

SECTION 08710
FINISH HARDWARE

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Scope: Furnish and install hardware as indicated on the Drawings or specified
- B. Additional Requirements Specified Elsewhere
 - 1. Section 01340: Shop Drawings, Product Data, and Samples
 - 2. Section 01400: Quality Control
 - 3. Section 01600: Materials and Equipment
- C. Related Requirements Specified Elsewhere
 - 1. Section 05501: Anchor Bolts and Drilled-In Anchors
 - 2. Section 07900: Joint Sealants (Threshold Caulking)
 - 3. Section 08100: Metal Doors and Frames

1.2 QUALITY ASSURANCE

- A. Design Criteria
 - 1. Provide Underwriters' Laboratory listed hardware for fire or accident hazard where scheduled or required to maintain rating of opening

1.3 SUBMITTALS

- A. In Accordance with Section 01340
- B. Hardware Schedule
 - 1. Within 10 days after receipt of a contract for the finish hardware, prepare a complete schedule and submit copies through the Contractor to the Engineer for approval
 - a. Provide sufficient copies for the Engineer to retain 3 copies for file and distribution to the Owner and the Engineer's resident project representative
 - 2. Do not order hardware until a corrected copy of the schedule is returned to the supplier bearing the approval of the Engineer
 - 3. A catalog cut of each different hardware item shall be included with each hardware schedule
- C. Templates
 - 1. Within 10 days after receipt of the approved corrected hardware schedule, submit 4 sets of templates and schedules to the hollow metal door and frame suppliers

D. Warranty

1. Provide written warranty covering requirements of Section 1.5

1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver hardware to the job site only after proper provision for storage has been made by the Contractor
- B. Properly package and clearly label each item to indicate exact location for which intended
- C. All hardware shall have all necessary screws, bolts and fasteners required for proper installation, wrapped in paper or plastic and packaged with the hardware

1.5 WARRANTY

- A. Warrant all finish hardware to be free of defects for a period of two years after proper installation and acceptance by the Engineer and Owner
- B. Warrant door closers for five years with the above conditions

PART 2 - PRODUCTS

2.1 DESIGN BASIS

A. Hinges

1. Heavy weight, ball bearing, stainless steel
2. NRP at exterior outswing doors
3. Size
 - a. Doors 3'-0" or less in width: 4½" x 4½"
 - b. Doors over 3'-0" in width: 6" x 5"
4. Hager BB1199, Stanley FBB199, or equivalent
5. FIB-R-Door BB1

B. Locksets

1. Mortise type with corrosive resistant stainless steel case and parts
2. ANSI F13 entrance function
 - a. Latch bolt by lever either side unless outside level locked by deadbolt projection
 - b. Deadbolt by key outside and by thumb turn grip inside
 - c. Inside level always free, simultaneously retracts latchbolt and deadbolt and unlocks outside lever
3. ¾" throw latch
4. Stainless steel 1" throw deadbolt
5. Armored front
6. Stainless steel
7. Satin finish

8. Schlage L9453P 17L 630, Corbin Russwin ML2000 Series with PSM lever, or equivalent

C. Latchsets

1. Heavy duty cylindrical type
2. ANSI F75 passage function
 - a. Latch bolt by lever either side
 - b. Both levers always free
3. Non-ferrous with stainless steel cases and trim
4. Satin finish
5. Schlage ND53PD SPA 626, Corbin Russwin CL3500 Series with PZD lever, or equivalent

D. Exit Devices

1. Mortise type, with anodized aluminum crossbar
 - a. Provide stainless steel materials where indicated on the Drawings
2. Outside lever and cylinder
3. ANSI 05/08 classroom function for exterior doors
 - a. Free at all times except when locked by key
4. Both sides always free for interior doors
5. UL listed, less dogging
6. Corbin Russwin ED 6600 Series with PR3M level, or equivalent

E. Closers

1. Non-handed/non-sized heavy duty
2. Push side mounting, unless otherwise indicated
 - a. Provide all mounting plates and accessories as required for job conditions
3. Built-in stop and selective hold open feature
4. Special rust inhibitor prime coat
5. LCN 4040 ALxSRlxH, Norton 7530 HxSS, or equivalent

F. Flushbolts

1. Manual
 - a. Mortise type
 - b. Top and bottom of inactive leaf of pairs of doors
 - c. Stainless steel
 - d. Trimco 3917 with Trimco 3910 dust-proof strike, Ives FB457 with Ives DP2 dust-proof strike, or equivalent
2. Automatic
 - a. Mortise type
 - b. Top and bottom of inactive leaf of pairs of doors
 - c. Stainless steel
 - d. Inactive door latches when active door closes, bolts retract when active door opens
 - e. Rod length as required by job conditions

- f. Trimco 3810 with Trimco 3910 dust-proof strike, Ives FB31P with Ives DP2 dust-proof strike, or equivalent

G. Stops

- 1. Floor mounted
 - a. Exterior doors
 - 1) Heavy duty
 - 2) Replaceable resilient bumper
 - 3) Minimum height: 2³/₄"
 - 4) Trimco 1201CK-SS, Ives FS448 or equivalent
 - 5) Provide washers/backer plates where stop is mounted to grating
 - b. Interior doors
 - 1) Floor or wall type stop as required
 - 2) Replaceable resilient bumper
 - 3) Trimco W1211 or 1211, Ives FS13 or FS17, or equivalent
- 2. Floor mounted with manual holder
 - a. Heavy duty
 - b. Replaceable resilient bumper
 - c. Minimum height: 2³/₄"
 - d. Trimco 1224, Ives FS450, or equivalent
 - e. Provide washers/backer plates where stop is mounted to grating
- 3. Wall mounted
 - a. Heavy duty
 - b. Resilient convex bumper
 - c. Trimco 1270WX-SS, Ives WS406CVX-SS, or equivalent
- 4. Hinge pin door stop
 - a. Sized appropriately for associated hinge pin
 - b. Replaceable resilient bumper
 - c. Ives 70-B26D, or equivalent
- 5. Wall mounted with manual holder
 - a. Heavy duty
 - b. Replaceable resilient bumper
 - c. Trimco 1207, Ives WS449, or equivalent

H. Holders

- 1. Refer to stops with manual holder

I. Threshold

- 1. Saddle type
- 2. Aluminum or stainless steel
- 3. Profiled surface for skid resistance
- 4. Pemko 172A, or equivalent
- 5. Nominal width to match door jamb width

J. Weatherstrip

1. Aluminum exterior with silicon seal
2. Pemko 303AS, or equivalent
3. For stainless steel doors and frames
 - a. Stainless steel exterior with silicon seal
 - b. Pemko 305SSS, or equivalent

K. Door Bottom

1. Exterior doors
 - a. Aluminum exterior with silicon or neoprene seal
 - b. Pemko 216APK, or equivalent
 - c. For stainless steel doors and frames
 - 1) Stainless steel exterior with neoprene seal
 - 2) Pemko 315SSN, or equivalent
2. Interior doors
 - a. Aluminum exterior with silicon or neoprene seal
 - b. Pemko 217APK, or equivalent
 - c. For stainless steel doors and frames
 - 1) Stainless steel exterior with neoprene seal
 - 2) Pemko 315SSN, or equivalent

L. Silencers

1. All resilient material, no metallic parts
2. Trimco 1229A, Ives SR64, or equivalent

M. Kick Plates

1. Stainless Steel, 0.050-inch thick
 - a. For aluminum doors, provide 0.050-inch thick aluminum
2. 10" high x 2" less than width of door

N. Push Plates

1. Stainless Steel, 0.050-inch thick
 - a. For aluminum doors, provide 0.050-inch thick aluminum
2. 4" x 16"

O. Pull Plates

1. Plate: Stainless steel, 4" x 16" x 0.050" thick
2. Grip: Stainless steel, 3/4" diameter round bar
3. For aluminum doors, provide aluminum plate and grip of same dimensions

P. Astragal

1. Aluminum exterior with silicon or neoprene seal
2. Attach to active leaf

3. Pemko 375R, or equivalent
4. For stainless steel doors
 - a. Stainless steel exterior with silicon seal
 - b. Pemko 357SS-S88

Q. Equivalent products of other manufacturers may be accepted subject to compliance with design, function, materials and performance of the specified items

2.2 KEYING, KEYS

- A. Key all cylinders for each facility and/or building alike
- B. Install temporary cylinders for each facility and/or building in all exterior doors to act as construction cylinders
 1. Key temporary cylinders alike
 2. Provide a total of six keys for temporary cylinders with two keys each provided to the Owner and Engineer
 3. Upon final acceptance of the project by the Owner, provide and install permanent cylinders in all exterior doors
- C. All cylinders to be grand master keyed
 1. Provide a total of three grand master keys

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Run weather stripping or sound stripping full height of both jambs and full width of head
- B. Through-bolt closers, pulls, exit devices, and half-surface hinges to doors
- C. Provide stainless steel machine screws or sheet metal screws wherever required for metal doors or frames
- D. Furnish stops with expansion anchors wherever attached to concrete
- E. Run thresholds full width of opening
- F. Run door bottoms full width of doors
- G. Install thresholds on concrete slabs with drilled-in anchors
- H. Bed thresholds in caulking
- I. Install silencers on all doors unless otherwise noted on the Drawings

3.2 PROTECTION

- A. Do not install door silencers, door bottoms, and wall stops until after painting is complete
- B. Loosen locksets prior to painting and retighten after painting is complete
- C. Mask all hardware or otherwise protect during painting operation

3.3 HARDWARE SCHEDULE

- A. Hardware Set A
Single Door - Exterior
Hinges
Latchset
Closer
Stop (floor type)
Threshold
Weatherstrip
Door Bottom (exterior type)
Silencers
Kick Plate
Add Electric Strike where shown on Door Schedule
- B. Hardware Set B
Single Door - Exterior
Hinges
Exit Device
Closer
Stop (floor type)
Threshold
Weatherstrip
Door Bottom (exterior type)
Silencers
Kick Plate
- C. Hardware Set C
Pair Doors - Exterior
Hinges
Exit Device
Closer (active leaf only)
Flushbolts (manual)
Stop (active leaf – hinge pin; inactive leaf – floor type with manual holder)
Threshold
Weatherstrip
Door Bottom (exterior type)
Silencers
Kick Plate (both doors)
Astragal

END OF SECTION