

SECTION 08 71 00

DOOR HARDWARE

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Hardware for swinging Aluminum, Hollow Metal and Wood Door Openings.

1.2 REFERENCES

A. Use the following references to properly detail, schedule, furnish and install finish hardware items.

1. NFPA 80 – Standard for Fire Doors and Other Opening Protectives (2007)
2. DHI Installation Guide for Doors and Hardware (1984)
3. DHI Sequence and Format for the Hardware Schedule (1996)
4. ANSI/ICC A117.1 – Accessible and Usable Buildings and Facilities (2009)
5. ANSI/BHMA A156.4 – Door Controls – Closers (2013)
6. ANSI/BHMA A156.2 – Bored and preassembled Locks and Latches (2017)
7. ANSI/BHMA A156.18 – Materials and Finishes (2016)

1.3 SUBMITTALS

A. Schedule:

1. Provide submittals in accordance with 01 33 00 – Submittal Procedures.
2. Provide hardware schedule in vertical format on 8-1/2-inch by 11-inch paper for electronic format. Conform to DHI publication Sequence and Format for Hardware Schedule using Architect's door numbers and hardware set numbers.

B. Product Data: Provide one set of manufacturer's catalog and technical data for each hardware item used, highlighting design, function, fasteners, accessories, and options to facilitate review with each hardware schedule submitted.

C. Templates: Provide two sets of manufacturer's templating information for mortised and template hardware upon receipt of approved hardware schedule to the door and frame supplier(s). Include requirements for internal reinforcements required for surface mounted hardware.

D. Keying Schedule: Arrange meeting with Owner, Architect and finish hardware supplier to determine keying requirements immediately upon receipt of finish hardware schedule.

1.4 QUALITY ASSURANCE

A. Fire Rated Door Openings:

1. Comply with NFPA 80.
2. Furnish nationally recognized testing agency label or stamp on hardware for labeled openings.
3. Only labeled locks or latches or fire exit hardware can be used on fire rated openings.

4. Where UL requirements conflict with Drawings or Specifications, furnish hardware conforming to the UL requirements.

2.1 MATERIALS

A. Locksets:

1. Cylindrical Locks:

- a. Conform to ANSI/BHMA A156.2, Series 4000 Operational Grade 1.
- b. Latchbolt with appropriate throw for fire rated doors and pairs of doors in accordance with manufacturers listing.
- c. Lock functions as specified in hardware schedule.
- d. Lever design: 14C
- e. Backset: 2-3/4-inch
- f. Strike single door: ANSI 4-7/8-inch with proper lip length to minimally clear trim.
- g. Strike pair of doors: flat lip strike sized to fit flush with face of door.
- h. Furnish wrought strike box.
- i. Acceptable manufacturers and types:

Best
9K Series

2. Aluminum Door Deadbolt – Narrow Style:

- a. Provide narrow style aluminum door deadbolts as specified.
- b. Provide deadbolts with a 31/32 inch, 1-1/8 inches, or 1-1/2 inch backset as required for door detail with a full 1-3/8 inches throw deadbolt.
- c. Provide manufacturers standard strike.
- d. Provide 4089 exit indicator.
- e. Provide 4066 Thumbturn cylinder where scheduled.
- f. Acceptable manufacturers and types:

AdamsRite
MS1850 Series

3. Aluminum Door Deadlatch:

- a. Provide narrow style aluminum door Deadlatch as specified.
- b. Provide deadbolts with a 31/32 inch, 1-1/8 inches, or 1-1/2 inch backset as required for door detail with a 5/8 inch by 1 inch by 5/8 inch throw latchbolt.
- c. Provide manufacturers standard strikes unless extended lip strikes are necessary to protect trim.
- d. Provide 4600-01 lever handle at offices where scheduled for inside trim.
- e. Provide 3080-01 entry trim with cylinder hole for offices where scheduled.
- f. Acceptable manufacturer and type:

Adams Rite
4530 Series

4. Cylinders:

- a. Provide mortise and rim cylinders and cores from same manufacturer as locksets, for all locksets, exit devices, cylinder dogging, key switches and auxiliary hardware.
- b. Appropriate cam and blocking rings for proper installation.

B. Keys & Keying

1. Cylinders: 7-pin, interchangeable core and keyed into a BEST Cormax factory registered Masterkey System.
2. Provide construction cores and keys during construction period. Construction control and operating keys and cores are not part of permanent keying system or furnished on same keyway (or key section) as permanent keying system.
3. Permanent Keys and Cores: Prepare permanent cores and keys in accordance with keying schedule. Provide Masterkeys and other Security Keys.
4. Furnish keys in the following quantities:
 - a. 4 each Masterkeys per new Masterkey set.
 - b. 2 each Change keys each keyed core.
 - c. 6 each Construction Masterkeys.
 - d. 2 each Construction Control keys.
 - e. 2 each Control keys.
5. Install permanent cores in locksets.
6. Return construction cores to Hardware Supplier.

C. Exit Devices:

1. UL-listed for fire at fire door assemblies, and UL listed for panic at non-rated door assemblies.
2. Size exit devices to proper door width and height.
3. Narrow Stile exit device at aluminum narrow stile doors.
4. Stainless Steel deadlocking $\frac{3}{4}$ -inch throw latch bolt.
5. LBR (less bottom rod) where scheduled to eliminate use of floor mounted strikes.
6. Cylinders for exit devices with cylinder dogging or locking trim.
7. Strike: as recommended by manufacturer.
8. Lever design: To match lockset trim.
9. Acceptable manufacturers and types:

Precision
Apex 2000 Series

D. Surface Door Closers:

1. Conform to ANSI/BHMA A156.4 Grade 1.
2. Heavy duty high silicon aluminum alloy or cast iron body closers.
3. Furnish manufacturers recommended size, arms and configuration for door and frame application required.
4. Furnish brackets, spacers, support shoes, and plates for complete and proper installation.
5. DA (delayed-action) at toilet room doors and as scheduled.
6. Acceptable manufacturers and types:

Stanley
CLD-4550 Series

E. Overhead Door Stop:

1. Provide overhead stop or overhead stop/holder for interior doors as specified. Provide overhead stop for interior doors and at any door that swings more than 140 degrees before striking a wall, open against equipment, casework, sidelights, and/or where conditions do not allow a wall stop or a floor stop presents a tripping hazard.
2. Where overhead holders are specified provide friction type at doors without a closer and positive type at doors with a closer.
3. Acceptable manufacturers:

ABH	Rixson	Glynn Johnson
9020 Series	9 Series	90 Series
1020 Series	6 Series	100 Series

F. Door Trim:

1. Provide push/pull bars of solid bar stock, 1-1/4 inch diameter and length as scheduled. Push bars shall be of sufficient length to span from center to center of each stile. Where required, mount back to back with pull.
2. Provide offset pulls of solid bar stock, 1-1/4 inch diameter and length as scheduled. Where required, mount back to back with push bar.
3. Provide push plates 6 inches wide x 16 inches high x 0.050 inch thick and beveled 4 edges. Where width of door stile prevents use of 4 inches wide plate, adjust width to fit.
4. Provide pull plates 4 inches wide x 16 inches high x 0.050 inch thick, beveled 4 edges, and prepped for pull. Where width of door stile prevents use of 4 inches wide plate, adjust width to fit.
5. Acceptable manufacturers:

Type	Trimco	Burns	Rockwood
Push/Pull Bar	1747	M422xM39G	RM252
Offset Pull	1191-5J	M39G	RM202
Push Plate	1001-9	56	70E
Pull Plate	1014-3B	5421B	126 x 70C

PART 3 - EXECUTION

3.1 SCHEDULE

- A. Should items of hardware not definitely specified be required for completion of the Work, furnish such items of type and quality comparable to adjacent hardware and appropriate for service required.
- B. Where items of hardware aren't definitely or correctly specified, are required for completion of the Work, a written statement of such omission, error, or other discrepancy to Architect, prior to date specified for receipt of bids for clarification by addendum; or, furnish such items in the type and quality established by this specification, and appropriate to the service intended.
- C. Refer to Drawing Sheet A-601 for hardware sets.

END OF SECTION