single Dummy Trim (IDT) 	This is a single, surface-mounted lever for an inactive door or a non-latching door					
Double Dummy Trim (2DT) 	This is a through bolt mounted pair of matching levers for an inactive door or a non-latching door					
L-Privacy (F19) 	Rotating inside lever Rotating outside lever only when deadbolt is retracted.	Turning the emergency key, Turning inside turn lever. [Rotating inside knob/lever retracts deadbolt and latch simultaneously.]	Turning inside turn lever Turning the emergency key.	Turning inside turn lever Rotating inside lever retracts latch and dead-bolt simultaneously Turning the emergency key.	Cannot be locked	Always unlocked

**Functions**

Function & Diag. [ANSI No.]	Description		Outside Lever or Knob		Inside Knob/Lever	
	Latch operated by	Deadbolt operated by	Locked by	Unlocked by	Locked by	Unlocked by
<b>Single keyed (continued)</b>						
LT-Privacy 	Rotating inside lever Rotating outside lever—only when turn knob is unlocked	N/A	Turning inside turn lever Turning the emergency key.	Turning inside turn lever; Rotating inside lever; Turning the emergency key.	Cannot be locked	Always unlocked
N-Passage (F01) 	Rotating inside or outside lever	N/A	Cannot be locked	Cannot be unlocked	Cannot be locked	Cannot be locked
NX-Exit (F31) 	Rotating inside lever  The latchbolt is deadlocked with an auxiliary deadlatch	N/A	Always Fixed	Cannot be locked	Cannot be locked	Always unlocked
<b>Double keyed</b>						
Entrance (*C-Public) F09 	Rotating inside lever; Rotating outside lever only when unlocked by key in inside cylinder Turning key in outside cylinder only. The latchbolt is deadlocked with an auxiliary deadlatch. When required, inside cylinder may be combined to operate by master key only	N/A	Turning key in inside cylinder	Turning key in inside cylinder	Cannot be locked	Always unlocked
Holdback (CHB) 	Turning outside key, Rotating outside lever only when unlocked by key in inside cylinder Inside lever Latchbolt held retracted by turning inside key while holding up on inside lever. The latchbolt is deadlocked with an auxiliary deadlatch	N/A	Turning key in inside cylinder	Turning key in inside cylinder	Cannot be locked	Always unlocked
Communicating (G) F14 	Latch operated from either side only when the deadbolt is retracted.	Turning key in outside or inside cylinder	Turning key in inside or outside cylinder	Turning key in inside or outside cylinder	Turning key in inside or outside cylinder	Turning key in inside or outside cylinder
Intruder (IND) F33 	Turning key in inside or outside cylinder Rotating outside lever when deadbolt is retracted Rotating inside lever.	Turning key in outside or inside cylinder Rotating inside lever [Retracts the deadbolt and latch simultaneously].	Extending the deadbolt by turning key in inside or outside cylinder	Retracting the deadbolt by turning key in inside or outside cylinder Rotating inside lever [Retracts the deadbolt and latch simultaneously].	Cannot be locked	Always unlocked
Intruder (INL) F32 	Rotating inside lever Rotating outside lever only when unlocked by inside or outside key Turning key in inside or outside cylinder. The latchbolt is deadlocked with an auxiliary deadlatch. When required, inside cylinder may be combined to operate by master key only	N/A	Turning key in inside or outside cylinder	Turning key in inside or outside cylinder	Cannot be locked	Always unlocked

\*ATTENTION: Locksets that secure both sides of the door are controlled by building codes and the Life Safety Code®. In an emergency exit situation, failure to quickly unlock the inside lever could be hazardous or even fatal.

**Functions**

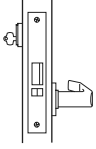
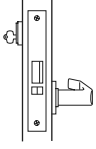
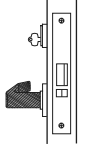
Function & Diag. [ANSI No.]	Description	Outside Lever or Knob		Inside Knob/Lever		
		Latch operated by	Deadbolt operated by	Locked by	Unlocked by	Locked by
<b>Double keyed (continued)</b>						
Intruder (INA) F34 	Turning key in inside or outside cylinder; Rotating outside lever when deadbolt is retracted, Rotating inside lever	Turning key in outside or inside cylinder Rotating inside lever (Retracts the deadbolt and latch simultaneously)	Extending the deadbolt by turning key in inside or outside cylinder	Retracting the deadbolt by turning key in inside or outside cylinder Rotating inside lever (Retracts the deadbolt and latch simultaneously)	Cannot be locked	Always unlocked
The latchbolt is deadlocked with an auxiliary deadlatch. When required, inside cylinder may be combined to operate by master key only.						
Storeroom (*W) F30 	Turning key in inside or outside cylinder	N/A	Always locked	Cannot be locked	Always unlocked	Cannot be locked
The latchbolt is deadlocked with an auxiliary deadlatch. When required, inside cylinder may be combined to operate by master key only.						
Storeroom (*S) F35 	Rotating inside lever Rotating outside lever only when locking toggle is in unlocked position and deadbolt is retracted, Turning key in inside or outside cylinder.	Turning key in inside or outside cylinder	Placing locking toggle in locked position	Turning key in outside cylinder or inside cylinder and placing locking toggle in unlocked position	Extending the deadbolt	Retracting the deadbolt

**Deadlocks**

Deadlock (AD) F17 	N/A	Turning key in outside cylinder Turning inside turn lever.	N/A	N/A	N/A	N/A
Classroom Deadlock (RD) F29 	N/A	Turning key in outside cylinder Turning inside turn lever.*	N/A	N/A	N/A	N/A
*Function RD—the inside turn knob retracts deadbolt but will not project it. (Specify hand of door.) Only for 1 - 3/4" doors.						
YD-Deadlock F18 	N/A	Turning key in outside cylinder only	N/A	N/A	N/A	N/A
WD-Deadlock F16 	N/A	Turning key in outside or inside cylinder	N/A	N/A	N/A	N/A
The latchbolt is deadlocked with an auxiliary deadlatch. When required, inside cylinder may be combined to operate by master key only.						

\*ATTENTION: Locksets that secure both sides of the door are controlled by building codes and the Life Safety Code®. In an emergency exit situation, failure to quickly unlock the inside lever could be hazardous or even fatal.

## Functions

Function & Diag. [ANSI No.]	Description	Outside Lever or Knob		Inside Knob/Lever		
		Latch operated by	Deadbolt operated by	Locked by	Unlocked by	Locked by
<b>Special</b>						
Classroom [XR] 	Rotating inside lever Turning key in outside cylinder.	N/A	N/A	N/A	Cannot be locked	Always unlocked
Classroom Holdback (*XRHB)FO9 	Rotating inside lever; Turning key in outside cylinder. Latchbolt held retracted by turning O/S key while holding up I/S lever  The latchbolt is deadlocked with an auxiliary deadlatch	N/A	N/A	N/A	Cannot be locked	Always unlocked
Storeroom (*ZD) 	Turning key in outside cylinder  The latchbolt is deadlocked with an auxiliary deadlatch	N/A	Always locked	Cannot be unlocked	N/A	N/A

\*ATTENTION: Locksets that secure both sides of the door are controlled by building codes and the Life Safety Code®. In an emergency exit situation, failure to quickly unlock the inside lever could be hazardous or even fatal.

## 48H/49H Series-Mortise Deadlocks

### Specifications

**Case:** 0.095" cold rolled steel, 3-3/8" x 4-3/16" x 1". Steel is zinc dichromate plated for corrosion protection.

**Faceplate:** Brass or bronze material, 5-3/8" x 1-3/16" x 7/32".

**Strike:** Brass, bronze, or stainless steel base material.

**48HS1:** Flat strike supplied standard, 3-1/2" x 1-1/8" x 3/32"

Fits standard door frame cut-out as specified in ANSI A115.5.

**48HS2:** Lipped strike supplied as option, 4-7/8" x 1-1/4" x 3/32". Fits standard door frame cut-out as specified in ANSI A115.1.

**Backset:** 2 3/4"

**Door Thickness:** Standard lock configuration designed for doors 1-3/4" thick. Thick door configuration available for doors up to 3" thick (specify thickness when ordering).

NOTE: "R" function not available for thick door.

**Deadbolt:** Stainless steel, 1" throw

**Trim:**

**48H:** Cylinder and trim ring only.

**49H:** M escutcheon supplied; refer to 47H specification for dimensions.

**Finishes:**

**48H:** Available in all finishes offered for 45H.

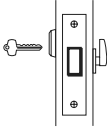
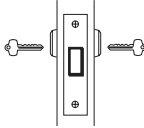
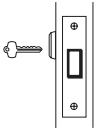
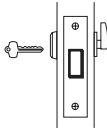
**49H:** Available in 626 only.



48H Series

49H Series

## 48H/49H Function Chart

Description		Description	
Function & Diag. BHMA#	Deadbolt operated by	Function & Diag. BHMA#	Deadbolt operated by
<b>Special</b>			
*K-Cylinder Deadlock 	Rotating the inside thumb turn rosette, Turning the outside key.	*M-Cylinder Deadlock 	Turning the outside or inside key
E06071		E06061	
*L-Cylinder Deadlock 	Turning the outside key	*R-Cylinder Deadlock 	Turning the outside key Rotating the inside thumb turn cylinder assembly retracts the deadbolt, but will not project it.
E06081		E06091	

\*ATTENTION: Locksets that secure both sides of the door are controlled by building codes and the Life Safety Code®. In an emergency exit situation, failure to quickly retract the deadbolt could be hazardous or even fatal.

NOTE: Specify the hand of door when ordering. The R function deadlock can only be used on 1 3/4" thick doors.

### How to Order - 48H/49H Series

Series	Core Housing	Function Code	Standard Finishes	Options
48H- standard	0-less cylinder (48H only)	K- cylinder x turn	S1- flat strike (default)	48H: SH- security head
49H- high security	7-7-pin housing 48H accepts all BEST cores; 49H only 5C cores; 49H- 626 ONLY	L- cylinder only	S2- ANSI strike	49H: K- non UL cylinder
		M- double cylinder	605 606 611 612 613 618 619 625 626 690	
		R- classroom cylinder x turn	49H 626 ONLY	

\*\*Must specify key mark and number of keys or designate L/C for less core.

## Standard Mortise Cylinder

### Standard 1E74 Mortise Cylinder

Designed for standard security applications, BEST® offers the 45H/48H mortise locksets, utilizing the 1E74 mortise cylinder and special interchangeable core. Special cylinder variations are available for most applications. BEST cylinders are machined from solid brass or bronze bar stock. Additional security is provided by a set screw that mounts diagonally into the cylinder wall. This set screw prevents unauthorized removal of the cylinder without use of the control key.

#### 1E74 Cylinder Specifications

**Diameter:** 1-5/32". 1.150-32 (NS-2A) threaded mortise cylinder.

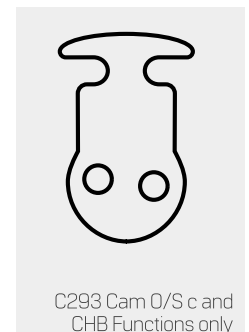
**Length:** 1-1/4"

**Material:** Brass or bronze.

**Finish:** Supplied to match mortise lockset trim (see specifications, page 3).

**Cylinder Ring:** Wrench resistant ring with tension spring, machined from all brass or bronze. Proper length automatically provided with lockset. For more ring information see cylinder catalog.

**Cam:** Proper cam provided for cylinder as required by designated function on order. Special cams available; see cylinder catalog section.



# High Security Cylinder

## 1EJ7J4 High Security rCylinder

Designed for high security applications, BEST® offers the 47H/49H mortise locksets, utilizing the 1EJ7J4 high security cylinder and special 5C interchangeable core. This special cylinder is listed by Underwriters Laboratories as conforming to Standard UL437 for high security cylinders. The patented cylinder provides additional strength through a hardened stainless steel alloy ring, face and keyway disc. It is available in most keyed functions (All functions are certified to ANSI A156.13 Security Grade 1) and is supplied only with "M" trim. Cylinder also conforms to ANSI A156.5 Mortise Cylinder, Grade 1A.

NOTE: 1EJ7J4 must be combined at factory to comply to UL437. 1EK7K4 is combined in the field and may be ordered less core.



1EJ7J4 High Security Cylinder

### 1EJ7J4 Cylinder Specifications

**Diameter:** 1-5/32". 1150-32 (NS-2A) threaded mortise cylinder.

**Length:** 1-1/16"

**Materials:** Brass and stainless steel.

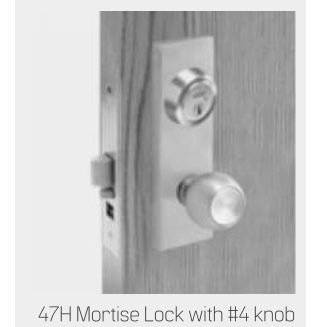
**Finish:** Stainless steel base plated to match 626 finish.

**Cylinder Ring:** High security wrench resistant, machined from stainless steel, hardened. Proper length automatically provided with lockset. Special door preparation required. Diameter of hole 1-3/4".

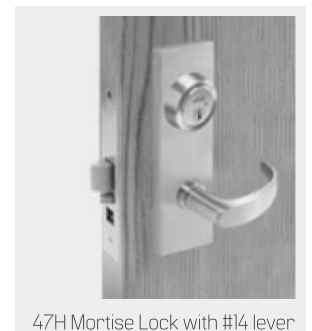
**Cylinder Face, Keyway Disc:** Stainless steel, hardened.

**Cam:** Proper cam provided for cylinder as required by designated function order.

NOTE: 1EJ7J4 must be combined at factory to comply to UL437. 1EK7K4 is combined in the field and may be ordered less core.



47H Mortise Lock with #4 knob



47H Mortise Lock with #14 lever



dormakaba Group

#### CORPORATE HEADQUARTERS

6161 EAST 75TH STREET  
INDIANAPOLIS, IN 46250 USA

Phone 855-365-2407

[bestaccess.com](http://bestaccess.com)

For questions about ordering and to be sure you get the right configuration for your needs, contact your BEST dormakaba sales representative.  
6161 East 75th Street, Indianapolis, IN 46250 USA | **855-365-2407** | [bestaccess.com](http://bestaccess.com)

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**1E SERIES FEATURES**

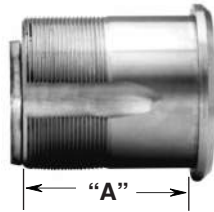


**1E Mortise Cylinder**  
Standard mortise applications require use of BEST's 1E Series cylinders with standard 1E-C4 cam. BEST cylinders may

be altered to function with other manufacturers' locks by use of different cams (see page 8) and different cylinder rings (see page 9). Special cylinder variations are available for most applications (see pages 4 & 5). BEST cylinders are machined from brass or bronze bar stock and are available in a variety of finishes. Additional security is provided by a set screw that mounts diagonally in the cylinder wall and when tightened, holds the cylinder securely in the housing. BEST mortise cylinders feature the BEST interchangeable core and may be masterkeyed into any existing BEST system. Contact your local Best Access Systems sales office for information on special cylinder applications not listed in this catalog.

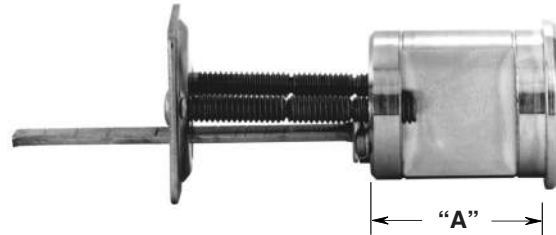


**1E Rim Cylinder**  
Standard rim cylinder applications require the use of BEST's 1E rim cylinder series. BEST rim cylinders are interchangeable with other manufacturers' rim cylinders. BEST rim cylinders are machined from solid bar stock and are available in a variety of finishes. The standard package for the BEST rim cylinder includes cylinder, RP3 ring package, 1E-S2 spindle, clamp plate and clamp plate screws. BEST rim cylinders feature the BEST interchangeable core and may be masterkeyed into any existing Best system.



Specifications	Dimension	Door
Cylinder Nomenclature	"A"	Thickness
1E-64	1 1/8"	1 5/8" to 2 1/4"
1E-74	1 1/4"	1 7/8" to 2 1/2"

Cylinder diameter - 1 5/32"  
To order: see below example: **1E74-C4-RP3-626**  
Products covered by on or more of the following patents: 4,437,695 4,633,690 4,616,394



Specifications	Dimension	Door
Cylinder Nomenclature	"A"	Thickness
1E-62	1 3/16"	1" to 2 3/4"
1E-72	1 11/32"	1 1/4" to 3"

Cylinder diameter - 1 5/32"  
To order: see below example: **1E72-S2-RP3-626**

**HOW TO ORDER**

STEP A	B	C	D	E	F	G	**
1E	7	4		C4	RP3	626	
Cylinder Diameter	Core Housing	Function Code Length	Standard Mortise Code	Cam or Spindle	Rings	Standard Finishes	
1E- 1 5/32" 3E- 1 1/2" 5E- see pages 10,11 8E- see page 7	0- dummy 6- 6 pin 7- 7 pin housing accepts all Best cores	2- rim 4- mortise* 6- tapered mortise  see pages 4-5 for special cylinders	Blank- standard 22- 1 3/8" 24- 1 1/2" up to 96- 6"  (see page 4-5)	C4- standard cam C181- Adams Rite MS cam S2- standard spindle  (For special cams see page 8)	RP1- tapered cyl. RP2- 6 pin mortise RP3- std. package RP4- 3E mortise  (For special rings see page 9)	605 606 612 613 622 625 626 690  Specify hand if required	

\* For additional special mortise cylinders, see pages 4 and 5.  
\*\* Must specify keymark and number of keys or designate L/C for less core.





## STANDARD RINGS

### RP Standard Ring Package

The RP standard ring package includes a 1E-R3 ( $\frac{3}{16}$ " ) and 1E-R5 ( $\frac{3}{8}$ " ) ring.



### RP1 Ring Package

The RP1 ring package for the 1E-76 cylinder includes a 1E-R2 ( $\frac{1}{8}$ " ) and 1E-R3 ( $\frac{3}{16}$ " ) ring.



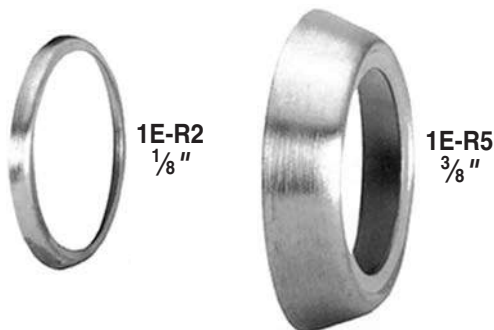
### RP2 Ring Package

The RP2 ring package for the 1E-64 cylinder includes a 1E-R2 ( $\frac{1}{8}$ " ) and 1E-R4 ( $\frac{1}{4}$ " ) ring.



### RP3 Ring Package

The RP3 ring package for the 1E-62, 1E-72 and 1E-74 cylinders includes a 1E-R2 ( $\frac{1}{8}$ " ) and a 1E-R5 ( $\frac{3}{8}$ " )



## STANDARD CAM

Standard Cam for 1E-64, and 1E-74 Mortise Cylinders

Unless otherwise specified, the 1E-C4 cam is supplied on all 1E mortise cylinders.

### Standard 1E-C4 Cam

Commonly used cams are listed on page 8.

If a cam other than the variety listed is needed, a sample cam should be forwarded to your local BEST office along with the lock manufacturer's name and lock series or identification number.

## SPINDLES



**1E-S2 Spindle (Steel)** - A-40100-SH

**1E-S3 Spindle (Bronze)** - A-40100-Z

**5" Spindle** - A-54950;  **$\frac{5}{32}$ " Spindle** - A-40101

The 1E-S2 flat spindle is supplied standard on all 1E rim cylinders. If marine application is necessary, request "marine construction" (1E-S3 bronze spindle and non ferrous materials supplied). A five (5) inch spindle is available for thick door applications.

## MORTISE SERVICE EQUIPMENT



ED211



ED212

### ED211 Mortise Cylinder Wrench

The Best mortise cylinder wrench and test handle is an essential dual-purpose tool. The double end is used primarily to install or remove BEST mortise cylinders without marring the cylinder surface finish. The single end may be used to test the lock operation, as well as align the throw pins.

**To order specify: ED211 mortise cylinder wrench.**

### ED212 Mortise Cylinder Cam Assembly Tool

Mortise cylinder cams are quickly changed with the use of this tool. Approximate length  $1\frac{3}{4}$ ".

**To order specify: ED212 assembly tool.**

### ED221 Mortise Cylinder Thread Repair Die

Tool for re-threading  $1\frac{5}{32}$ " diameter cylinders.

**To order specify: ED221 thread repair die.**

### ED222 Cylinder Cam Testing Tool

Special cylinder/wrench assembly. Screws provide rapid means to install cams for testing.

**To order specify: ED222 cam testing tool.**

### ED225 Hole Tap For $1\frac{5}{32}$ " Mortise Cylinder

Tap tool used to re-thread housing threads for 1E Mortise Cylinders.

### A40095 Standard Throw Pins

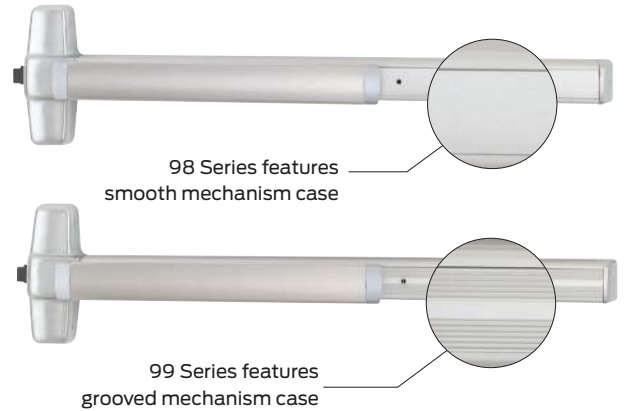
# VON DUPRIN®

## Exit device

# 98/99 Series

### Overview

The 98/99 Series devices are heavy-duty push pads. The 98 Series has a smooth mechanism case, while the 99 Series has a grooved mechanism case. The 98/99 Series has been certified to the highest industry standards and are used in schools, hospitals and government buildings.



### Device types



Rim device



75 Mortise lock device



27 Surface mounted vertical rod device <sup>1</sup>



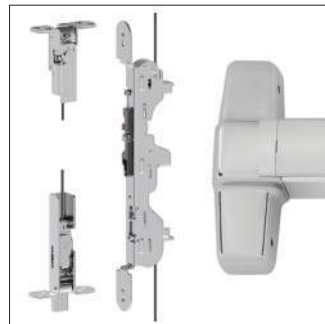
47 Concealed vertical rod device, 5/16" throw <sup>1</sup>  
48 Concealed vertical rod device, 5/8" top, 1 1/2" bottom throw



47WDC Concealed vertical rod wood door device <sup>1</sup>



49 Concealed vertical cable device <sup>2</sup>



50WDC Concealed vertical cable wood door device



57 Three-point latch device

<sup>1</sup> Also available less bottom rod (LBR)

<sup>2</sup> Also available less bottom latch (LBL)

## Finishes



**605**  
Bright Brass



**606**  
Satin Brass



**612**  
Satin Bronze



**619**  
Satin Nickel



**622**  
Matte Black



**625**  
Bright Chrome



**626**  
Satin Chrome



**626AM**  
Satin Chrome,  
Antimicrobial



**628**  
Aluminum, Clear  
Anodized



**630**  
Satin Stainless



**630AM**  
Satin Stainless,  
Antimicrobial



**643e**  
Aged Bronze



**693**  
Black



**710**  
Dark Brown,  
Anodized

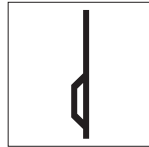
Due to the many variations in monitors and printers, color samples may appear different than the physical product. Contact your local sales representative for a physical color sample.

## Trim functions



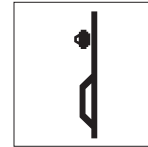
**EO No outside trim**

- Exit only



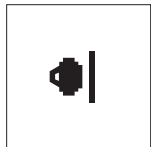
**DT Dummy trim**

- Pull when dogged (not recommended for fire device)



**NL Night latch**

- Key retracts latchbolt
- Rim and 1 1/4" mortise cylinder



**NLOP Night latch**

- Key retracts latchbolt, pull required



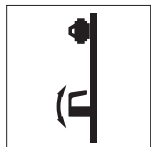
**TP Thumbpiece**

- Key locks and unlocks
- Rim and 1 1/4" mortise cylinder



**TPBE Thumbpiece, blank escutcheon**

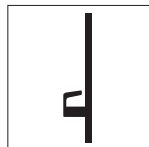
- Blank escutcheon always operable (no cylinder, use with DT trim)



**L Lever**

**K Knob**

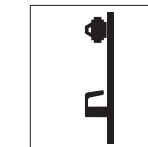
- Key locks and unlocks
- Rim and 1 1/4" mortise cylinder
- Handed, reversible lever
- Electrified lever operation available



**LDT Lever, dummy trim**

**KDT Knob, dummy trim**

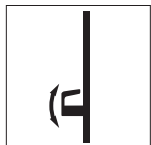
- Pull when dogged



**LNL Lever, night latch**

**KNL Knob, night latch**

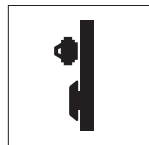
- Key retracts latchbolt
- Rim and 1 1/4" mortise cylinder
- Handed, reversible lever



**LBE<sup>1</sup> Lever, blank escutcheon**

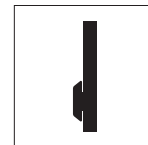
**KBE Knob, blank escutcheon**

- Always operable (no cylinder)



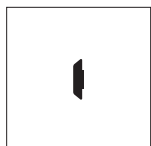
**TL Turn lever**

- Key locks and unlocks (use with DT trim)
- 1 1/4" mortise cylinder

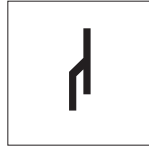


**TLBE Turn lever, blank escutcheon**

- Blank escutcheon always operable (no cylinder, use with DT trim)



**TLOP Turn lever, optional pull**



**HL Hospital latch**

- Key locks and unlocks
- 1 1/4" mortise cylinder

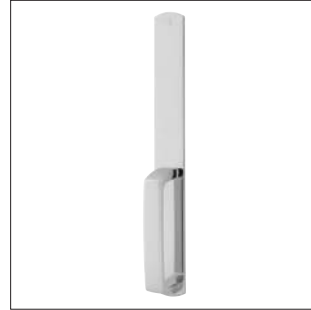
## Trim styles



990



996



696



697  
3/4" (19mm) diameter pull



392-7



HL



374



VR910



VR914

### Dimensions

Trim style	Width	Height	Thickness	Projection
990	3"	14 3/16"	3/32"	2"
996 Knob	2 3/4"	10 3/4"	27/32"	3 1/4"
996 Lever	2 3/4"	10 3/4"	27/32"	2 7/8"
696	1 5/8"	13 1/2"	3/16"	2 1/8"
697	1 5/8"	13 1/2"	3/16"	3"
392-7	3/4" inch round stainless steel with 7" center to center that matches the 98/99 center case. 3 1/2" offset with 1 1/2" clearance.			
HL	2 9/16"	7 7/8"	-	2 5/8"
374	2 3/4"	10 3/4"	27/32"	
VR910/914 with RIM/verticals	5 1/2"	11"	-	
VR910/914 with mortise	7 1/4"	11"	-	

## Lever styles

### Decorative levers



**M51**  
■ Knurling available



**M52**  
■ Knurling available



**M53**



**M54**



**M55**



**M56**



**M57<sup>1</sup>**



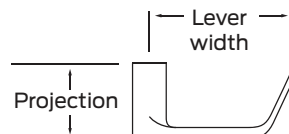
**M61**  
■ Handed



**M62<sup>1</sup>**  
■ Handed

### Dimensions

Lever	Width	Projection
M51	4.5"	2.5"
M52	4.5"	2.4"
M53	4.4"	2.4"
M54	4.4"	2.3"
M55	4.4"	2.7"
M56	4.5"	2.3"
M57	4.5"	2.7"
M61	4.5"	2.7"
M62	4.6"	2.4"



<sup>1</sup> Available in stainless steel substrate only

## Lever styles

### Decorative levers



**M63**  
▪ Handed



**M81**  
▪ Knurling available



**M82**



**M83**



**M84**



**M85**  
▪ Handed



**ME1**  
▪ Handed



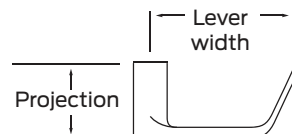
**ME2**  
▪ Handed



**ME3**

### Dimensions

Lever	Width	Projection
M63	4.6"	2.6"
M81	4.8"	2.5"
M82	4.9"	2.5"
M83	4.7"	2.25"
M84	5.1"	2.2"
M85	4.9"	2.7"
ME1	5.4"	2.6"
ME2	5.2"	2.4"
ME3	5"	2.8"



<sup>1</sup> Designed with Gensler as product design consultant

## Lever styles

### Standard levers



01



02

- Knurling available



03

- Knurling available



05



06

- Default lever
- Suites with Schlage Rhodes
- Knurling available



07

- Suites with Schlage Athens



12

- Handed

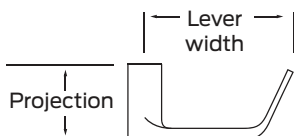


16

- Suites with Schlage Omega

### Dimensions

Lever	Width	Projection
01	4.0"	2.1"
02	4.75"	2.3"
03	4.75"	2.813"
05	3.75"	2.8"
06	4.7"	2.1"
07	4.6"	2.3"
12	4.3"	2.9"
16	5.05"	2.66"





## Lever styles

### Standard levers



**17**

- Suites with Schlage Sparta
- Knurling available



**18**



**Accent (ACC)**

- Handed



**Asti (AST)**

- Handed



**Merano (MER)**

- Handed



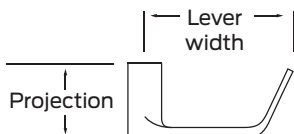
**Latitude (LAT)**



**Longitude (LON)**

### Dimensions

Lever	Width	Projection
17	4.7"	2.3"
18	4.75"	2.4"
Accent (ACC)	4.4"	3.1"
Asti (AST)	4.2"	2.5"
Merano (MER)	4.1"	2.5"
Latitude (LAT)	4.6"	2.3"
Longitude (LON)	4.9"	2.3"



## Electromechanical device options

### Switches

---

<b>LX</b>	<b>Latchbolt monitoring</b>
<b>LX-LC</b>	<b>Latchbolt monitoring, low current</b> <ul style="list-style-type: none"> <li>▪ Signals use of an opening</li> <li>▪ SPDT switch to monitor latch bolt</li> <li>▪ 2 A maximum @ 24VDC; below 50 mA @ 24VDC for low current option</li> </ul>
<b>RX</b>	<b>Request to exit</b>
<b>RXLC</b>	<b>Request to exit - low current</b>
<b>RX2</b>	<b>Double request to exit - 2 RX switches</b>
<b>WP-RX</b>	<b>Waterproof request to exit</b>
<b>RX-AUX</b>	<b>RX to RX-2 conversion</b> <ul style="list-style-type: none"> <li>▪ Signals use of an opening</li> <li>▪ SPDT switch to monitor pushpad</li> <li>▪ 2 A maximum @ 24VDC; below 50 mA @ 24VDC for low current option</li> </ul>
<b>LX-RX</b>	<b>Request to exit/latchbolt monitoring combination</b>
<b>LX-RX-LC</b>	<b>Request to exit/latchbolt monitoring combination, low current</b> <ul style="list-style-type: none"> <li>▪ 2 A maximum @ 24VDC; below 50 mA @ 24VDC for low current option</li> </ul>
<b>SS</b>	<b>Signal switch</b> <ul style="list-style-type: none"> <li>▪ Monitors pushpad and latchbolt</li> <li>▪ Signals unauthorized use of an opening</li> <li>▪ Switch makes latch bolt tamper-resistant</li> <li>▪ Up to 2.0 A @ 24VDC</li> </ul>

### Latch retraction

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<b>EL</b>	<b>Electric latch retraction</b>
<b>SD-EL</b>	<b>Electric latch retraction with special center case dogging</b> <ul style="list-style-type: none"> <li>▪ Enables remote unlatching</li> <li>▪ Alternative to manual dogging</li> <li>▪ Voltage: 24VDC (continuous duty)</li> <li>▪ Current: 16.0 A inrush / 0.3 A holding</li> </ul>

<b>QEL</b>	<b>Quiet electric latch retraction</b>
<b>HD-QEL</b>	<b>Quiet electric latch retraction with hex dogging</b>
<b>SD-QEL</b>	<b>Quiet electric latch retraction with special center case dogging</b> <ul style="list-style-type: none"> <li>▪ Bolt retraction via switch</li> <li>▪ Converts exit door to push-pull operation</li> <li>▪ Voltage: 24VDC</li> <li>▪ Current: 1.0 A inrush (0.5 sec.) / 0.14 A holding</li> </ul>

### Delayed egress

---

<b>CX</b>	<b>Chexit delayed exit</b> <ul style="list-style-type: none"> <li>▪ Meets NFPA 101 requirements</li> <li>▪ Self-contained controls, locking, alarm</li> <li>▪ Input voltage: 24VDC</li> <li>▪ Input current inrush: 1.25 A</li> <li>▪ Input current holding: 390 mA</li> <li>▪ Alarm relay and secure relay contact ratings: 24 VDC, 1 A</li> </ul>
<b>CX-RCM</b>	<b>Chexit remote module</b> <ul style="list-style-type: none"> <li>▪ Chexit for smaller doors that can not accommodate a standard Chexit device</li> <li>▪ Size: 3.75" x 5.57" x 2.50"</li> <li>▪ Input voltage: 24VDC</li> <li>▪ Input current inrush: 1.25A</li> <li>▪ Input current holding: 390mA</li> <li>▪ Alarm relay and secure relay contact ratings: 24 VDC, 1 A</li> </ul>

### Miscellaneous

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<b>ALK</b>	<b>Alarm exit kit</b> <ul style="list-style-type: none"> <li>▪ Unauthorized opening triggers 85-decibel horn</li> <li>▪ Set in armed or disarmed mode by key</li> <li>▪ Assembly includes both a 24VDC input and external inhibit</li> </ul>
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## Electromechanical device options

- |              |   |
|--------------|---|
| <b>CON</b>   | <b>Allegion Connect</b> <ul style="list-style-type: none"><li>▪ Common connectors to connect various door hardware all the way to the power supply</li></ul>  |
| <b>E996</b>  | <b>Electric locking and unlocking trim</b> <ul style="list-style-type: none"><li>▪ Remains latched while unlocked</li><li>▪ Remote electrical control</li><li>▪ Voltage: 24VDC (Continuous Duty)</li><li>▪ Current: 0.22 amps</li></ul> |
| <b>E7500</b> | <b>Electric mortise lock device</b> <ul style="list-style-type: none"><li>▪ Voltage: 12 or 24VDC</li><li>▪ Current: 0.60 amps @ 12VDC, 0.30 amps @ 24VDC</li></ul>  |

## Electromechanical device options

Matrix shows available options per device type but does not represent compatibility across multiple options.

	Switches									Latch retraction					Delayed egress		Misc			
	LX	LX-LC	RX	RXLC	RX2	WP-RX	LX-RX	LX-RX-LC	SS	EL	SD-EL	QEL	HD-QEL	SD-QEL	CX	CX-RCM	ALK	CON	E996	Mortise
98 99	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
98F 99F	■	■	■	■	■	■	■	■	■	■		■			■	■	■	■	■	
XP98 XP99		■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■	
XP98-F XP99-F		■	■	■	■	■	■	■		■		■			■	■	■	■	■	
9875 9975			■	■	■	■		■		■	■	■	■	■	■	■	■	■	■	■
9875-F 9975-F			■	■	■	■		■		■		■			■	■	■	■	■	■
9827 9927	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
9827-F 9927-F	■	■	■	■	■	■	■	■	■	■		■			■	■	■	■	■	
9857 9957	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
9857-F 9957-F	■	■	■	■	■	■	■	■	■	■		■			■	■	■	■	■	
9847 9947	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
9847-F 9947-F	■	■	■	■	■	■	■	■	■	■		■			■	■	■	■	■	
9848 9948	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
9848-F 9948-F	■	■	■	■	■	■	■	■	■	■		■			■	■	■	■	■	
9849 9949	■ <sup>1</sup>	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
9849-F 9949-F	■ <sup>1</sup>	■	■	■	■	■	■	■	■	■		■			■	■	■	■	■	
9847WDC 9947WDC	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
9847WDC-F 9947WDC-F	■	■	■	■	■	■	■	■	■	■		■			■	■	■	■	■	
9850WDC 9950WDC	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
9850WDC-F 9950WDC-F	■	■	■	■	■	■	■	■	■	■		■			■	■	■	■	■	

<sup>1</sup> For 98/9949 devices, LX switch monitors trim input or electric dogging of EL/QEL devices. LX switch does not monitor latchbolt condition.

## Mechanical device options

### Dogging

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- CD**      **Cylinder dogging, panic only**
- CD-CX**    **Center case cylinder dogging for Chexit devices**
- CI**      **Cylinder dogging indicator**
- Battery-operated dogging indicator in cylinder format with red light visible from over 75 feet away
- DI**      **Dogging indicator**
- Battery-operated dogging indicator in hex format with red light visible from over 75 feet away
- LD**      **Less dogging**
- SD**      **Special center case dogging**
- Center case cylinder dogging

### Classroom security

---

- 2**      **Double cylinder**
- Inside key cylinder locks/unlocks outside trim
- 2SI**    **Double cylinder with security indicator**
- Inside key cylinder locks/unlocks outside trim with visible indicators that provide status of door
- CDSI**    **Cylinder dogging with indicator**
- Provides visible lock/unlock indicators showing whether device is dogged or undogged
- HDSI**    **Hex dogging with indicator**
- Provides visible lock/unlock indicators showing whether device is dogged or undogged

### Environmental

---

- PN**      **Pneumatic latch retraction**
- For areas where electrical devices banned
  - Special linkage for mechanical or pneumatic dogging
- QM**      **Quiet mechanical option**
- Provides damper-controlled relatching of device
- INS**      **Insulclad kits**
- Kits with longer fasteners or parts for Insulclad doors
- AM**      **Anti-microbial finish**

### Weatherized

---

- WH**      **Weep holes**
- Drainage (weep) holes in mechanism case
- WS**      **Windstorm**
- Severe weather certified/tested
  - FEMA and ICC compliant
  - Tornado and hurricane tested

### California code

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- AX**      **Accessible device**
- UL certified to meet new 5 lb. maximum operating force requirement
  - Exceeds ANSI/BHMA requirements

### Latches

---

- PL**      **Pullman latch**
- Latches are always extended
  - Most commonly used in conjunction with electric strikes and LBR-less bottom rod application

## Mechanical device options

### Touch bar trim

---

- |                |  |
|----------------|--|
| <b>RSS</b>     | <b>Red silk screen</b> <ul style="list-style-type: none"><li>▪ Red silk-screened lettered touchbar trim</li></ul>  |
| <b>PUSH</b>    | <b>PUSH</b> <ul style="list-style-type: none"><li>▪ Touchbar trim embossed PUSH</li></ul>  |
| <b>SG</b>      | <b>Safety glow</b> <ul style="list-style-type: none"><li>▪ Self-illuminating touchpad</li><li>▪ Glows brightly during low or no light conditions</li></ul> |
| <b>KN</b>      | <b>Knurled touchbar</b> <ul style="list-style-type: none"><li>▪ Tactile warning applied to device</li></ul>  |
| <b>BRAILLE</b> | <b>Braille</b> <ul style="list-style-type: none"><li>▪ Vision impaired touchpad</li><li>▪ Raised letter and Braille</li></ul>                              |

## Mechanical device options

Matrix shows available options per device type but does not represent compatibility across multiple options.

	Dogging						Classroom security				Environmental				Weatherized		CA code
	CD	CD-CX	CI	DI	LD	SD	-2	-2SI	CDSI	HDSI	PN	QM	INS	AM	WH	WS	AX
98 99	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■
98F 99F							■	■			■	■		■	■		■
XP98 XP99	■	■	■	■	■	■	■	■	■				■	■	■		■
XP98-F XP99-F							■	■					■	■	■		■
9875 9975	■	■	■	■	■	■	■		■	■			■	■	■		
9875-F 9975-F							■			■			■	■	■		
9827 9927	■	■	■	■	■	■			■	■	■	■		■	■		■ LBR
9827-F 9927-F										■	■		■	■	■		■ LBR
9857 9957	■	■	■	■	■	■			■	■	■		■	■	■		
9857-F 9957-F										■			■	■	■		
9847 9947	■	■	■	■	■	■			■	■	■		■	■	■		■ LBR
9847-F 9947-F										■			■	■	■		■ LBR
9848 9948	■	■	■	■	■	■			■	■	■		■	■	■		
9848-F 9948-F										■			■	■	■		
9849 9949	■	■	■	■	■	■			■	■	■	■	■	■	■		■ LBL
9849-F 9949-F										■			■	■	■		■ LBL
9847WDC 9947WDC	■	■	■	■	■	■			■	■	■		■	■	■		
9847WDC-F 9947WDC-F										■			■	■	■		
9850WDC 9950WDC	■	■	■	■	■	■			■	■	■		■	■	■		■ LBL
9850WDC-F 9950WDC-F										■			■	■	■		■ LBL

## Mechanical device options

Matrix shows available options per device type but does not represent compatibility across multiple options.

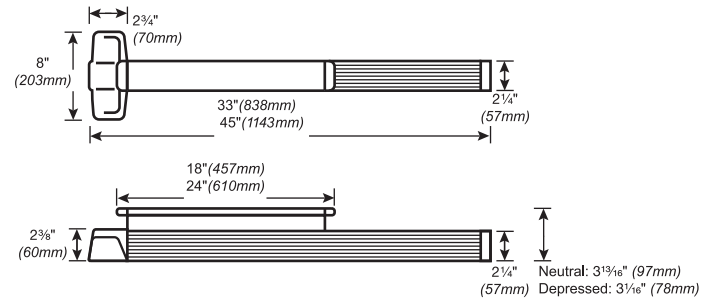
	Latches	Touch bar trim				
	PL	RSS	PUSH	SG	KN	BRILLE
98 99		■	■	■	■	■
98F 99F		■	■	■	■	■
XP98 XP99		■	■	■	■	■
XP98-F XP99-F		■	■	■	■	■
9875 9975		■	■	■	■	■
9875-F 9975-F		■	■	■	■	■
9827 9927	■	■	■	■	■	■
9827-F 9927-F		■	■	■	■	■
9857 9957		■	■	■	■	■
9857-F 9957-F		■	■	■	■	■
9847 9947	■	■	■	■	■	■
9847-F 9947-F		■	■	■	■	■
9848 9948		■	■	■	■	■
9848-F 9948-F		■	■	■	■	■
9849 9949		■	■	■	■	■
9849-F 9949-F		■	■	■	■	■
9847WDC 9947WDC		■	■	■	■	■
9847WDC-F 9947WDC-F		■	■	■	■	■
9850WDC 9950WDC		■	■	■	■	■
9850WDC-F 9950WDC-F		■	■	■	■	■



## Specifications

Accessibility	<ul style="list-style-type: none"> <li>■ Force to depress push pad                             <ul style="list-style-type: none"> <li>- AX device: 5 lbs</li> <li>- Standard device: 15 lbs</li> </ul> </li> <li>■ Push pad projection                             <ul style="list-style-type: none"> <li>- Neutral: 3 13/16" (97 mm)</li> <li>- Depressed: 3 1/16" (78 mm)</li> </ul> </li> </ul>
Certifications/ approvals	All Von Duprin 98/99 exit devices are ANSI/BHMA Certified. Please refer to the BHMA Certified Products Directory for specific listings.
Mounting height	39 13/16" (1011 mm) 39 11/16" (1008 mm) with mullion
Warranty	36 months from the date of placing the product in operation

## Dimensions





### LG1 Lock Guard

- Units are non-handed and incorporate security frame pin to prevent separation of the door and frame. LG7 does not incorporate the security frame pin
- Unit covers the latch bolt area of the door and lock, thereby providing added protection from burglars, vandals or normal abuse.
- Ideal for use with mortise or cylindrical locks.
- Easy installation.
- Through bolted with carriage bolts and nuts.
- Available in a variety of materials, 13 gauge stainless steel, 12 gauge steel and brass material.

#### Dimensions

3" Wide x 11-1/2" High  
 Bolt center to center: 10-1/2"

#### Finishes

Ives Number	USP*	US2G*	US4*	US10*	US32D	SP313*
BHMA	600	603	606	612	630	695

\* not available on LP7



### LG10 Lock Guard

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

#### Dimensions

2-1/2" Wide x 9-1/2" High  
 Stud center to center: 8-1/2"

#### Finishes

Ives Number	USP	US32D
BHMA	600	630



**LG11 Lock Guard**

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

**Dimensions**

2-1/2" Wide x 9-1/2" High  
Stud center to center: 8-1/2"

**Finishes**

Ives Number	US32D	SP313
BHMA	630	695



**LG12 Lock Guard**

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

**Dimensions**

1-1/2" Wide x 9-1/2" High  
Stud center to center: 8-1/2"

**Finishes**

Ives Number	USP	US32D
BHMA	600	630

A  
Hinges & Pivots

B  
Pulls & Plates

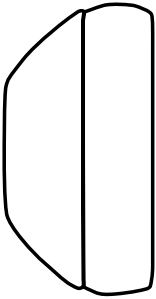
C  
Flush Bolts & Coordinators

D  
Latches, Catches & Bolts

E  
Stops

F3  
Exterior Hardware

G  
Miscellaneous Hardware



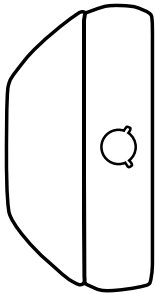
**VR910-DT With black grip**  
**VR914-DT Without black grip**

- For use with Von Duprin 98/99 Series rim and vertical rod exit device
- Non-handed
- Thru-bolts direct to the exit device
- Pull operation only.

Width	Height	Thru-Bolt Pattern	Clearance Grip to Door	Projection
5-1/4"	11"	1-3/8" wide x 7" high	1-1/2"	1-7/8"

**Finishes**

US Finish	US32D
BHMA	630



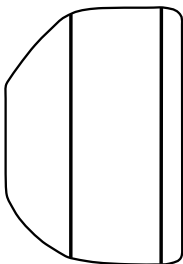
**VR910-NL With black grip**  
**VR914-NL Without black grip**

- For use with Von Duprin 98/99 rim and vertical rod exit device
- Non-handed
- Thru-bolts direct to the exit device

Width	Height	Thru-Bolt Pattern	Clearance Grip to Door	Projection
5-1/4"	11"	1-3/8" wide x 7" high	1-1/2"	1-7/8"

**Finishes**

US Finish	US32D
BHMA	630



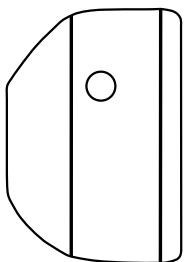
**VR910M-DT With black grip**  
**VR914M-DT Without black grip**

- For use with Von Duprin 9875/9975 mortise lock exit device
- Non-handed
- Thru-bolts direct to the exit device

Width	Height	Thru-Bolt Pattern	Clearance Grip to Door	Projection
7-1/4"	11"	1-3/8" wide x 7" high	1-1/2"	1-7/8"

**Finishes**

US Finish	US32D
BHMA	630



**VR910M-NL RHR With black grip**  
**VR910M-NL LHR With black grip**  
**VR914M-NL RHR Without black grip**  
**VR914M-NL LHR Without black grip**

- For use with Von Duprin 9875/9975 Series mortise lock exit device
- Thru-bolts direct to the exit device
- Night latch operation (cylinder not furnished)

Width	Height	Thru-Bolt Pattern	Clearance Grip to Door	Projection
7-1/4"	11"	1-3/8" wide x 7" high	1-1/2"	1-7/8"

**Finishes**

US Finish	US32D
BHMA	630

Hinges & Pivots

**A**

Pulls & Plates

**B13**

Flush Bolts & Coordinators

**C**

Latches, Catches & Bolts

**D**

Stops

**E**

Exterior Hardware

**F**

Miscellaneous Hardware

**G**



## Long Door Pulls

Offered in two Models:

**9264**

**Offset**

**9266**

**Straight**

- Heavy 1-1/4" Round Brass or Stainless Steel
- Round or Flat Tip
- 316 Stainless Steel
- 1-3/4", 2" or 2-1/4" Door Thickness
- Round Tip Standard
- Flat Tip Optional

### Dimensions

Length: 36" / 20" CC

72" / 56" CC

Diameter: 1-1/4"

Projection: 2-3/4"

### Special Lengths Available

18" and 24"

Custom lengths available from 36" to 144"

### Finishes

Ives Number	US3	US4	US10B	US32	US32D
BHMA	605	606	613	629	630



Offset  
Bracket



Round Tip



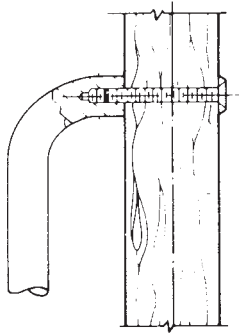
Flat Tip

**Note:** A middle position bracket is required for pulls over 8 feet.

## Mounting

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

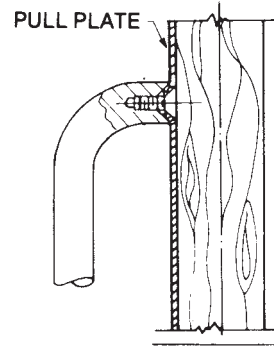
### Type Standard Mount



#### Standard Mounting

- (2) 3/8-16 x 2-1/4" brass, flat head machine screws; plate to match.
  - (2) 3/8-16 countersunk washers; plated to match
- Note: 8102HD and 8105 have (2) 5/16-18 x 2-1/2" machine screws  
 -Options: (2) 5/16 countersunk washers

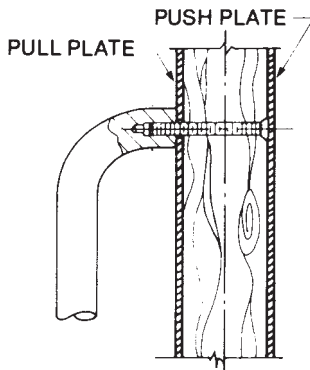
### Type G Mount



#### Concealed Pull Plate Mounting

- Available only for 8302, 8303, 8311 Pull Plates.
- (2) 3/8-16 x 5/8" steel flat head machine screws; zinc plated.
- Pull mounts directly onto plate.  
 Plate is attached to door by 6 screws.  
 Note: 8302 has (2) 5/16-19 x 5/8" steel flathead zinc plated screws

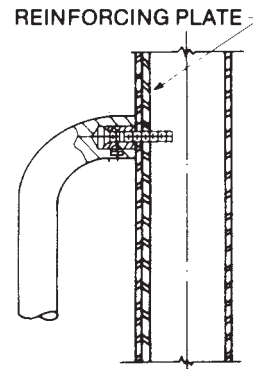
### Type F Mount



#### Wood Doors Concealed Pull Mounting With Push Plate

- (2) 2-1/4" steel flat head machine screws; zinc plated.
- Available only for 8102HD, 8103HD, 8105, 8111, 8302, 8303, 8305 and 8311. Plate on opposite side of door must be ordered separately.
- Note: 8102HD, 8302 will have 5/16-18  
 8105, 8111, 8305, 8311 will have 1/4-20  
 8103HD, 8303 will have 3/8-16"

### Type H-I-L Mount



#### Reinforced Hollow Metal Door Concealed Pull Mounting

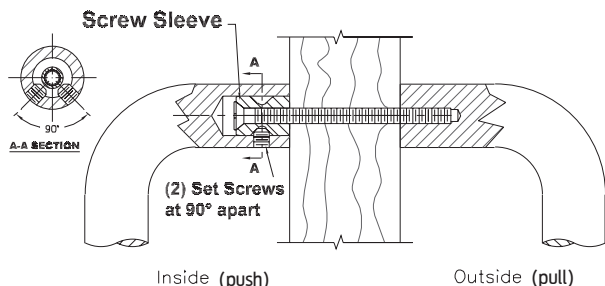
- Available only for 8102, 8103, 810EZ or wood door pulls, 8302, 8303 pull plates and 9264, 9265, 9266 and 9267 long door pulls.
- (2) Steel screw sleeves; zinc plated.
  - (2) Steel countersunk trim head machine screw; zinc plated for reinforced metal door.
  - (2) Steel countersunk trim head steel metal screw; zinc plated for wood doors.
- Note: 8102HD and 8302 will have 5/16-18"  
 8103HD, 8103EZHD, 8303 will have 3/8-16

## Mounting for 8103EZ, 8190, 9100, 9103EZ, 9190 and 9264, 9265, 9266 and 9267 long door pulls.

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

• Consult Customer Service if other than standard.

### Type J/N Mount



#### Back to Back "Two-Anchor"

Wood or Metal Door

Available only for 8103EZHD, 8190HD, 9100HD push/pull combinations and 9264, 9265, 9266 and 9267 long door pulls.

- (2) 3/8-16 x 2-3/4" steel countersunk trim head machine screws with (4) set screws for maximum anchoring force.
- (2) Steel screw sleeves; zinc plated.

### Type NS-Standard Push/Pull Mounting

Type N & Standard

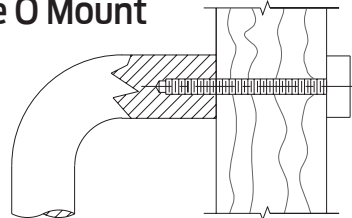
Pushbar to Pull

- (1) 3/8 - 16 X 3" steel countersunk trim head machine screws with (2) set screws.
- (1) steel screw sleeve, zinc plated.

Free End Pushbar & Pull

- (2) 3/8 - 16 X 2-1/4" brass, oval head mach screws; plated to match.
- (2) No. 14 countersunk washers; plated to match.

### Type O Mount



#### Decorative Blind Thru - Bolt

Wood or Metal Door

Available only for 8103EZHD, 8190HD and 9100HD Series Push/Pull Combinations.

- (2) 3/8-16 x 2-1/4" blind thru - bolts; plated to match.

### Type NO Push/Pull Mounting

Type N & Type O

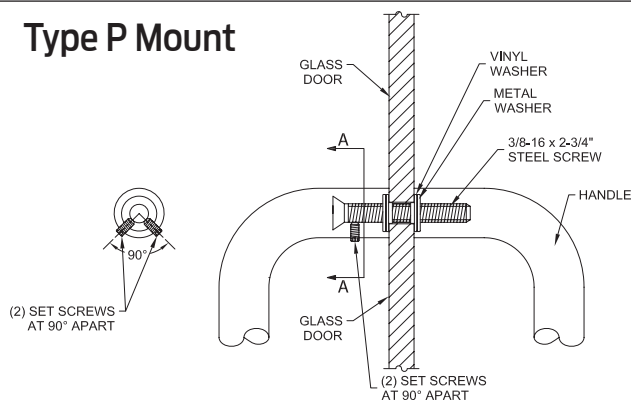
Pushbar to Pull

- (1) 3/8 -16 X 3" steel countersunk trim head machine screws with (2) set screws.
- (1) steel screw sleeve, zinc plated.

Free End Pushbar & Pull

- (2) 3/8 - 16 X 2-1/4" blind thru-bolts; plated to match.

### Type P Mount



#### 1/2" Glass Door

Available only for 8103EZHD, 8190HD, 9100HD, 9265 and 9266 long door pulls.

- (2) 3/8-16 x 2-1/4" steel countersunk trim head machine screws with (4) set screws for maximum anchoring force.
- (2) Steel screw sleeves; zinc plated
- (2) Metal and Vinyl washers

Hinges & Pivots  
A

Pulls & Plates  
B17

Flush Bolts & Coordinators  
C

Latches, Catches & Bolts  
D

Stops  
E

Exterior Hardware  
F

Miscellaneous Hardware  
G

# 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 six 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 85° to 110° 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:

<b>Finish</b>	<b>Description</b>
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 85° to 110°. 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 110° 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 5° to 7° less than the Dead-Stop opening.

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

*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):

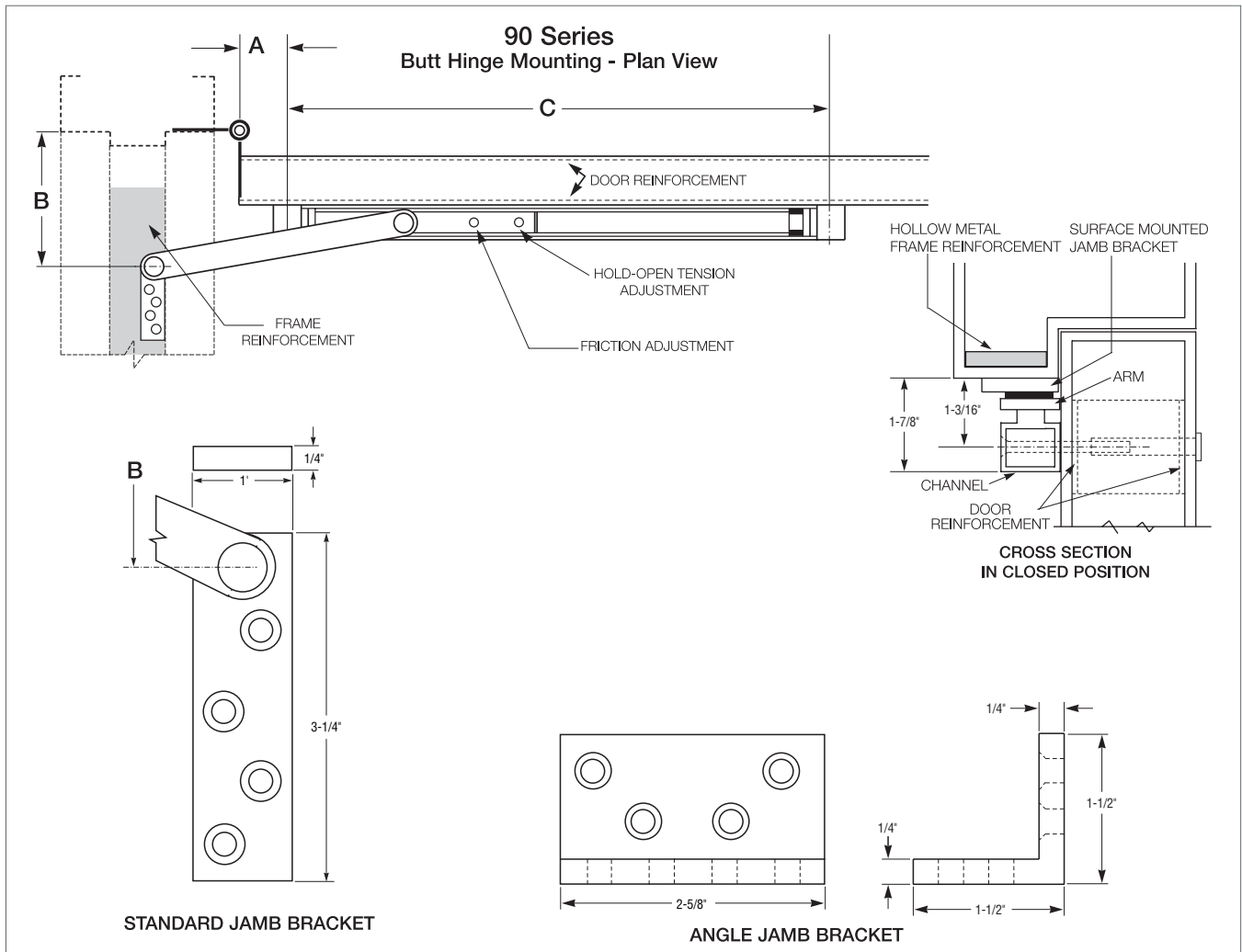
A screw package with pin-in-socket screws for mounting the door bracket and the jamb bracket is provided instead of the standard screw package.

### 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



SIZE	BUTTS/OFFSET PIVOTS				CENTER HUNG			
	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

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)

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

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):**

<b>2</b>	(23-1/16"-27")
<b>3</b>	(27-1/16"-33")
<b>4</b>	(33-1/16"-39")
<b>5</b>	(39-1/16"-45")
<b>6</b>	(45-1/16"-54")

**Function:**

<b>H</b>	Hold-Open
<b>F</b>	Friction Hold-Open
<b>S</b>	Stop-Only
<b>SE</b>	Special Stop-Only

**Finishes:**

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

**Options:**

<b>J</b>	Angle Jamb Bracket
<b>SHIM</b>	Blade Stop Shims— SHIM1-1/4" Kit SHIM2-1/2" Kit SHIM3-3/4" Kit
<b>SOC</b>	Pin-in-Socket Security Screws

# 100 Series Concealed Overhead Door Holders/Stops



## 100 Series Heavy-Duty

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

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

### Five Models:

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

### Six Sizes:

- Each model comes in six sizes.
- Simple
- Standardized

### Three Options:

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

### Unmatched Convenience:

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

### Materials and Finishes:

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

<b>Finishes</b>	<b>Description</b>
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

## Models

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

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

### 100H Series Hold-Open

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

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

### 100HP Series Internal Hold-Open

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

## 100F Series Friction Hold-Open

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

## 100S Series Stop-Only

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

## 100SE Series Special Stop-Only

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

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

## Application Information

### UL Classification

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

### Dead Stop Templating:

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

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

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

### Environmental Considerations:

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

### Function Conversion Kits

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

## Options

### Suffix ADJ (Adjustable Jamb Bracket):

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

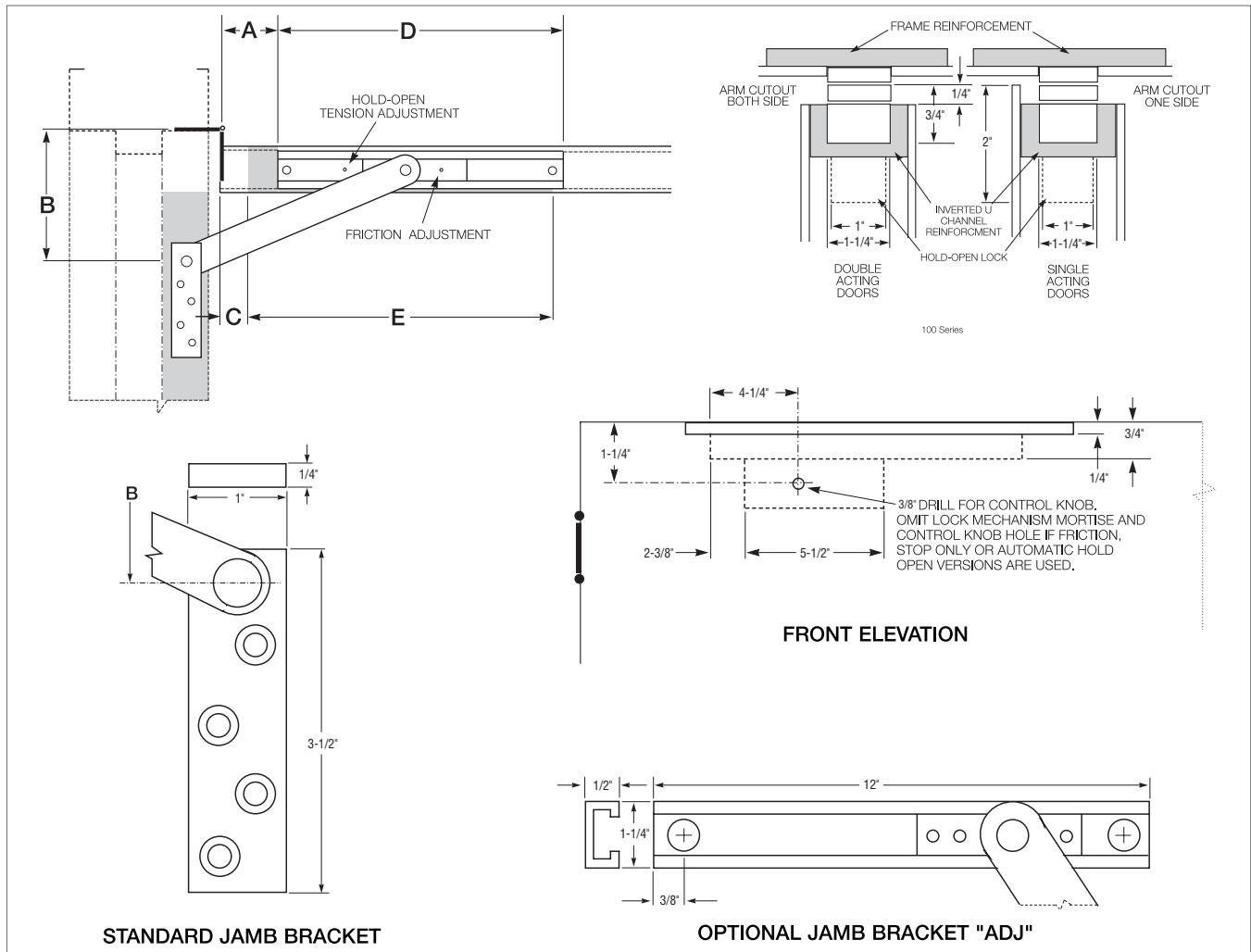
### Suffix CJ (Closer Jamb Bracket):

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

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

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

# 100 Series Concealed Overhead Door Holders/Stops



SIZE	BUTTS/OFFSET PIVOTS				CENTER HUNG			
	DOOR OPENING	STOP ONLY	HOLD OPEN	FRICTION	DOOR OPENING	STOP ONLY	HOLD OPEN	FRICTION
1	18"-23"	101S*	101H*	101F*	----	----	----	----
2	23-1/16"-27"	102S*	102H*	102F*	----	----	----	----
3	27-1/16"-33"	103S	103H	103F	33-1/16"-39"	103S	103H	103F
4	33-1/16"-39"	104S	104H	104F	39-1/16"-45"	104S	104H	104F
5	39-1/16"-45"	105S	105H	105F	45-1/16"-51"	105S	105H	105F
6	45-1/16"-54"	106S	106H	106F	51-1/16"-59"	106S	106H	106F

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

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

G-J Model	BHMA*	FED. Spec.
101-106 H	C01511	1160
101-106 S	C01541	----
101-106 F	C01531	----

\* First numeral (0) designates optional material.

To specify:

Brass material, change 0 to 1 (i.e. C11511)

Stainless Steel material, change 0 to 5 (i.e. C51511)

## BHMA

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

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

**10**      **4**      **H**      -      **US26D**      -      **ADJ**

**Overhead Series:**  
10

**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")  
**6**      (45-1/16"-54")

**Function:**  
**H**      Hold-Open  
**HP**    Internal 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

**Options:**  
**ADJ**    Adjustable Jamb Bracket  
**CJLH**   Special Jamb Bracket for LCN 5030 Closer, LH Door  
**CJRH**   Special Jamb Bracket for LCN 5030 Closer, RH Door  
**SOC**    Pin-in-Socket Security Screws



Surface mounted closer

# 4040XP Series

Overview

The 4040XP Series is LCN’s most popular door closer—and for good reason. This durable non-handed, surface-mounted heavy-duty closer, is designed for the most demanding high-use-and-abuse applications.

- ANSI/BHMA A156.4 Grade 1 rated
- Meets ADA reduced opening force requirements
- cUL listed and UL listed for self-closing doors without hold-open

The beauty of the 4040XP is that it goes way beyond the required standards. And in doing so, it has set the standard for reliability, longevity, and value.

- Stronger materials designed to go the distance.
- Proven production processes and technology, such as, forging steel and heat-treating certain components, that ensure a tougher, bolder construction.
- Abuse-cycle and temperature tests that mimics what door closers encounter in high-abuse environments.
- Well-marked adjustment valves and built-in preventative measures for adjusting too far and breaking the closer.
- 30-year limited warranty

Our relationship with you doesn’t end at the sale. LCN supports you throughout the life of your facility with all your technical and application needs. Bottom line, the 4040XP is a closer you can count on that’s built to last a lifetime—all while delivering remarkable value in a variety of applications.

Cylinder

### 4040XP-3071

Cast iron cylinder assembly

Handing

Non-handed

Sizing

Adjustable spring size 1–6, includes LCN Green Dial

Available cylinder options

DEL	Delayed action cylinder
-----	-------------------------





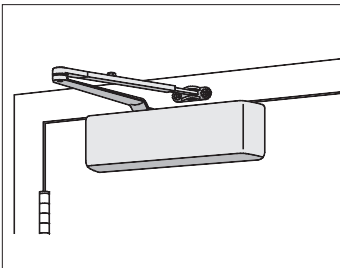
## Adjustments

There are several design features that make installation or adjustment of the 4040XP easier and more intuitive.

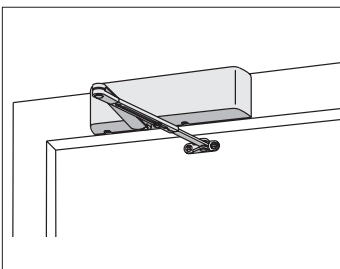
- **LCN Green Dial** provides a visual reference of the spring power setting, taking the guesswork out of spring power adjustments.
- **Additional adjustments** can be made to the back check, main, and latch regulation valves which are labeled for easy identification.
  - **Note:** Labels correspond to a diagram with door swing zones located on the closer body.
- **A patent-pending positive stop feature** on all regulation valves. The improved staking feature prevents the screw from being backed out and causing accidental damage to the product.
  - The patent-pending regulation valve indicators provide visual color indicators of how far a screw is backed out—the more visible the component, the faster the speed.
  - This makes adjustments simpler and more intuitive.
- **New QR code** that provides on-the-spot access to interactive installation and maintenance instructions and tech support.



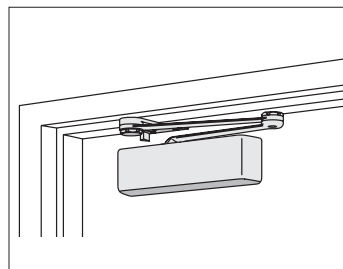
## Mounting



Hinge (pull side)



Top jamb (push side)



Parallel arm (push side)

## Finishes

### Powder coat finishes



**622**  
Matte Black



**689**  
Aluminum



**690**  
Statuary Bronze



**691**  
Light Bronze



**693**  
Black



**695**  
Dark Bronze



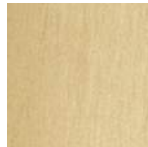
**696**  
Brass

150+ additional custom colors available using the RAL numbering system

### Metal plated finishes



**632**  
Bright Brass



**633**  
Satin Brass



**639**  
Satin Bronze



**616**  
Satin Bronze,  
Blackened



**646**  
Satin Nickel



**651**  
Bright Chrome



**652**  
Satin Chrome

### Available finish options

MTLPC	Brite metallic: Custom powder coat finish, which resembles that of 651 or 652 plated finish.
SRI	For installations where a higher level of protection against weather conditions, or the effects of a potentially corrosive atmosphere is required, LCN offers a special rust inhibiting (SRI) process. Ferrous metal components receive an SRI pretreatment and a standard powder coat finish of your choice, or a custom powder coat finish for a nominal additional cost. Closers treated with the SRI process exceed the 100 hour protection level available with standard LCN powder coated finishes.

## Covers

### Standard cover



Front view



Back view

### 4040XP-72

#### plastic cover (PC)

- Non-handed
- Includes 4040XP-54 snap-on cover clip
- Redesigned snap-fit cover with improved patent-pending retention fit

### Optional cover



### 4040XP-72MC

#### metal cover (MC)

- Handed
- Required for plated finishes and custom powder coat finishes
- Optional

## Arms



- 4040XP-3077  
Regular Arm (REGARM)**
- Non-handed
  - Mounts pull side or top jamb with shallow reveal P4041 closer includes PA shoe, 4040XP-62PA required for parallel arm mounting



- 4040XP-3077L  
Long Arm (LONG)**
- Non-handed
  - Includes long rod and shoe, 4040XP-79LR for top jamb mount
  - Optional



- 4040XP-3077ELR  
Extra Long Arm (XLONG)**
- Non-handed
  - Includes extra long rod and shoe, 4040XP-79ELR for top jamb mount with deep reveal
  - Optional



- 4040XP-3049  
Hold Open Arm (H)**
- Non-handed
  - Mounts pull side or top jamb with shallow reveal, hold open adjustable shoe
  - 4040XP closer includes 4040XP-62PA shoe required for parallel arm mounting
  - Optional



- 4040XP-3049L  
Hold Open Long Arm (HLONG)**
- Non-handed
  - Includes long head and tube, 4040XP-3048L for top jamb mount
  - Optional



- 4040XP-3077EDA  
Extra Duty Arm (EDA)**
- Non-handed
  - Features forged, solid steel main and forearm for potentially abusive installations
  - Optional



- 4040XP-3049EDA  
Hold Open Extra Duty Arm (HEDA)**
- Handed
  - Parallel arm features forged, solid steel main and forearm for potentially abusive installations
  - Hold open function is adjusted at the shoe
  - Optional



- 4040XP-3077EDA/62G  
Extra Duty Arm with 62G Thick Hub Shoe (EDAW62G)**
- Non-handed
  - Features forged, solid steel main and forearm for potentially abusive installations
  - 62G shoe provides additional blade stop clearance
  - Optional



- 4040XP-3049EDA/62G  
Hold Open Extra Duty arm with 62G Thick Hub Shoe (HEDA62G)**
- Handed
  - Features forged, solid steel main and forearm for potentially abusive installations
  - 62G shoe provides additional blade stop clearance; hold open function is adjusted at the shoe
  - Optional



- 4040XP-3077CNS  
Cush-n-Stop Arm (CUSH)**
- Non-handed
  - Features solid forged steel main arm and forearm with stop in soffit shoe.
  - Optional



- 4040XP-3049CNS  
Hold Open Cush-n-Stop Arm (HCUSH)**
- Non-handed
  - Hold open function with templated stop/hold open points
  - Handle controls hold open function
  - Optional



- 4040XP-3077SCNS  
Spring Cush-n-Stop Arm (SCUSH)**
- Non-handed
  - For potentially abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe
  - Optional

## Arms



**4040XP-3049SCNS**  
**Spring Hold Open Cush-n-Stop**  
**Arm (SHCUSH)**

- Non-handed
- For potentially abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe
- Handle controls hold open function
- Optional

## Installation accessories



**4040XP-18  
Plate**

- Required for hinge side mount where top rail is less than 3 3/4" (95 mm)
- Requires minimum 2" (51 mm) minimum top rail



**4040XP-18G  
Plate**

- Locates top jamb mounted closer flush with top of head frame face in flush ceiling condition
- Requires 1 3/4" (44 mm) minimum head frame



**4040XP-18TJ  
Plate**

- 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



**4040XP-18PA  
Plate**

- Required for parallel arm mounting where top rail is less than 5 1/2" (140 mm), measured from the stop
- Requires 2" (51 mm) minimum top rail



**4040XP-62PA  
PA shoe**

- Required for parallel arm mounting



**4040XP-30  
CUSH shoe support**

- Provides anchorage for fifth screw used with CUSH arms, where reveal is less than 3 1/16" (78 mm)
- Optional



**4040XP-61  
Blade stop spacer**

- Required to lower parallel arm shoe to clear 1/2" (13 mm) blade stop
- Optional



**4040XP-419  
PA flush panel adapter**

- Provides horizontal mounting surface for parallel arm shoe on single rabbeted or flush frame
- Optional

## Installation accessories



**4040XP-62A**  
**Auxiliary shoe**

- Requires a top rail of 7" (178 mm)
- Shoe replaces -62PA for parallel arm mounting of regular arm with overhead holder/stop
- Optional



**4040XP-54**  
**Snap-on cover clip**

- Used to secure 4040XP-72 plastic cover to cylinder body

## Fasteners

Self-reaming and tapping screws included standard

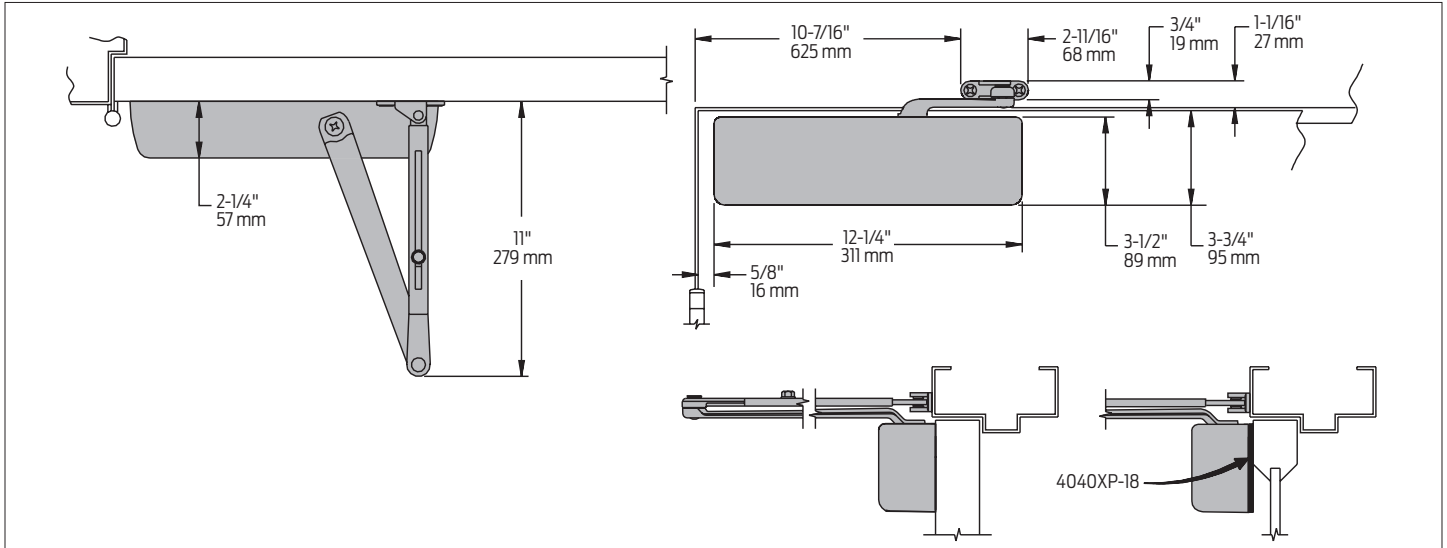
### Fastener pack options

TBSRT	TB <sup>1</sup> with self-reaming and tapping screws
WMS	Wood and machine screw
TBWMS	TB <sup>1</sup> , wood and machine screw
TORX	TORX machine screw
TBTRX	TB <sup>1</sup> and TORX machine screw

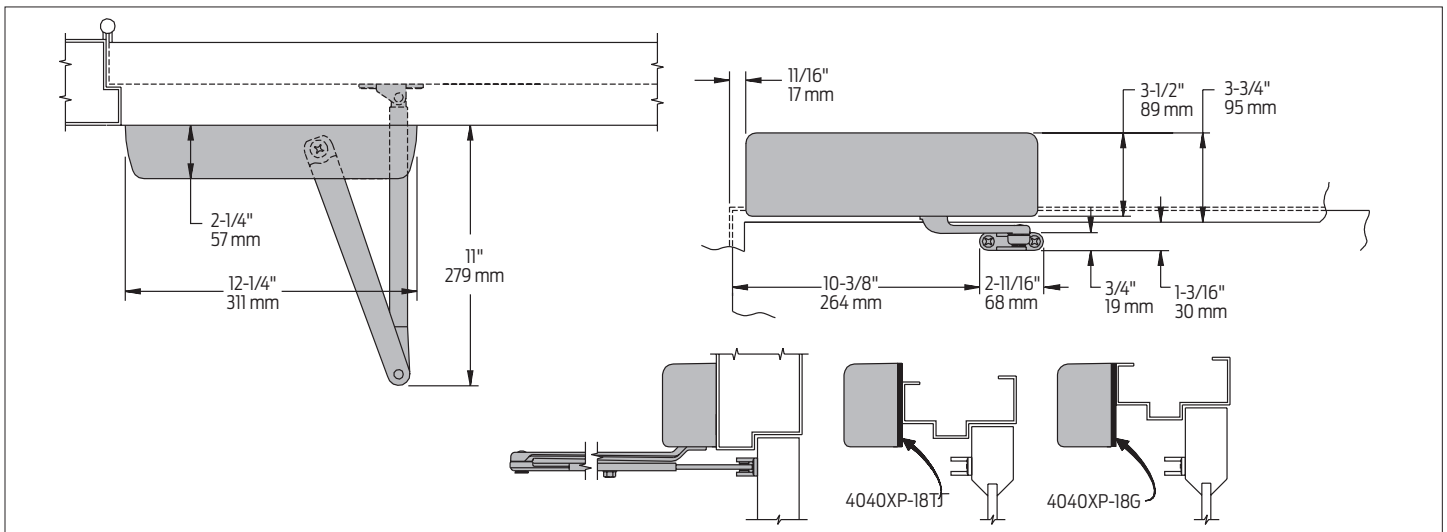
<sup>1</sup>Specify door thickness if other than 1 3/4"

## Dimensions and mounting

### Hinge (pull) side mounting

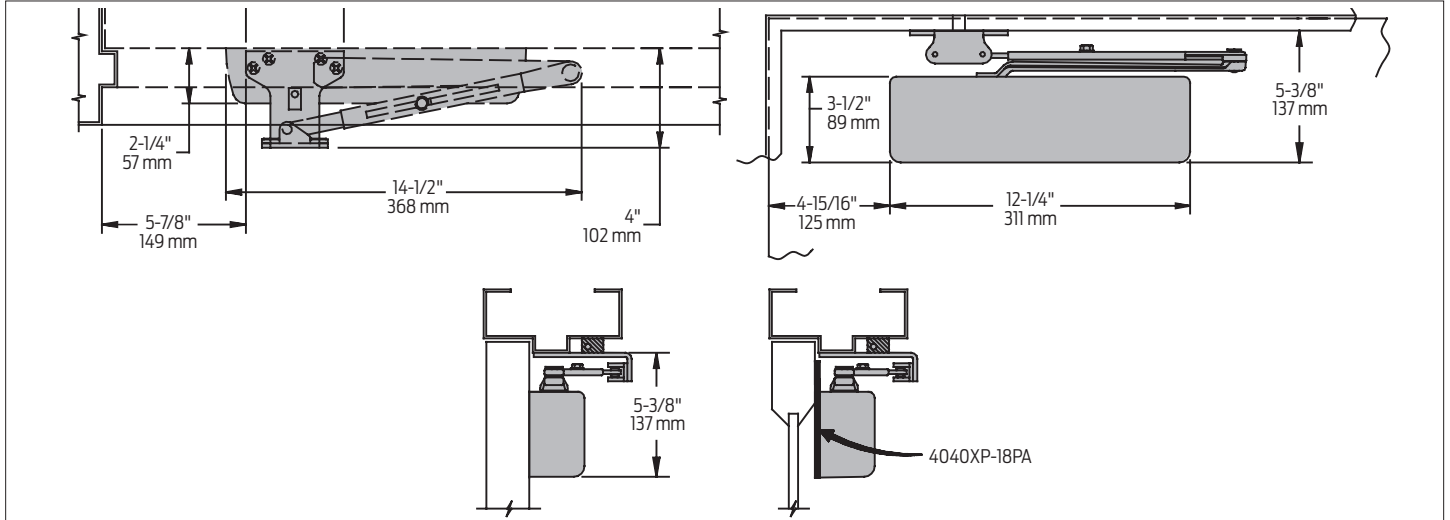


### Top jamb (push side) mounting

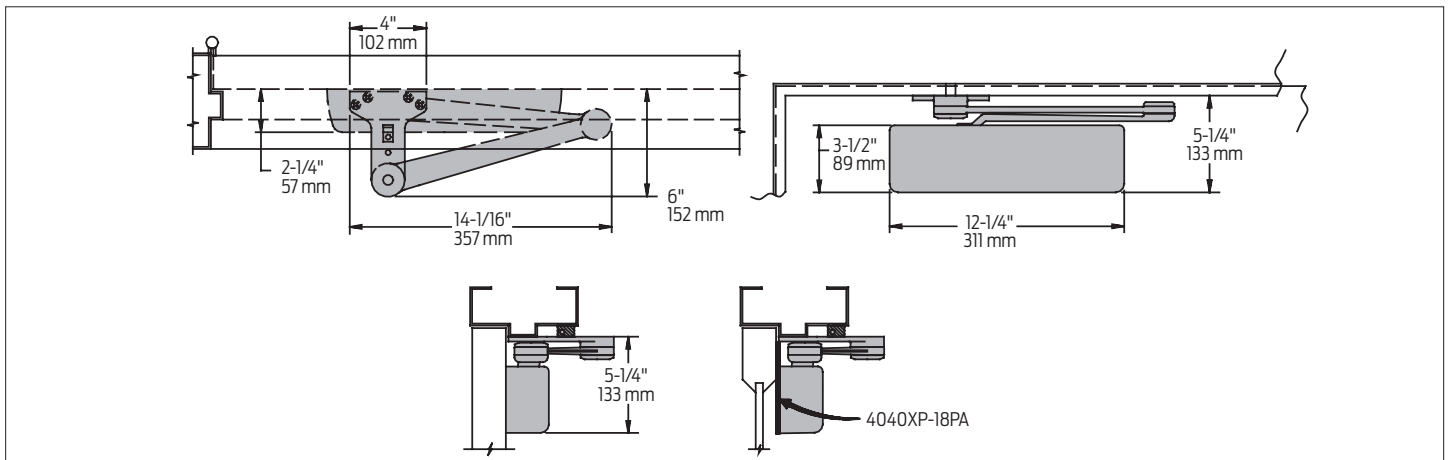


## Dimensions and mounting

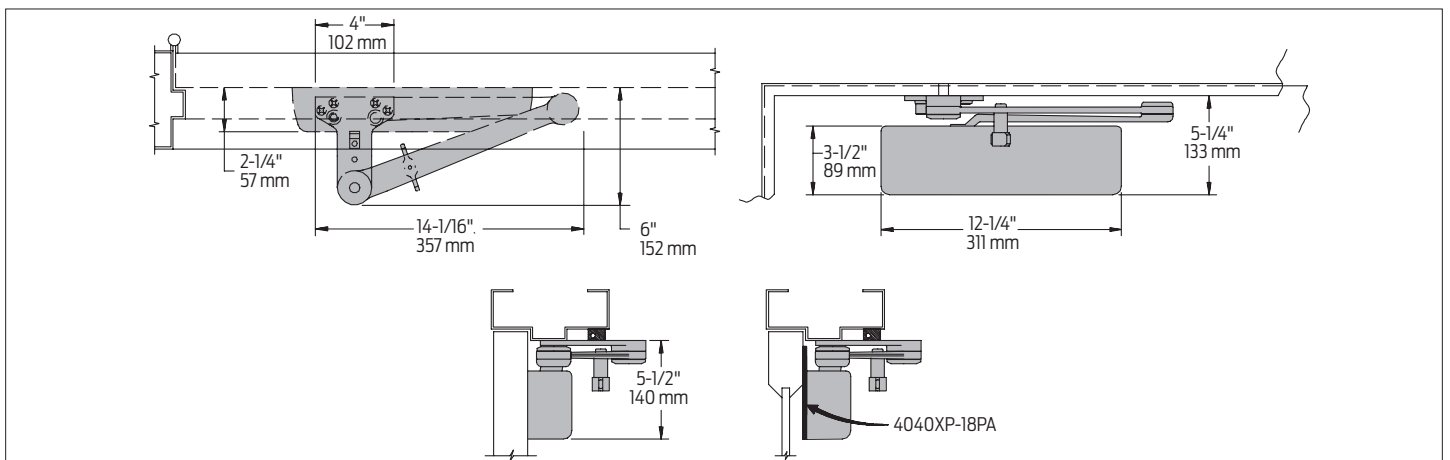
### Parallel arm (push side) mounting



### EDA mount



### CUSH mount





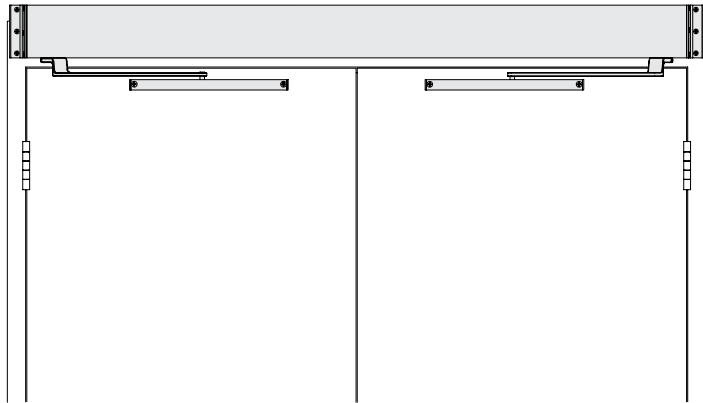
## Specifications

<b>Accessibility</b>	Available with less than 5.0 lbs. opening force on 36" door	<b>Standard features</b>	<ul style="list-style-type: none"> <li>Full complement bearings with minimum 0.5" height to help withstand abuse</li> <li>All-weather Liquid X fluid for consistent performance through every season</li> <li>Non-PRV (pressure relief valve) design to minimize risk of property damage, injury, increased maintenance, and liability exposure</li> <li>Snap-on cover with patent-pending retention improvement to protect the products</li> <li>Powder coat finish that lasts longer than spray lacquer</li> <li>30-year warranty</li> </ul>
<b>Certifications/ approvals</b>	<ul style="list-style-type: none"> <li>Grade 1 – ANSI A156.4</li> <li>UL 10C</li> <li>Meets BAA – Buy American Act</li> </ul>		
<b>Degree of operation</b>	<p>Hinge (pull) side</p> <p>Max opening: 120°</p> <p>Hold open: 90–120°</p> <p>Top jamb (push side) mount</p> <p>Max opening: 120°</p> <p>Hold open: 85–120°</p> <p>Parallel arm with 62PA</p> <p>Max opening: 180°</p> <p>Hold open: 180°</p> <p>EDA</p> <p>Max opening: 180°</p> <p>Hold open: 180°</p> <p>Cush and spring cush</p> <p>Max opening: 110°</p> <p>Hold open: 110°</p>		<p><b>Ease of installation and adjustment</b></p> <ul style="list-style-type: none"> <li>Tight tolerances in manufacturing for accuracy and precision</li> <li>LCN Green Dial to take the guesswork out of spring force adjustments</li> <li>Peel-n-stick template for quick and accurate installation</li> <li>Patent-pending positive stop to prevent the screw from being backed out</li> <li>Patent-pending regulation valve indicators for visual color indicators</li> <li>Independent speed adjustments for greater door control</li> <li>Graphic visuals and indicators to make adjustments faster, easier, and consistent</li> <li>QR code for on-the-spot access to interactive instructions and tech support</li> </ul> <p><b>Flexibility</b></p> <ul style="list-style-type: none"> <li>Universal non-handed design</li> <li>Full ranges of mounts</li> <li>Adjustable spring sizes 1–6</li> </ul>
<b>Environmental conditions</b>	<ul style="list-style-type: none"> <li>Approved for interior use</li> <li>Approved for exterior use (SRI coated only)</li> <li>LCN's standard all weather fluid performs to temperature ranges from 120°F (49°C) to -30°F (-35°C)</li> <li>LCN's powder coat finish surpasses 100 hours of salt spray which is over four times the ANSI standard for corrosion resistance.</li> </ul>		
<b>Warranty</b>	30 years		
<b>Standard features</b>	<p><b>Quality and durability</b></p> <ul style="list-style-type: none"> <li>Cast iron cylinder for rugged performance</li> <li>Single-piece, heat-treated forged steel arms to withstand greater forces</li> <li>Heat-treated 1 1/2" diameter piston for extra hardness and strength</li> <li>Double heat-treated steel pinion 11/16" journal diameter for greater wear-resistance</li> </ul>		

# 9550 SERIES

## FEATURES

**OPERATOR MOUNTS  
SIMULTANEOUS PAIR, SURFACE MOUNT  
\*PULL SIDE  
PUSH SIDE  
DOUBLE EGRESS**



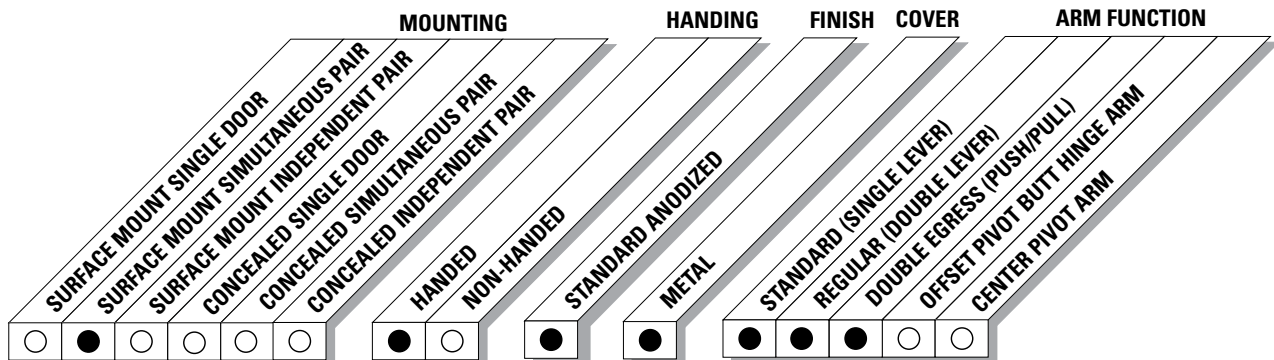
\*PULL SIDE mount shown

The 9550 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

- Push 'N Go permits non-switch activation.
- Power Boost provides additional latching force.
- Electromechanical unit with microprocessor control.
- Digital keypad for easy setup.
- Meets International Building Code requirements and ANSI A156.19.
- UL approved for fire doors.

*9550 Series is fully compliant with UL 325 & UL 1998 and meets the provisions of ANSI A156.19. The 9550 Series is UL listed for fire-rated applications. The 9550 Series also meets the provisions of the Americans with Disabilities Act.*

- 9550 Series operator is shipped with motor gearboxes, control box, arms, header, and mounting hardware. Actuators available separately, see pages 122-137.
- Simultaneous pair, surface mounted.
- Meets ADA requirements (power mode only).
- Handed product.
- Pull, Push or Double Egress applications available.
- 72" header length is standard. Specify other length 52" to 98". Consult factory regarding this option.
- Adjustable hold open period of 2 to 32 seconds in automatic or manual mode.

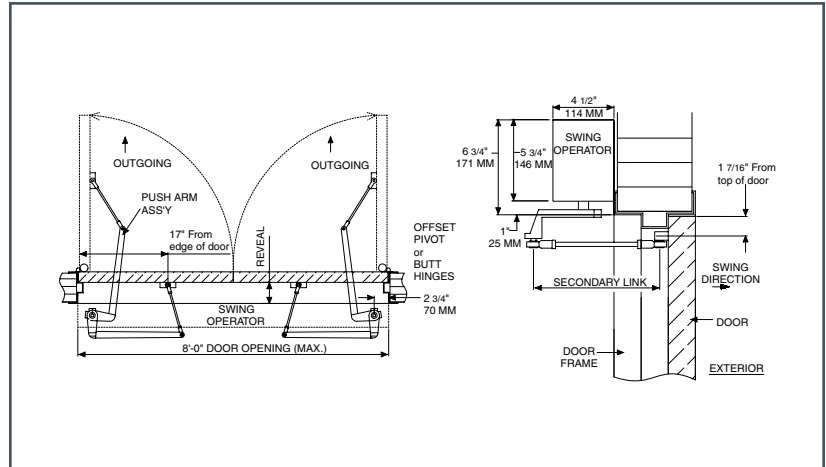


● AVAILABLE  
○ NOT AVAILABLE

# LCN 9550 SERIES

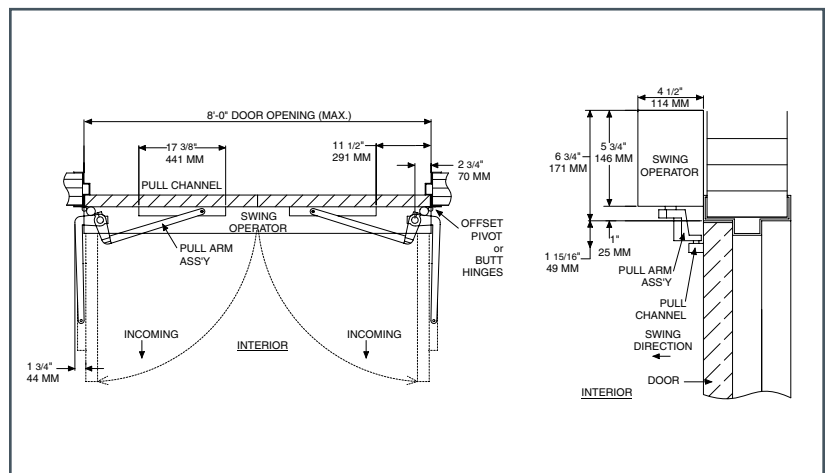
## TOP JAMB SIMULTANEOUS PAIR (OFFSET PIVOT/BUTT HINGE, CENTER PIVOT, PUSH) MOUNTING

Consult factory for all balanced door installations.



## TOP JAMB SIMULTANEOUS PAIR (OFFSET PIVOT/BUTT HINGE, CENTER PIVOT, PULL) MOUNTING

*NOTE: Cannot be used with swing clear hinges, pocket pivots or balanced doors.*



## MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Reveal for push** installations should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM.
- **Reveal for pull** installations should not exceed 4" (102 mm).
- **Reveal** for double egress installations should not exceed 4" (102 mm).
- **Head Frame** minimum 1-3/4" (44 mm). Face frame 6-3/4" (171 mm) total operator clearance.
- **Top Rail** minimum 2-3/4" (70 mm).
- **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

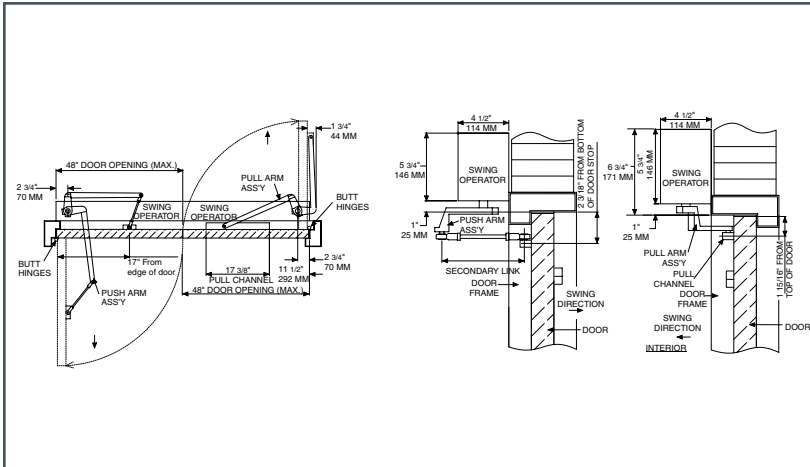
Contact LCN Product Support for installation assistance.

# 9550 SERIES

MOUNTING DETAILS

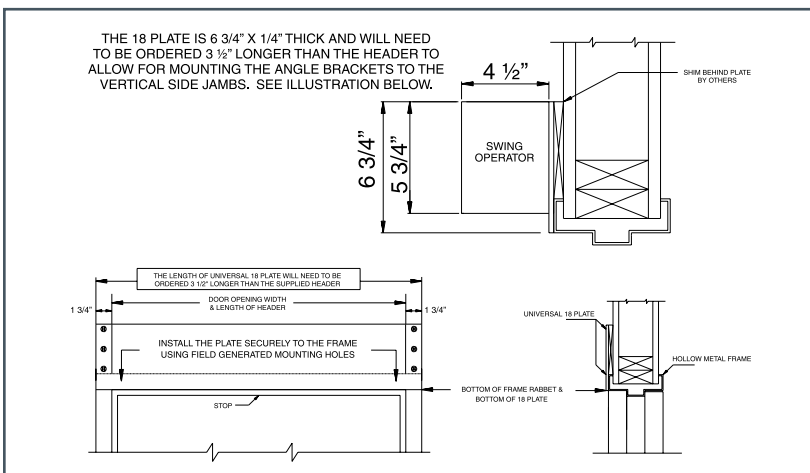
## TOP JAMB SIMULTANEOUS PAIR (RH DOUBLE EGRESS) MOUNTING

Double egress applications with safety sensors require LCN 9560 series.  
 NOTE: Cannot be used with swing clear hinges, pocket pivots or balanced door.



## HOLLOW METAL FRAME

Suggested Installation.



## MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Reveal for push** installations should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM.
- **Reveal for pull** installations should not exceed 4" (102 mm).
- **Reveal for double egress** installations should not exceed 4" (102 mm).
- **Head Frame** minimum 1-3/4" (44 mm). Face frame 6-3/4" (171 mm) total operator clearance.
- **Top Rail** minimum 2-3/4" (70 mm).
- **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

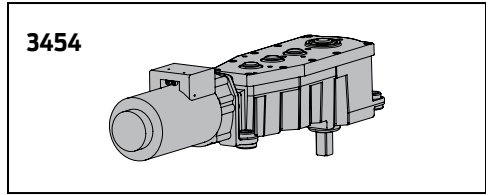
Contact LCN Product Support for installation assistance.

# 9550 SERIES

## MOTOR GEARBOX

### MOTOR GEARBOX – SENIOR SWING, 9550-3454

Driving mechanism for operator. Provides 15 lbs opening force. Handed.



## MOUNTING BRACKETS

### MOUNTING BRACKET – 2-3/4", 9550-275

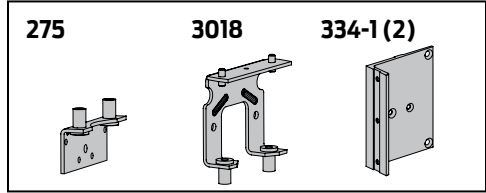
Motor gearbox mounting bracket for 2-3/4" offset pivot or butt hinge installations. Front bracket.

### REAR MOUNT BRACKET, 9550-3018

Motor gearbox mounting bracket. Rear bracket.

### ANGLED BRACKET, 9550-334-1

Mounting bracket for surface applications. (Includes 2 mounting brackets).



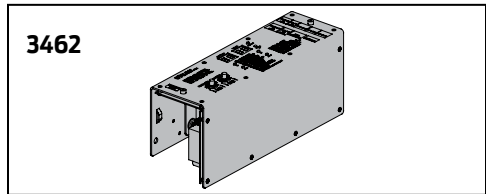
## CONTROL BOXES

### CONTROL BOX – SENIOR SWING, 9550-3462

Electronic controlling device for Senior Swing.

### COMPANION CABLE, 9550-982

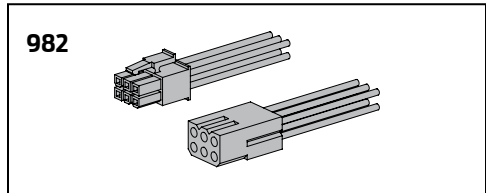
Cable that allows one control box to run two motor gear boxes. Companion cable. For use with Senior Swing.



## HEADERS

### HEADER, 9550-3572HL

Standard, mounting header. Pair door, two operators. Specify length 52" to 98" maximum.



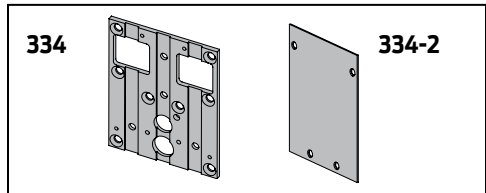
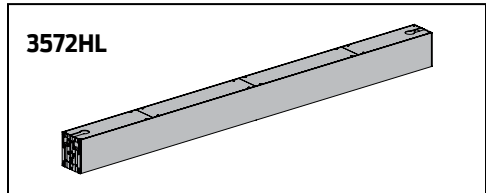
## END CAPS

### HEADER ENDCAPS, 9550-334

End cap with openings for wiring.

### END DRESS PLATE, 9550-334-2

Metal finish end cap.



# 9550 SERIES

## ARMS

### STANDARD ARM ASSEMBLY, 9550-3077PLCM

Handed arm. (Includes 3077 regular arm assembly, 3038 track, and 3034 track roller).

### REGULAR ARM ASSEMBLY, 9550-3077

Handed arm. (Includes 77 main arm assembly and 79 linkage assembly).

### REGULAR LONG ARM ASSEMBLY, 9550-3077L

Handed arm. (Includes 77 main arm assembly and 79LR linkage assembly).

### STANDARD ARM, 9550-3077T

Handed arm. Track roller not included.

### MAIN ARM, 9550-77

Handed arm attaches to motor gearbox.

### LINKAGE ASSEMBLY – 15", 9550-79

Threaded rod attaches to door. Extends from main arm.

### LINKAGE ASSEMBLY – 32", 9550-79LR

Threaded long rod attaches to door. Extends from main arm. Used for reveal 10" to 20".

## TRACKS

### TRACK 9550-3038

Standard non-handed track.

### TRACK END CAP 9550-73

Black plastic end caps.

### ROLLER, 9550-3034

Quiet low friction roller assembly.

## INSTALLATION ACCESSORIES

### SPINDLE PLATE – 2-3/4", 9550-11A

Hides bottom of motor gearbox. Completes header box. Cutout allows for motor gearbox shaft. For 2-3/4" offset pivot or butt hinge installations.

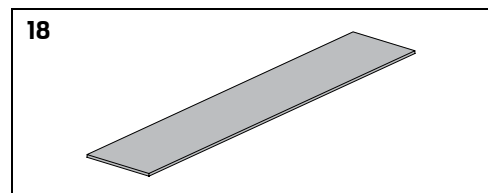
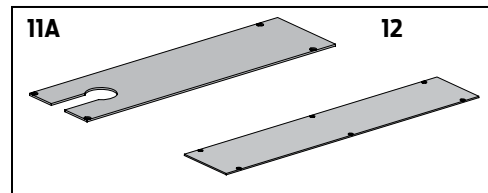
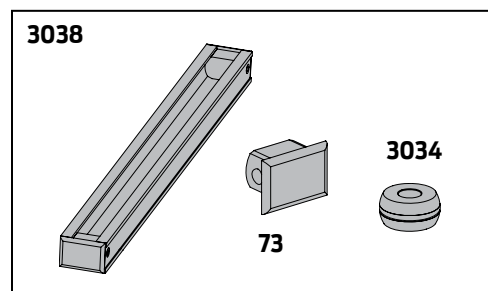
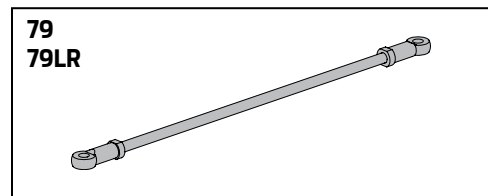
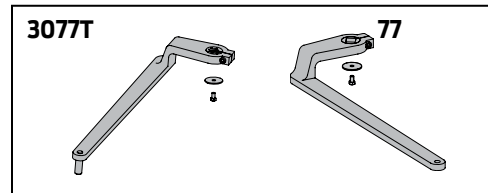
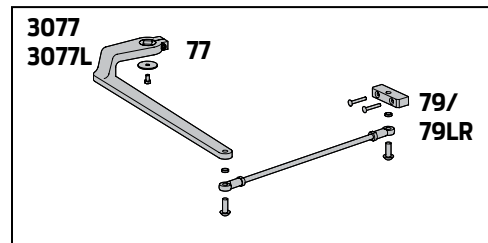
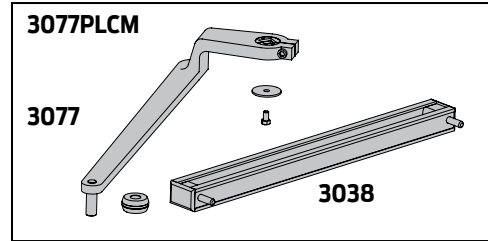
### FILLER PLATE BLANK, 9550-12

Completes length of header box. (Specify length).

### MOUNTING PLATE, 9550-18

Optional mounting plate for standard hollow metal door frames. Specify length 55-1/2" to 101-1/2" maximum when using angle brackets. Specify length 52" to 98" maximum when using dress plates.

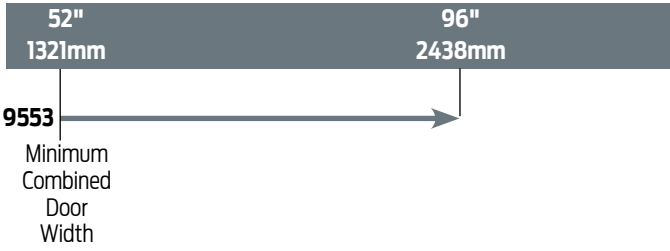
*NOTE: The length of a universal 18 plate will need to be ordered 3-1/2" longer than the supplied header when using angle brackets.*



# 9550 SERIES

## TABLE OF SIZES

### COMBINED DOOR WIDTH



→ Indicates recommended range of door width for operator.

NOTE: For all Senior Swing Series.  
 Simultaneous Pair – Width per leaf 30” minimum to 48” maximum.

## HOW-TO-ORDER 9550 SERIES OPERATORS

### 1. SPECIFY HAND

- RH
- LH

### 2. SPECIFY HEADER / LENGTH

- HL\_\_ (Specify length 52” to 98”)  
 regular or long arm
- HL\_\_ (Specify length 60” to 98”)  
 for standard or DE arm

### 3. SPECIFY FINISH

- Standard Anodized Finish \_\_\_\_\_  
 Aluminum or Dark Bronze.

### Operator will be shipped with:

- STANDARD MOTOR GEARBOX (SF) (2 ea),
- STANDARD CONTROL BOX (SC),
- METAL COVER (at specified length 72” standard),
- REGULAR ARM (2 ea),
- 2-3/4” PIVOT POINT,
- MACHINE SCREW PACK

## OPERATOR OPTIONS

### MOUNTING PLATE

- Plate, \_\_\_\_ (Specify Length 52” to 101-1/2”)

### ARM

- Standard Arm (2 ea)  
 w/Standard Track (2 ea)
- Double Egress  
 Includes Standard Arm w/Track (1 ea)  
 & Regular Arm (1 ea)
- Long Arm (3077L)

# AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

## 8310 Series 36" x 6" Full Length Actuators

### FULL LENGTH ACTUATOR (FLA), 8310-836T

Hardwired low voltage actuator with stainless steel touch plate with 36" x 6" area on surface. Blue handicap symbol conforms with most accessibility codes. Added "PUSH TO OPEN" lettering for enhanced identification. Designed to meet California building codes and increase accessibility for wheelchair bound entrants. Can easily be mounted to any flat surface or a bollard post.

### FULL LENGTH ACTUATOR (FLA), 8310-836TW

Same as the 8310-836T with a built in wireless transmitter and 3v battery. Use in conjunction with 8310-865 Receiver (not included).

### RECEIVER, 8310-865

Receiver, Wireless, 1 Channel, w/Sequencing Feature. Used in conjunction w/ Wireless Actuators & Transmitter(s).

### TRANSMITTER, 8310-844

Transmitter, Wireless, 1 Channel, 9v Battery included. Used to convert standard actuators to wireless. Requires 8310-865 Receiver. Recommended for exterior application with 8310-836T.

### FLA BOLLARD POST 8310-866FLA

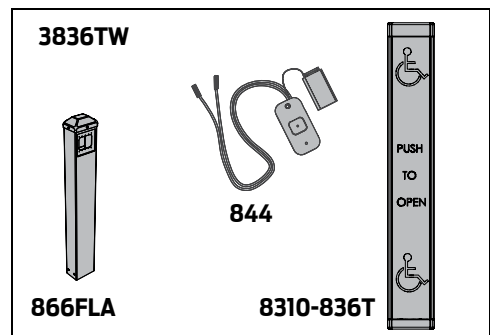
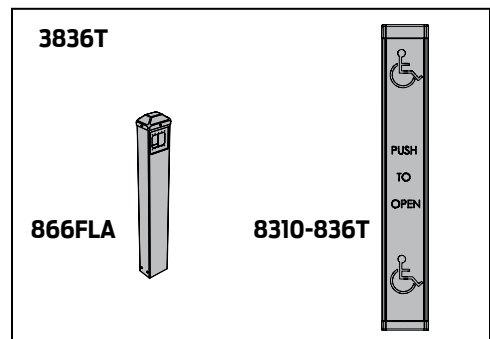
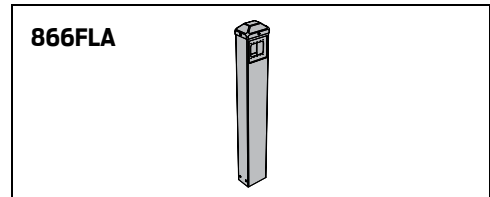
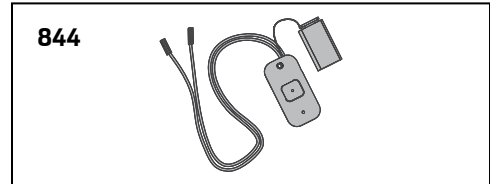
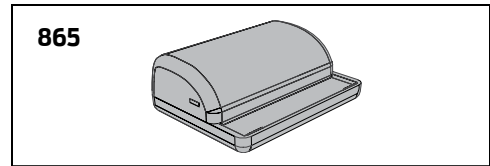
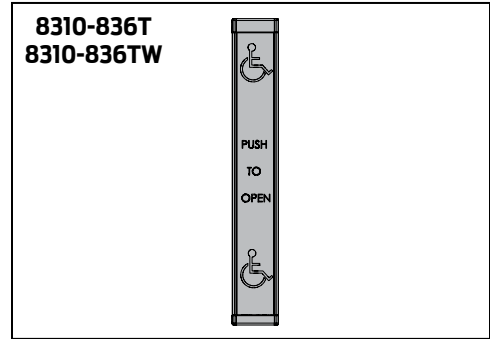
A powder coated steel 42" x 4" x 6": Bollard Post, mounting base pre prepped for the 8310-836T. Includes 8310-866 CAP, 2 mounting screws & spacer for installation.

### FLA BOLLARD MOUNT KIT 8310-3836T

36" x 6" Actuator with 8310-866FLA Bollard for wired applications.

### FLA BOLLARD MOUNT 8310-3836TW

36" x 6" Actuator with 8310-866FLA Bollard and 8310-844 wireless Transmitter. Transmitter requires 8310-865 Receiver (not included).





### Cylinders



**4040XP-3071**  
Cast Iron Cylinder Assembly

- Non-handed
- Heavy duty



**4041-3071 DEL**  
Cast Iron Cylinder Assembly

- Used for delayed action closing
- Non-handed
- Heavy duty

### Covers



**4040XP-72**  
Plastic Cover

- Includes 4040XP-54 snap-on cover clip
- Non-handed
- Standard



**4040XP-72MC**  
Metal Cover

- Handed
- Required for plated finishes and custom powder coat finishes
- Optional

### Installation Accessories



**4040XP-18**  
Plate

- Required for hinge side mount where top rail is less than 3-3/4" (95 mm)
- Requires minimum 2" (51 mm) minimum top rail



**4040XP-18G**  
Plate

- Locates top jamb mounted closer flush with top of head frame face in flush ceiling condition
- Requires 1-3/4" (44 mm) minimum head frame



**4040XP-18TJ**  
Plate

- 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



**4040XP-18PA**  
Plate

- Required for parallel arm mounting where top rail is less than 5-1/2" (140 mm), measured from the stop
- Requires 2" (51 mm) minimum top rail



**4040XP-62PA**  
PA Shoe

- Required for parallel arm mounting

### Installation Accessories cont.



**4040XP-30**  
CUSH Shoe Support

- Provides anchorage for fifth screw used with CUSH arms, where reveal is less than 3-1/16" (78 mm)
- Optional



**4040XP-61**  
Blade Stop Spacer

- Required to lower parallel arm shoe to clear 1/2" (13 mm) blade stop
- Optional



**4040XP-419**  
PA Flush Panel Adapter

- Provides horizontal mounting surface for parallel arm shoe on single rabbeted or flush frame
- Optional



**4040XP-62A**  
Auxiliary Shoe

- Requires a top rail of 7" (178 mm)
- Shoe replaces -62PA for parallel arm mounting of regular arm with overhead holder/stop
- Optional



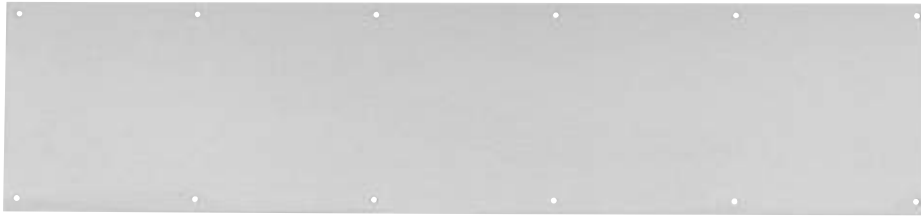
**4040XP-54**  
Snap-On Cover Clip

- Used to secure 4040XP-72 Plastic Cover to cylinder body

### 8400 Series Protection Plates

- Door protection plates are available in .050" thick brass, stainless steel or aluminum; and 1/8" thick high impact polyethylene in clear or black.
- Bevel edge options; specify B4E for all four edges.
- Mounting screw pack furnished standard, 16 screws per pack. Optional screw packs are available for TEK or TORK screw heads. Refer to the following chart for ordering.
- Specify NMH for no mounting holes. (Not available on 8402)
- Specify NMH-A for no mounting holes with adhesive. (Not available on 8402)
- Specify CS for counter sunk mounting holes.
- Specify ERS prepped with extra row of screws.

**Kickplate Gasket Tape** Tape is recommended when using a brass plate on a metal door to reduce tarnishing from electrolytic oxidation. One tape pack will cover an the perimeters of a 8" x 34" kickplate. Order 8401 Gasket Tape.



### 8400 Protection Plate 8402 (UL)\* Protection Plate

\*UL mark appears in upper right corner. Factory supplied screws must be used.

Number of screw packs required by plate size (specify TEK Screws or TORK screws).

	22"-25"	26"-33"	34"-41"	42"-48"
4"-8"	1	1	1	1
9"-16"	1	1	1	1
17"-24"	1	1	1	2
25"-32"	1	1	2	2
33"-40"	1	2	2	2
41"-48"	2	2	2	2

#### Finishes brass 24" x 48" max. size

US Number	US3	US4	US10	US10B	US15	US26	US26D
BHMA	605	606	612	613	619	625	626

#### Finishes stainless steel

US Number	US32	US32D
BHMA	629	630

#### Finishes aluminum

US Number	US28
BHMA	628

#### Finishes plastic

Clear and Black
-----------------

Residential Grade Kickplates available Carded only, finishes PA28, PA3, PA619, PA716, B3, B505, B619, B716

A  
Hinges & Pivots

B14  
Pulls & Plates

C  
Flush Bolts & Coordinators

D  
Latches, Catches & Bolts

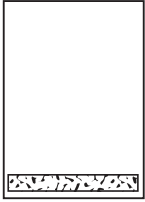
E  
Stops

F  
Exterior Hardware

G  
Miscellaneous Hardware

**A**

Hinges & Pivots



### 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

**B18**

Pulls & Plates



### 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

**C**

Flush Bolts & Coordinators

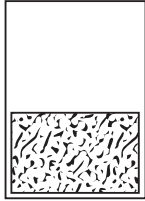


### Stretcher Plates

- 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

**D**

Latches, Catches & Bolts



### 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

**E**

Stops

**F**

Exterior Hardware

**G**

Miscellaneous Hardware



**FS18S  
FS18L Floor Stops**

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

**Dimensions**

FS18S Height: 1-1/2"                      FS18L Height: 3-1/2"  
 FS18S Diameter: 2"                      FS18L Diameter: 2"  
 FS18S Stud Length: 2-1/2"              FS18L Stud Length: 2-1/2"

**FS434 Floor Stop**

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



**Dimensions**

Overall Height: 2-5/8"  
 Base Size: 1-1/2" W x 2-3/4" L

**Finishes**

Ives Number	USC
BHMA	604

**430 Floor Door Stop**

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



**Dimensions**

Overall Height: 1-5/16"  
 Base Diameter: 1-1/4"

**Finishes brass**

Ives Number	B3	B4	B5	B10B	B15	B26	B26D
BHMA	605	606	609	613	619	625	626

**Finishes aluminum**

Ives Number	A3*	A5	A14	A92
BHMA	666		669	673

\* only available in Slim-Pak of 25

A Hinges & Pivots  
 B Pulls & Plates  
 C Flush Bolts & Coordinators  
 D Latches, Catches & Bolts  
**E5 Stops**  
 F Exterior Hardware  
 G Miscellaneous Hardware



### WS406CVX Wall Bumpers WS406CCV WS407CVX WS407CCV

WS406CVX & WS407CVX  
Meets ANSI/BHMA 156.16 L22201 for brass,  
and L52101 for stainless steel.

WS406CCV & WS407CCV  
Meets ANSI/BHMA 156.16 L22251 for brass  
and L52251 for stainless steel.

- Constructed in sturdy yet economical wrought base of brass 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.

WS406CVX (406) – convex rubber bumper, packed with wood screw and plastic anchor.

WS406CCV (406-1/2) – concave rubber bumper, which avoids damage to locks with projecting buttons, packed with wood screw and plastic anchor.

WS407CVX (407) – convex rubber bumper packed with screw and drywall anchor.

WS407CCV (407-1/2) – concave rubber bumper which avoids damage to locks with projecting buttons and is packed with screw and drywall anchor.

#### Dimensions

Base Diameter: 2-1/2"

Base Thickness: 3/8"

Overall Projection: 1"

#### Finishes *brass*

Ives Number	US3	US4	US5*	US10	US10B	US15	US15A**	US26	US26D	B716**
BHMA	605	606	609*	612	613	619	620	625	626	

#### Finishes *stainless steel*

Ives Number	US32D
BHMA	630

\* only available on WS407CVX Slim-Pak of 15

\*\* available on WS407CCV or WS407CVX Slim-Pak of 15

A  
Hinges & Pivots

B  
Pulls & Plates

C  
Flush Bolts & Coordinators

D  
Latches, Catches & Bolts

E12  
Stops

F  
Exterior Hardware

G  
Miscellaneous Hardware

**A**  
Hinges & Pivots



### FS439 Universal Dome Floor Stop

- High or Low-Rise Mount
- Zinc or Stainless Steel
- Spring-loaded Rubber Contact
- Replaceable Rubber Bumper

#### Dimensions

Overall Height: 1-1/2"

Pad Height: 1-1/8"

Base Height: 1/4"

Base Diameter: 1-7/8"

#### Finishes

Ives Number	US3	US4	US10B	US26D	US32D
BHMA	677	678	704	682	630

**B**  
Pulls & Plates

**C**  
Flush Bolts & Coordinators



### FS410 Decorative Floor Stop

- Non-directional
- Cast Brass Construction
- Replaceable Rubber Bumper

#### Dimensions

Overall Height: 1-1/2"

Bumper Thickness: 1/4"

Diameter: 1-1/4"

#### Finishes

Ives Number	US3	US26D
BHMA	605	626

**D**  
Latches, Catches & Bolts

**E4**  
Stops

**F**  
Exterior Hardware

**G**  
Miscellaneous Hardware



2720 Tobey Drive, Indianapolis, IN 46219  
 Tel 1-877-671-7011 ■ Fax 800-851-0000  
 Zero.Customer.Support@allegion.com  
 www.zerointernational.com

Part No:

142 Rain drip

Part description:

Accessories & options

Notes:

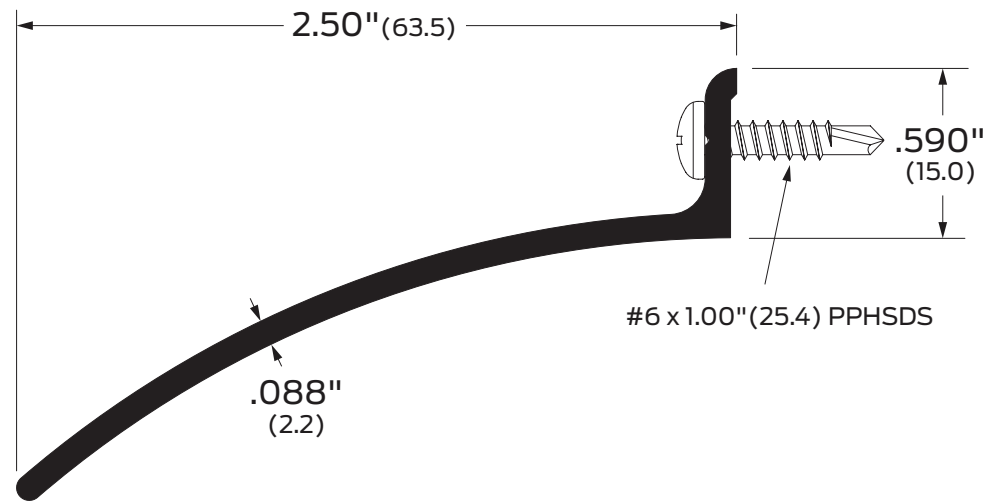
Provided by:

Customer name:

Job no:

Date:

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Certifications:

Fire rated-UL10c

ANSI/BHMA:

142AA, 142BK, 142D, 142G

R3Y976

Finishes:

- AA** Aluminum clear anodized
- BK** Aluminum black anodized
- D** Aluminum dark bronze anodized
- G** Aluminum gold anodized

Options:

**SEC** Security screws







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 www.zerointernational.com

Part No:

188S

Part description:

Self-adhesive weatherstripping

Notes:

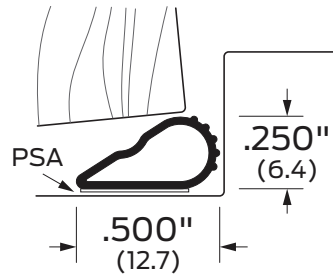
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Date:

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Notes:

PSA standard. 20-minute fire rating.

Certifications:

- Fire rated-UL10c
- Smoke and draft control
- Air Infiltration
- Sound

ANSI/BHMA:

188S

ROE151

Finishes:

- BK** Black
- BR** Brown
- CL** Clear
- GY** Gray
- WH** White

Options:

- ZAG** Ligature resistant gasketing





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Part No:

429

Part description:

Head & jamb gasketing

Notes:

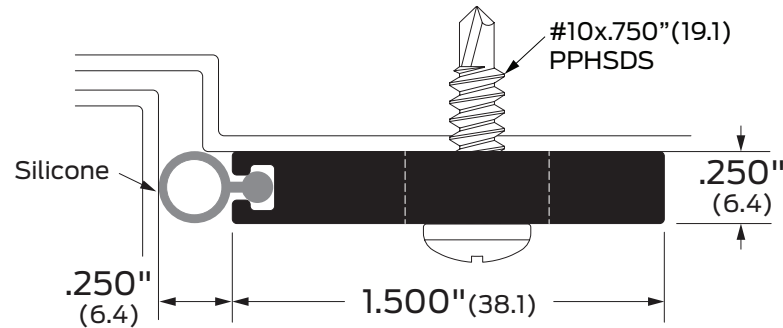
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Customer name:

Job no:

Date:

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Notes:

Gasketing protection for closer bracket or door coordinator.

Certifications:

- Fire rated-UL10c
- Smoke and draft control

ANSI/BHMA:

429AA, 429BK, 429D, 429G

R3E164

Finishes:

- AA** Aluminum clear anodized
- BK** Aluminum black anodized
- D** Aluminum dark bronze anodized
- G** Aluminum gold anodized

Options:

- S** Order as a set
- SEC** Security screws





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Part No:

39

Part description:

Door sweep

Notes:

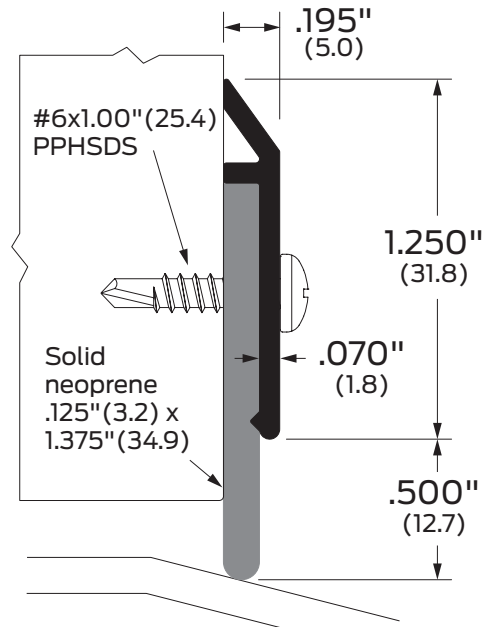
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Customer name:

Job no:

Date:

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Certifications:

Fire rated-UL10c

ANSI/BHMA:

39A, 39BK, 39D, 39G

R3B434

Finishes:

- A** Aluminum mill finish
- BK** Aluminum black anodized
- D** Aluminum dark bronze anodized
- G** Aluminum gold anodized

Options:

- S** Order as a set
- SEC** Security screws





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Part No:

8192

Part description:

Door sweep, meeting stile

Notes:

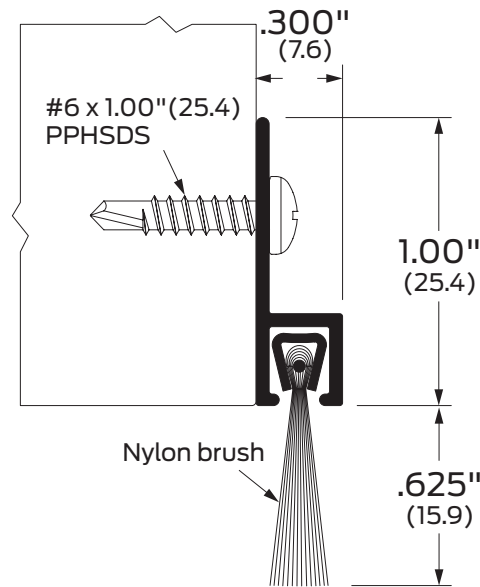
Provided by:

Customer name:

Job no:

Date:

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**Certifications:**

Fire rated-UL10c

**ANSI/BHMA:**

8192AA, 8192BK, 8192D, 8192G

R3A436, R3A735

**Finishes:**

- AA** Aluminum clear anodized
- BK** Aluminum black anodized
- D** Aluminum dark bronze anodized
- G** Aluminum gold anodized

**Options:**

- PSA** Pressure-sensitive adhesive
- SEC** Security screws





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Part No:

547

Part description:

Saddle threshold

Notes:

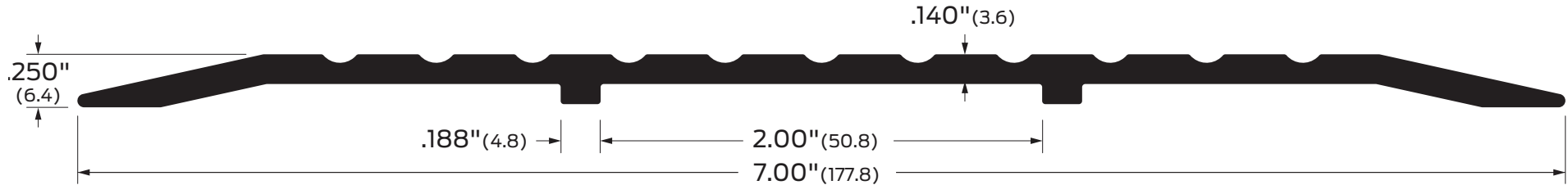
Provided by:

Customer name:

Job no:

Date:

Image may not be shown to scale



Notes:

Supplied without mounting holes.

Certifications:

- Fire rated-UL10c
- ADA Accessible

ANSI/BHMA:

- 547A, 547BK, 547D, 547G J32100, J32130
- 547A-E, 547BK-E, 547D-E, 547G-E J32200, J32230



Finishes:

- A** Aluminum mill finish
- BK** Aluminum black anodized
- D** Aluminum dark bronze anodized
- G** Aluminum gold anodized

Options:

- E** Epoxy abrasive tread
- EL** Photoluminescent and abrasive epoxy tread
- V3** Full body strength fill
- EV3** Epoxy and full body strength fill
- ELV3** Photoluminescent and abrasive epoxy tread, full body strength fill

**SCHLAGE**

# Door position switches



674-OH

Overhead door, floor mount magnetic switch

## Overview

Door position switches are used to detect the open or closed status of an opening and then send this status to a control panel. They come in a variety of shapes and sizes and are designed for monitoring door positions, roof hatches, gates etc.

### Concealed SPDT magnetic switches

- For wood doors and frames
- 0.3 Amps @ 30 VDC
- UL10C/CAN-ULC-S104



679-05

### Concealed/flush mount magnetic switches

- For aluminum, wood and hollow metal doors
- 0.25 Amps @ 30 VDC
- UL10C/CAN-ULC-S104



7764

- For hollow metal doors and frames
- 0.3 Amps @ 30 VDC
- UL10C/CAN-ULC-S104



679-05HM

### Surface mount magnetic switches

- For aluminum, wood and hollow metal doors
- 0.25 Amps @ 30 VDC
- UL10C/CAN-ULC-S104



7766

- For wood doors and metal frames
- 0.3 Amps @ 30 VDC
- UL10C/CAN-ULC-S104



679-05WD

## Ordering information

- **674-OH** - Overhead door floor mount
- **679-05** - Wood door and frame
- **679-05HM** - Hollow metal door and frame
- **679-05WD** - Wood door and metal frame
- **7764** - Concealed/flush mount
- **7766** - Surface mount

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### About Allegion

Allegion (NYSE: ALLE) is a global pioneer in seamless access, with leading brands like CISA®, Interflex®, LCN®, Schlage®, SimonsVoss® and Von Duprin®. Focusing on security around the door and adjacent areas, Allegion secures people and assets with a range of solutions for homes, businesses, schools and institutions. Allegion had \$2.9 billion in revenue in 2019 and sells products in almost 130 countries. For more, visit [www.allegion.com](http://www.allegion.com)

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**SCHLAGE**

PS902

2 amp power supply



Photo as shown includes optional board(s). Please contact your local sales office or visit the support section on our website for configuration assistance.

## Overview

The Schlage comprehensive line of power supplies and option boards was 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 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 is provided.

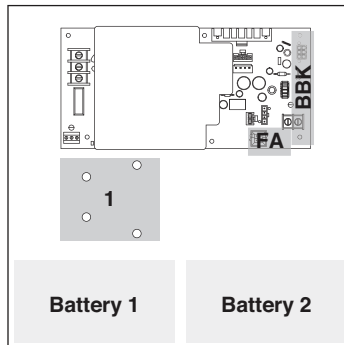
## Features and benefits

- 2A @ 12/24 VDC constant output, field selectable with jumper
- Provides low-voltage, Class 2, filtered and regulated power
- Universal 120-240 VAC, fused primary input
- Single polarized option board connector
- AC input and DC output monitoring circuit with LED indicators
- Externally visible AC input indicator with isolated SPDT contacts
- High-voltage protective cover for AC circuitry (not shown)
- Battery back-up board auto-selects voltage
- Optional Fire Alarm plug-in board available
- UL 294, ULC-S318, RoHS, and FCC Part 15 certified



## Configuration options

Available option board, fire alarm and battery backup connection locations:



### Exit device support

Von Duprin QEL	Up to 2 <sup>1</sup>
Von Duprin EL	None
Falcon EL	None

1. Requires the use of one 900-2RS option board

## 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" x 12" x 4" (H x W x D) Eight 1/2" x 3/4" knockouts NEMA Grade 1 Hinged cover with lock down screws
Operating temperature	32° - 120°F (0° - 49°C)
Certifications	ANSI/UL 294 ULC-S318 RoHS FCC Part 15 Class 2
Battery backup (install on main board)	900-BB: Battery backup board only 900-BBK: Battery backup kit (backup board plus battery pack)
Available option boards	900-FA: Plug-in fire alarm (install on main or option board) 900-2RS: 2 Relay option board capable of individual or sequential operation for single and pair door applications 900-4R: 4 Relay option board 900-4RL: 4 Relay option board with integrated logic and individual or sequential operation capability for controlling security interlocks, auto operators, and time delay function 900-8F: Fused, 8 zone option board 900-8P: PTC, 8 zone option board
AC primary fuse size	3.15A, 250v, 5 x 20mm
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.
Option board connectors	1
Fire alarm board connector	Yes
Keylock	Optional
Accessories	900-BAT: Backup battery pack

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## About Allegion

Allegion (NYSE: ALLE) is a global pioneer in safety and security, with leading brands like CISA®, Interflex®, LCN®, Schlage® and Von Duprin®. Focusing on security around the door and adjacent areas, Allegion produces a range of solutions for homes, businesses, schools and other institutions. Allegion is a \$2 billion company, with products sold in almost 130 countries. For more, visit [www.allegion.com](http://www.allegion.com).

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DOOR SCHEDULE

Table with columns: MARK, PANIC HARDWARE, SIZE (WIDTH, HEIGHT), DOOR (TYPE, MATERIAL, FINISH), FRAME (TYPE, MATERIAL, FINISH), DETAILS (SEE A-821), FROM: (R.M. NUMBER, ROOM NAME), TO: (R.M. NUMBER, ROOM NAME), ACTION, NOTES. Rows 101-211.

DOOR NOTES

- 1. DOORS SHALL BE 1-3/4" THICK UNLESS NOTED OTHERWISE.
2. SEE REMARKS SECTION OF DOOR SCHEDULE FOR GLASS TYPES.
3. ALL EXTERIOR DOORS IN BUILDINGS, INCLUDING, BUT NOT LIMITED TO DOORS OF TOILETS AND STORAGE ROOMS, SHALL CONFORM WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE.
a. EXIT DOOR SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
b. HAND ACTIVATED DOOR OPENING HARDWARE SHALL BE BETWEEN 34" MIN. AND 44" MAX. ABOVE FINISH FLOOR.
c. DEAD BOLTS ARE NOT PERMITTED UNLESS OPERABLE WITH A SINGLE EFFORT LEVER TYPE HARDWARE.
d. ALL ROOMS SERVING AN OCCUPANCY LOAD OF 50 OR GREATER AND DOORS LOCATED ON THE DISCHARGE OF EXIT CORRIDORS ARE REQUIRED TO BE PROVIDED WITH PANIC HARDWARE (CBC 1008.1.10).
e. ALL FIRE DOOR LABELS SHALL COMPLY WITH CBC 716.2.9.
4. FIRE ASSEMBLIES REQUIRED TO HAVE A ONE-HOUR FIRE-PROTECTION RATING SHALL BE EITHER AUTOMATIC OR SELF-CLOSING FIRE ASSEMBLIES TO BE ACTIVATED BY AN INCREASE IN TEMPERATURE SHALL HAVE HEAT-ACTIVATING DEVICES INSTALLED ON EACH SIDE OF THE WALL AT THE CEILING HEIGHT WHERE THE CEILING IS MORE THAN 3 FEET ABOVE THE TOP OF THE OPENING OR BY A SINGLE FUSIBLE LINK IN THE OPENING INCORPORATED IN THE CLOSING DEVICE.
5. ALL FIRE-RESISTIVE ASSEMBLIES FOR PROTECTED OPENING SHOULD COMPLY WITH SECTION 716.0 BC.
6. SEE SPECIFICATION SECTION 08 71 00 FOR DOOR HARDWARE INDEX AND DOOR HARDWARE SETS.
7. EXTERIOR STEEL CRAFT "L" SERIES 18 GA HONEYCOMB CORE OR "S" OR "A" SERIES 18 GA TUBULAR FOR FULL GLASS. GALVANIZED WITH GALVANNEED 14 GA FRAMES. USE MINIMUM 6" WIDE STILE ON ALL STILE & RAIL TYPE DOORS TO ACCOMMODATE EXIT DEVICES.
8. INTERIOR STEEL DOORS: STEELCRAFT "L" SERIES HONEYCOMB CORE, OR "S" OR "A" SERIES FOR FULL GLASS. 18 GA WITH 16 GA FRAMES. USE KNOCKDOWN FRAMES AT INTERIORS. USE MINIMUM 6" WIDE STILE ON ALL STILE & RAIL TYPE DOORS TO ACCOMMODATE EXIT DEVICES.
9. ALL INTERIOR HOLLOW METAL DOOR AND FRAMES TO HAVE JAMB AND HEAD GASKETING. PEMCO 319 OR EQUAL.
10. ALL INTERIOR STOREFRONT FRAMES SHOULD PROVIDE GASKETING FOR THE HOLLOW METAL DOORS PER THE DETAILS.
11. PROVIDE ACCESS CONTROL WIRING AND DOOR SWITCH WIRING PER HARDWARE SCHEDULE.
12. PROVIDE DOOR SWITCH WIRING PER HARDWARE SCHEDULE.
13. SEE SHEET A-252 FOR SIGNAGE PLAN.
14. ALL DOOR AND HARDWARE MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS, AND WITH THE CAL POLY CAMPUS STANDARD SPECIFICATIONS DIVISION 08 - OPENINGS

AGENCY APPROVAL DSAJ 03-122884

AMG logo and contact information: 26535 SUMMIT CIRCLE SANTA CLARITA, CA 91350 TEL (661) 251-7401

- CONSULTANTS
CIVIL ENGINEER: DIVERSIFIED PRODUCT SERVICES INTERNATIONAL (DPSI)
STRUCTURAL ENGINEER: STRUCTURAL DIVISION
M.E.P. ENGINEER: ALFATECH
FIRE PROTECTION ENGINEER: ALPHA FIRE UNLIMITED
FIRE ALARM ENGINEER: DEEP BLUE INTEGRATION INC.

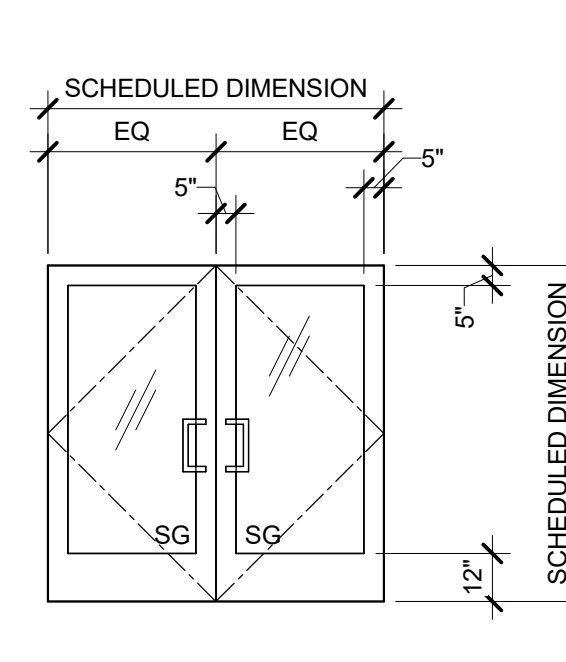
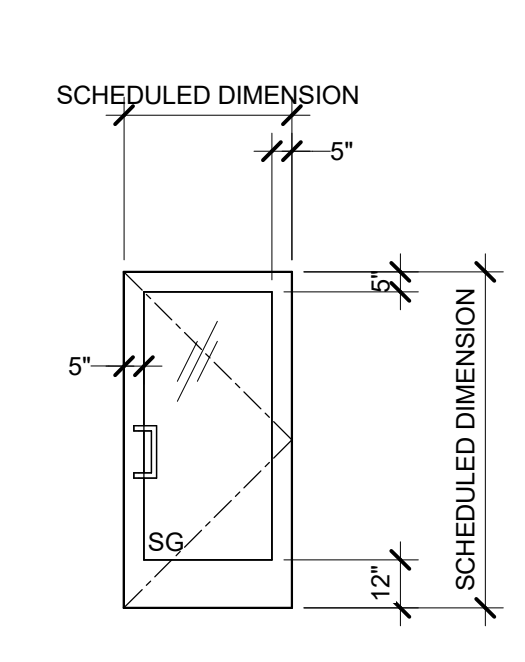
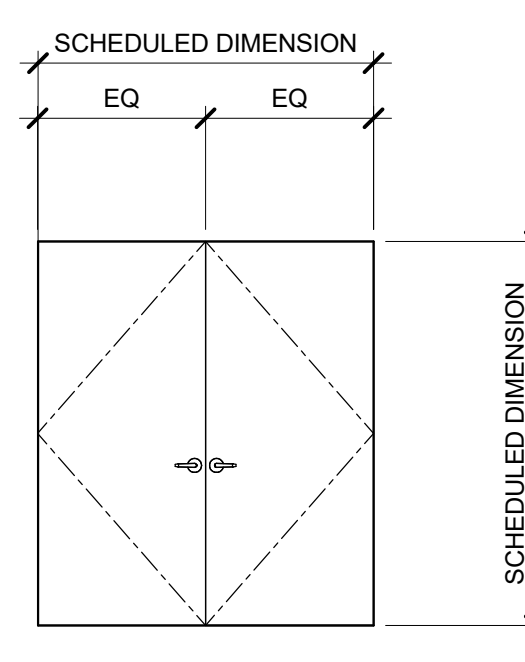
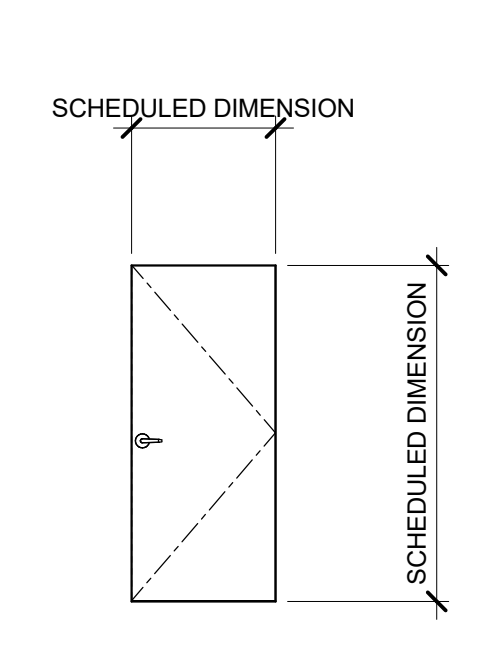
DOOR LEGEND

DOOR CONSTRUCTION AND MATERIAL:
HM - HOLLOW METAL
AL - ALUMINUM
STL - STEEL
DOOR FACING AND FINISH:
SP - STEEL, PAINTED
K - KYNAR FINISH ON ALUMINUM
WD - WOOD
WS - WOOD STAIN
FRAME MATERIAL:
HM - HOLLOW METAL
AL - ALUMINUM
FRAME FINISH:
SP - PAINTED STEEL
K - KYNAR FINISH ON ALUMINUM
FRAME TYPES:
A, B (SEE SCHEDULE, SHEET A-801)
SF - STOREFRONT (SEE ALUMINUM STOREFRONT WINDOW SCHEDULE, SHEET A-811)
GLASS:
ALL GLASS IN DOORS OR SIDE LITES IS TEMPERED (SG - SAFETY GLAZING)
HARDWARE:
P.H. - PANIC HARDWARE
ACTION:
RH - RIGHT HAND OH - OVERHEAD DOOR
LH - LEFT HAND
RHR - RIGHT HAND REVERSE
LHR - LEFT HAND REVERSE

DOOR GLAZING NOTES

- 1. ALL GLAZING SHALL BE TEMPERED 1/4" CLEAR GLASS UNLESS DOOR IS FIRE-RATED. THEN SAFETY GLAZING SHALL MEET CURRENT FEDERAL STANDARDS WHERE GLAZING OCCURS IN RATED DOOR ASSEMBLY. (WIRE GLASS IS NOT ACCEPTABLE)
2. RATED GLAZING NOTES:
A. FIRE-RESISTANCE-RATED GLAZING SHALL BE PERMITTED IN FIRE DOOR AND FIRE WINDOW ASSEMBLIES WHERE TESTED AND INSTALLED IN ACCORDANCE WITH THEIR LISTINGS AND WHERE IN COMPLIANCE WITH THE REQUIREMENTS OF CBC SECTION 716.3.
B. CBC 716.3 MARKING FIRE-RATED GLAZING ASSEMBLIES: FIRE-RATED ASSEMBLIES SHALL BE MARKED IN ACCORDANCE WITH TABLES 716.3, 716.5, AND 716.6.
C. CBC 716.3.1 FIRE-RATED GLAZING IDENTIFICATION: FOR FIRE-RATED GLAZING, THE LABEL SHALL BEAR THE IDENTIFICATION REQUIRED IN TABLES 716.3 AND 716.5. "D" INDICATES THAT THE GLAZING IS PERMITTED TO BE USED IN FIRE DOOR ASSEMBLIES AND THAT THE GLAZING MEETS THE FIRE PROTECTION REQUIREMENTS OF NFPA 252. "H" SHALL INDICATE THAT THE GLAZING MEETS THE HOSE STREAM REQUIREMENTS OF NFPA 252. "T" SHALL INDICATE THAT THE GLAZING MEETS THE TEMPERATURE REQUIREMENTS OF SECTION 716.5.1. THE PLACEHOLDER "XXX" REPRESENTS THE FIRE-RATING PERIOD IN MINUTES.
D. CBC 716.3.2 FIRE-PROTECTION-RATED GLAZING IDENTIFICATION: FOR FIRE-PROTECTION-RATED GLAZING, THE LABEL SHALL BEAR THE FOLLOWING IDENTIFICATION REQUIRED IN TABLES 716.3 AND 716.5: "OH-XXX", "OB" INDICATES THAT THE GLAZING MEETS BOTH THE FIRE PROTECTION AND THE HOSE-STREAM REQUIREMENTS OF NFPA 257 OR UL 9 AND IS PERMITTED TO BE USED IN FIRE WINDOW OPENINGS. THE PLACEHOLDER "XXX" REPRESENTS THE FIRE-RATING PERIOD IN MINUTES.
E. FIRE BARRIER: 3/4 HOUR GLAZING, MAX SIZE TESTED, MARKED D-H
F. NFPA 257 OR UL 9 MEETS FIRE WINDOW ASSEMBLY CRITERIA INCLUDING THE HOSE STREAM TEST
G. NFPA 252 OR UL 10B OR UL 10C D = MEETS FIRE DOOR ASSEMBLY CRITERIA. H = MEETS FIRE DOOR ASSEMBLY HOSE STREAM TEST
H. RATED GLAZING SHALL BE FIRELITE NT

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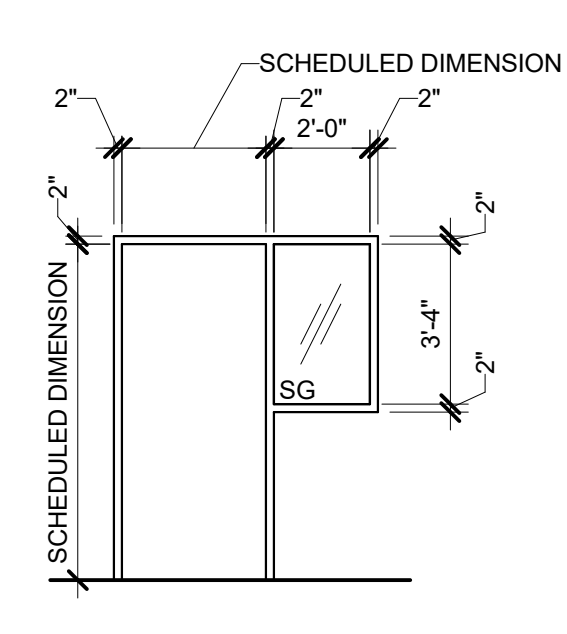
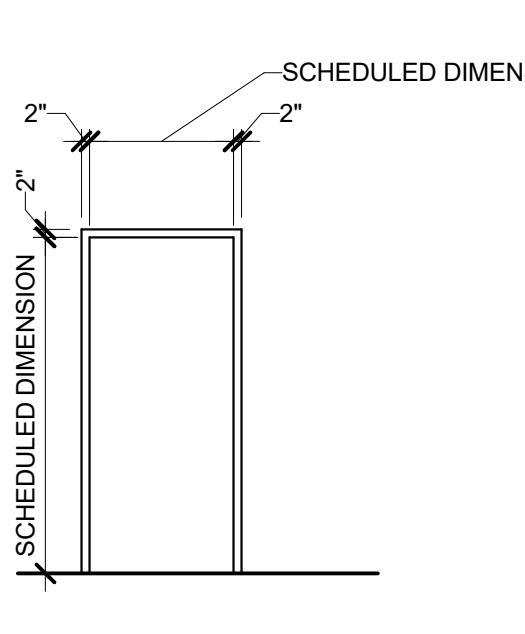
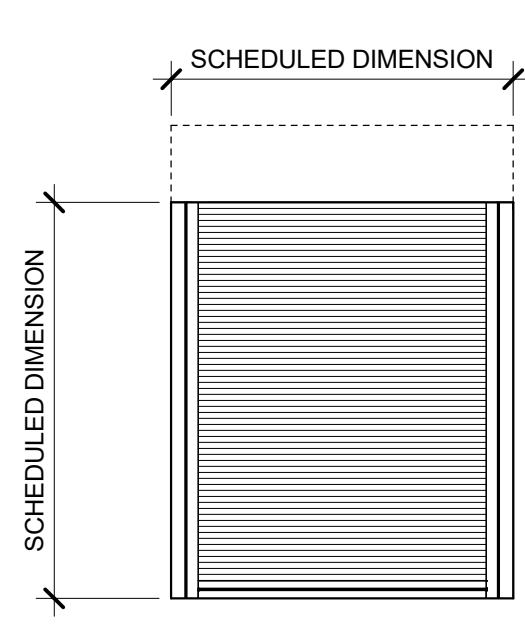
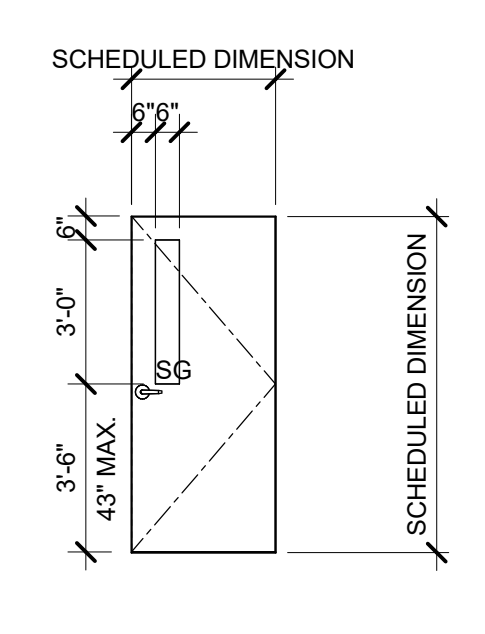


DOOR TYPE 'A'

DOOR TYPE 'AA'

DOOR TYPE 'B'

DOOR TYPE 'BB'



DOOR TYPE 'C'

DOOR TYPE 'D'

DOOR FRAME 'A'

DOOR FRAME 'B'

CONSTRUCTION DOCUMENTS