



Hager Companies
 139 Victor St.
 St. Louis, MO 63104
 Phone: (800) 325-9995
 Phone: (314) 772-4400
 Fax: (800) 782-0149
 E-mail: webmaster@hagerco.com
www.hagerco.com

This MANU-SPEC® utilizes the Construction Specifications Institute (CSI) *Project Resource Manual* (PRM), including *MasterFormat*™, *SectionFormat*™ and *PageFormat*™. A MANU-SPEC is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets [] and/or Specifier Notes; delete optional text in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies locking hardware. These products are manufactured by Hager Companies. Revise MANU-SPEC section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles.

**SECTION 08 71 00
 DOOR HARDWARE**

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Locking Hardware:
 - a. Cylindrical locks.
 - b. Mortise locks.
 - c. Deadbolts.
 - d. Tubular locks.
 - e. Interconnected locks.
 - f. Surface bolts.
 - g. Flush bolts.
 - h. Dustproof strikes.
 - i. Pocket door privacy latches.

Specifier Note: Revise paragraph below to suit project requirements. Add section numbers and titles in accordance with CSI *MasterFormat* and specifier's practice.

B. Related Sections:

1. Section [01 33 00 - Submittal Procedures] [_____].
2. Section [01 45 00 - Quality Control] [_____].
3. Section [01 78 00 - Closeout Submittals] [_____].
4. Section [08 11 00 - Metal Doors and Frames] [_____].
5. Section [08 11 16 - Aluminum Doors and Frames] [_____].
6. Section [08 14 16 - Flush Wood Doors] [_____].

Specifier Note: Paragraph below may be omitted when specifying manufacturer's proprietary products and recommended installation.



Retain References Paragraph when specifying products and installation by an industry reference standard. List retained standard(s) referenced in this section alphabetically. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Contract Conditions or Section 01 42 00 - References may establish the edition date of standards. This Paragraph does not require compliance with standard(s). It is a listing of all references used in this section. Only include here standards that are referenced in the body of the specification in PARTS 1, 2 and/or 3. Do not include references to building codes at any level.

1.02 REFERENCES

- A. American National Standards Institute/International Code Council (ANSI/ICC):
 - 1. ANSI/ICC A117.1 Standard for Accessible and Usable Buildings and Facilities.
- B. American National Standards Institute/Builders Hardware Manufacturers Association (ANSI/BHMA):
 - 1. ANSI/BHMA A156.2 Bored and Preassembled Locks and Latches.
 - 2. ANSI/BHMA A156.5 Auxiliary Locks and Associated Products.
 - 3. ANSI/BHMA A156.13 Mortise Locks and Latches.
 - 4. ANSI/BHMA A156.14 Sliding and Folding Door Hardware.
 - 5. ANSI/BHMA A156.16 Auxiliary Hardware.
 - 6. ANSI/BHMA A156.18 Materials and Finishes.
 - 7. ANSI/BHMA A250.13 Testing and Rating of Severe Windstorm Resistant Components for Swinging Door Assemblies.
- C. Builders Hardware Manufacturers Association (BHMA):
 - 1. COMPLETE SET - HISTORICAL REFERENCE A115 Specifications for Steel Door and Frame Preparation for Hardware DOCUMENT (A115.1 - A115.18).
- D. Underwriters Laboratories, Inc. (UL):
 - 1. UL 10B Fire Tests of Door Assemblies.
 - 2. UL 10C/UBC 7-2 Positive Pressure Fire Tests of Door Assemblies.

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 01 Submittal Procedures Section.

1.03 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 01 Submittal Procedures.
- B. Product Data: Submit for specified hardware items manufacturer's complete product literature, detailed installation diagrams and instructions, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
 - 4. Manufacturer's SPEC-DATA® product sheet.
- C. Samples:
 - 1. Submit samples upon request.
 - 2. Identify each sample by label, indicating applicable specification paragraph number, brand name and number, and finish and hardware package number.
 - 3. After approval, incorporate returned samples into work.
- D. Templates: Submit templates detailing installation procedures, including hardware layout, dimensions and placement.
- E. Quality Assurance: Submit certified test reports showing compliance with ANSI/BHMA A250.13.
- F. Closeout Submittals: Submit the following:
 - 1. Warranty: Manufacturer's standard warranty document executed by authorized company official. Manufacturer's

warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

1.04 QUALITY ASSURANCE

- A. Qualifications: Installer who is acceptable to manufacturer, is experienced in performing work of this section and who has specialized in installation of work similar to that required for this project.

1.05 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 01 Product Requirements.
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery, Storage & Protection:
 - 1. Deliver, store and handle in accordance with Section [01 61 00 - Common Product Requirements] [_____].
 - 2. Deliver, store and handle materials in accordance with manufacturer's written instructions.
 - 3. Deliver in original packaging with labels and identification intact.
 - 4. Ship hardware items in lots coordinated with openings, as numbered in door schedule.
 - 5. Inspect hardware items upon delivery to ensure that specified products have been received.
 - 6. Store hardware items in secure, dry location, protected from weather until ready for installation.
- D. Waste Management and Disposal:

Specifier Note: The disposal of packaging waste into landfill sites demonstrates an inefficient use of natural resources and consumes valuable landfill space. Specifying appropriate packaging and construction waste management and disposal procedures may contribute to points required for USGBC's LEED® construction project certification.

- 1. Separate waste materials for [reuse] [and] [recycling] [_____] in accordance with Section [01 74 19 - Construction Waste Management and Disposal] [_____].

Specifier Note: USGBC's LEED® certification includes credits for the diversion of construction waste from landfill. Diversion can be tracked by either weight or volume but must be consistent for all materials. Manufacturer may reclaim packaging and delivery materials for recycling.

- 2. Remove packaging materials from site and dispose of at appropriate recycling facilities.
- 3. Collect and separate for disposal [paper] [plastic] [polystyrene] [corrugated cardboard] [_____] packaging material [in appropriate onsite bins] [_____] for recycling.

1.06 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

Specifier Note: Coordinate article below with Conditions of the Contract and with Division 01 Closeout Submittals (Warranty) Section.

1.07 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.
 - 1. Warranty Term: [One calendar year] [_____] commencing on date of substantial completion.

PART 2 PRODUCTS

Specifier Note: Retain Article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal," "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.01 HAGER LOCKING HARDWARE

A. Manufacturer: Hager Companies.

1. Contact: 139 Victor St., St. Louis, MO 63104; Telephone: (800) 325-9995, (314) 772-4400; Fax: (800) 782-0149; E-mail: webmaster@hagerco.com; website: www.hagerco.com.

B. Proprietary Products/Systems: Hager Locking Hardware.

Specifier Note: Repeat the following article when more than one type of cylinder lock is required for a project. Refer to Hager Companies door hardware catalog when selecting and specifying cylindrical locks.

1. Cylindrical Locks:

- a. Grade: [Grade 1, extra heavy duty commercial, industrial, institutional] [Grade 2, standard duty commercial].

Specifier Note: Cylindrical lock functions are related to their end use or type. Hager Companies lists cylindrical lock functions as Passage, Dummy, Exit Only, Privacy, Office, Entry, Classroom, Corridor, Keyed Communicating, Storeroom and Intruder Classroom. Review Hager Companies product catalog information and specify lock function to suit project requirements.

- b. Function: [_____].

- c. Applicable Standards: ANSI/BHMA A156.2, ANSI/ICC A117.1, ANSI A250.13, [_____].

Specifier Note: Hager Companies manufactures Apollo knobs and Archer, August and Withnell levers for cylindrical lock systems. Review Hager Companies product catalog information and specify handle trim and type to suit project requirements.

d. Exposed Trim:

- 1) Knob: [Wrought brass] [Stainless steel].
- 2) Lever: [Wrought brass] [Bronze] [Zinc based] [Stainless steel].
- 3) Acceptable Material: [_____] manufactured by Hager Companies.

Specifier Note: Free-wheeling and thru-bolt mounting lock chassis are available with levers only. Edit Subparagraph below to suit project requirements.

- e. Lock Chassis: Heavy gauge steel, zinc dichromated, [free wheeling] [thru-bolt mounting].

f. Rose Diameter:

- 1) Knobs: 3 inches (76 mm).
- 2) Levers: [3 9/16 inches (90 mm)] [3 3/8 inches (86 mm)].

- g. Keys: [2] [_____] brass keys per lock.

Specifier Note: Review Hager Companies product catalog information and specify cylinder to suit project requirements.

h. Cylinder:

- 1) Standard Core: [Brass 6-pin, keyed different, C keyway] [Drilled 6-pin, standard] [Keyed 5-pin, standard].

Specifier Note: Interchangeable cores are not available on Apollo Knobs. Retain or delete Subparagraph below to suit project requirements.

- 2) Interchangeable Core: Brass [6] [7] pin, [combined] [uncombined].
- 3) Other keying options [_____].

i. Door Thickness:

- 1) Knobs: 1 3/8 inches - 1 3/4 inches (35 - 45 mm).
- 2) Levers: 1 3/8 inches - 2 inches (35 - 51 mm).

Specifier Note: Specify backset dimensions to suit project requirements.

- j. Backset: [2 3/4 inches (70 mm) [with 5 inches (127 mm) extension link]] [2 3/8 inches (60 mm)].

- k. Latchbolt: Stainless steel, 1/2 inch (12.7 mm) throw, adjustable.
 - 1) Latch: [Spring] [Dead].
 - 2) Corner: [Square] [Round].
 - 3) Size: [2 3/8 inches (60 mm)] [2 3/4 inches (70 mm)].
- l. Strike:

Specifier Note: Hager Companies Cylindrical Locks are available with a variety of strikes. Review Hager Companies product catalog information and retain strike from list below to suit project requirements.

- 1) Standard: 1 1/4 inch x 4 7/8 inch (32 x 124 mm).
- 2) T-Strike With Plastic Dust Box: 1 1/8 inch x 2 3/4 inches (29 x 70 mm).
- 3) Full Lip Strike: 1 5/8 inch x 2 1/4 inch (41 x 57 mm).
- 4) Full Lip Strike, Round Corner: 1 5/8 inch x 2 1/4 inch (41 x 57 mm).
- m. Faceplate:
 - 1) For 2 3/8 Inch (60 mm) Backset: 2 1/4 inch x 1 inch (57 x 25 mm).
 - 2) For 2 3/4 Inch (70 mm) Backset: 2 1/4 inch x 1 1/8 inch (57 x 29 mm).

Specifier Note: Refer to Hager Companies product catalog for product finish designations and availability per series selection. BHMA finish designations are available on the Hager Companies website and are listed according to U.S. Equivalent standards.

- n. Finish:
 - 1) To ANSI/BHMA A156.18, US [_____].
 - 2) Options: [Tactile knurling (levers only)] [Lead lined (levers only)] [Split finish].

Specifier Note: Cylindrical lock hardware has been tested up to 180 minutes.

- o. Fire Resistance Rating: As indicated on drawings, tested and listed by [UL/ULC for all functions up to 3 hours for "A" label single doors] [_____].
- p. Acceptable Material: Hager Companies Cylindrical Lock, Item Number [3400 Grade 1] [3500 Grade 2].

Specifier Note: Repeat the following article when more than one type of mortise lock is required for a project. Refer to Hager Companies door hardware catalog when selecting and specifying mortise locks.

- 2. Mortise Locks:
 - a. Grade: Grade 1, heavy duty commercial, industrial, institutional [sectional] [escutcheon].

Specifier Note: Mortise lock functions are related to their end use or type. Hager Companies lists mortise lock functions as Passage, Dummy, Double Dummy, Privacy, Office, Entry, Classroom Security, Cylinder x Thumbturn, Double Cylinder, Deadbolt / Classroom, Cylinder, Classroom, Storeroom and Storeroom with Deadbolt. Review Hager Companies product catalog information and specify lock function to suit project requirements.

- b. Function: [_____].
- c. Applicable Standards: ANSI/BHMA A156.13, ANSI A117.1, [_____].

Specifier Note: Hager Companies manufactures Archer, William and Withnell lever handles for mortise lock systems. Review Hager Companies product catalog information and specify handle trim and type to suit project requirements.

- d. Exposed Trim:
 - 1) Lever: [Cast zinc, standard] [Forged brass] [Cast stainless steel].
 - 2) Acceptable Material: [_____] manufactured by Hager Companies.
- e. Lock Case: 4 5/16 inches x 6 inches x 1 inch (110 x 152 x 25.4 mm).

Specifier Note: Edit the Subparagraph below to suit project requirements.

- f. Armor Front: [1 1/4 inches x 8 inches x 7/32 inches (32 x 203 x 5 mm)] [1 1/16 inches x 8 inches x 7/32 inches (27 x 203 x 5 mm)].

Specifier Note: Specify rose with Grade 1 Sectional mortise locks. Specify escutcheons with Grade 1 Escutcheon mortise locks.

- g. Rose Diameter: 2 7/16 inches (62 mm).
- h. Escutcheon: 1 15/16 inches x 8 inches (49 x 203 mm).
- i. Keys: [2] [_____] brass keys per lock.

Specifier Note: Review Hager Companies product catalog information and specify cylinder to suit project requirements.

- j. Cylinder:
 - 1) Standard Core: [Brass 6-pin, keyed different, C keyway] [Keyed 5-pin, standard].
 - 2) Interchangeable Core: Brass [6] [7] pin, [combined] [uncombined].
 - 3) Schlage "L" cam, standard.
 - 4) Other Keying Options: [_____].
- k. Door Thickness:

Specifier Note: Specify 1 3/4 inch (45 mm) wood door with Grade 1 Sectional mortise locks. Specify steel doors or wood doors having greater thicknesses with Grade 1 Escutcheon mortise locks.

- 1) Wood Door: 1 3/4 inches (45 mm), standard.
- 2) Wood Door: 1 3/4 inches - 2 1/2 inches (45 - 64 mm).
- 3) Steel Door: 1 3/8 inches - 2 1/2 inches (35 - 64 mm).
- l. Backset: 2 3/4 inches (70 mm).
- m. Latchbolt: Stainless steel, 3/4 inch (19 mm) throw with anti-friction tongue.
- n. Deadbolt: 1 inch (25.4 mm) throw, stainless steel.
- o. Strike:

Specifier Note: Hager Companies Mortise Locks are available with a variety of strikes. Review Hager Companies product catalog information and retain strike from list below to suit project requirements.

- 1) Standard Lip, Square Corner: 1 1/4 inches x 4 7/8 inches (32 x 124 mm), lip 1 3/16 inches (30 mm).
- 2) Extended Lip, Square Corner: 1 1/4 inches x 4 7/8 inches (32 x 124 mm), lip 1 1/2 inches (38 mm).
- 3) Standard Lip, Round Corner: 1 1/4 inches x 4 7/8 inches (32 x 124 mm), lip 1 3/16 inches (30 mm).
- 4) Extended Lip, Round Corner: 1 1/4 inches x 4 7/8 inches (32 x 124 mm), lip 1 1/2 inches (38 mm).
- 5) Flat Lip, Square Corner: 1 1/4 inches x 4 7/8 inches (32 x 124 mm), lip 7/8 inches (22 mm).
- 6) Extended Flat Lip, Square Corner: 1 1/4 inches x 4 7/8 inches (32 x 124 mm), lip 1 3/16 inches (30 mm).
- 7) No Lip, Square Corner: 1 1/4 inches x 4 7/8 inches (32 x 124 mm).

Specifier Note: Specify rose fasteners with Grade 1 Sectional mortise locks and escutcheon fasteners with Grade 1 Escutcheon mortise locks.

- p. Fasteners: Thru-bolted trim concealed under [rose] [escutcheon].

Specifier Note: Refer to Hager Companies product catalog for product finish designations. BHMA finish designations are listed on the Hager Companies website according to U.S. Equivalent standards.

- q. Finish:

- 1) To ANSI/BHMA A156.18, US [_____].
- 2) Options: [Tactile knurling] [and] [Lead lining].

Specifier Note: Mortise lock hardware has been tested up to 180 minutes.

- r. Fire Resistance Rating: As indicated on drawings, tested and listed by [UL/ULC for all functions up to 3 hours for "A" label single doors] [_____].
- s. Acceptable Material: Hager Companies Mortise Lock, Item Number [3800 Grade 1 Sectional] [3800 Grade 1 Escutcheon].

Specifier Note: Repeat the following article when more than one type of deadbolt is required for a project. Refer to Hager Companies door hardware catalog when selecting and specifying deadbolts.

3. Deadbolts:
 - a. Grade: [Grade 1] [Grade 2] auxiliary and primary locking.

Specifier Note: Deadbolt functions are related to their end use or type. Hager Companies lists deadbolt functions as Double Cylinder, Single Cylinder, Classroom Deadbolt and Thumbturn Only. Review Hager Companies product catalog information and specify lock function to suit project requirements.

- b. Function: [_____].
- c. Applicable Standards: ANSI/BHMA A156.5, ANSI A250.13, [_____].

Specifier Note: Wrought brass and stainless steel are available only with Grade 2, 3200 Series deadbolt locks. Review Hager Companies product catalog information and specify exposed trim to suit project requirements.

- d. Exposed Trim: [Brass] [Bronze] [Wrought brass] [Stainless Steel].
- e. Mechanism: Zinc-plated dichromated steel.
- f. Keys: [2] [_____] brass keys per lock.
- g. Cylinder:

Specifier Note: The standard drilled 6-pin cylinder is available only with Grade 1, 3100 Series Deadbolt locks. Review Hager Companies product catalog information and specify cylinder keying to suit project requirements.

- 1) Standard Core: [Brass 6-pin, keyed different, C keyway] [Drilled 6-pin, standard] [Keyed 5-pin, standard].
- 2) Interchangeable Core: [Brass [6] [7] pin, [combined] [uncombined]]
- 3) Other keying options [_____].
- h. Door Thickness: 1 3/8 inches - 1 3/4 inches (35 - 45 mm).

Specifier Note: Review Hager Companies product catalog information and specify backset to suit project requirements.

- i. Backset: [2 3/4 inches (70 mm), standard] [2 3/8 inches (60 mm)].

Specifier Note: Review Hager Companies product catalog information and specify latchbolt to suit project requirements.

- j. Latchbolt: Brass, 1 inch (25.4 mm) throw with concealed hardened steel roller.
 - 1) 2 3/4 inches (70 mm) [square] [round] corner bolt, standard.
 - 2) 2 3/8 inches (60 mm) [square] [round] corner bolt.
 - 3) 2 3/8 inches - 2 3/4 inches (60 - 70 mm) adjustable square corner bolt.
- k. Faceplate: 2 1/4 inch x 1 1/8 inch (57 x 29 mm) square corner faceplate.
- l. Strike:

Specifier Note: Hager Companies Deadbolt Locks are available with a variety of strikes. Review Hager Companies product catalog

information and retain strike from list below to suit project requirements.

- 1) Square corner 1 1/8 inches x 2 3/4 inches (29 x 70 mm) with dustbox, standard.
- 2) ASA deadbolt strike, 1 3/16 inches x 4 7/8 inches (30 x 124 mm).

Specifier Note: Refer to Hager Companies product catalog for product finish designations. BHMA finish designations are listed on the Hager Companies website according to U.S. Equivalent standards.

- m. Finish: To ANSI/BHMA A156.18, US [_____].

Specifier Note: Deadbolt lock hardware has been tested up to 180 minutes.

- n. Fire Resistance Rating: As indicated on drawings, tested and listed by [UL/ULC for all functions up to 3 hours for "A" label single doors] [_____].
- o. Acceptable Material: Hager Companies Deadbolt, Item Number [3100 Grade 1] [3200 Grade 2].

Specifier Note: Repeat the following article when more than one type of tubular lock is required for a project. Refer to Hager Companies door hardware catalog when selecting and specifying tubular locks.

4. Tubular Locks:

Specifier Note: Tubular lock functions are related to their end use or type. Hager Companies lists tubular lock functions as Passage, Dummy, Privacy, Entry, Classroom and Storeroom. Review Hager Companies product catalog information and specify lock function to suit project requirements.

- a. Grade: Grade 2, heavy duty residential, medium duty commercial.
- b. Function: [_____].
- c. Applicable Standards: ANSI/BHMA A156.2, ANSI A117.1, [_____].

Specifier Note: Hager Companies manufactures August, Archer and Withnell levers for tubular lock systems. Review Hager Companies product catalog information and specify lever trim and type to suit project requirements.

- d. Exposed Trim:
 - 1) Lever: Zinc based [wrought brass] [bronze] [_____].
 - 2) Acceptable Material: [_____] manufactured by Hager Companies.
- e. Lock Chassis: Zinc dichromated heavy gauge steel.
- f. Rose Diameter: 3 inches (76 mm).
- g. Keys: [2] [_____] brass keys per lock.
- h. Cylinder:

Specifier Note: Review Hager Companies product catalog information and specify cylinder to suit project requirements.

- 1) Standard Core: [Brass 6-pin, keyed different, C keyway] [Keyed 5-pin, standard].
- 2) Interchangeable Core: [Brass [6] [7] pin, [combined] [uncombined]]
- 3) Other keying options [_____].
- i. Door Thickness: 1 3/8 inches - 1 3/4 inches (35 - 45 mm).
- j. Backset:

Specifier Note: Review Hager Companies product catalog information and specify backset to suit project requirements.

- 1) Adjustable, 2 3/8 inches - 2 3/4 inches (60 - 70 mm).
- 2) Dead Latch: 5 inches (127 mm) with [square] [round] corners.

- 3) Spring Latch: 5 inches (127 mm) with [square] [round] corners.
- k. Latchbolt: Stainless steel, 1/2 inch (12.7 mm) throw, adjustable 2 3/8 inches - 2 3/4 inches (60 - 70 mm).

Specifier Note: Review Hager Companies product catalog information and specify latchbolt to suit project requirements.

- 1) Latch: [Spring] [Dead].
- 2) Corner: [Square] [Round].
- 3) Type: [Standard] [Drive-In].
- l. Strike:

Specifier Note: Hager Companies Tubular Locks are available with a variety of strikes. Review Hager Companies product catalog information and retain strike from list below to suit project requirements.

- 1) Standard: 1 1/4 inch x 4 7/8 inch x 5/8 inch (32 x 124 x 15.9 mm).
- 2) T-Strike Plate With Plastic Dust Box: 1 1/8 inch x 2 3/4 inches (29 x 70 mm).
- 3) Full Lip Strike: 1 5/8 inch x 2 1/4 inch (41 x 57 mm).
- 4) Full Lip Strike, Round Corner: 1 5/8 inch x 2 1/4 inch (41 x 57 mm).

Specifier Note: Edit Subparagraph below to suit project requirements.

- m. Faceplate: 2 1/4 inches x 1 inch (57 x 25.4 mm), stainless steel [with 1 inch - 1 1/8 inch (25.4 - 29 mm) faceplate adapter].

Specifier Note: Refer to Hager Companies product catalog for product finish designations. BHMA finish designations are listed on the Hager Companies website according to U.S. Equivalent standards.

- n. Finish:
 - 1) To ANSI/BHMA A156.18, US [_____].
 - 2) Options: [Tactile knurling] [_____].

Specifier Note: Tubular lock hardware has been tested up to 180 minutes.

- o. Fire Resistance Rating: As indicated on drawings, tested and listed by [UL/ULC for all functions up to 3 hours for "A" label single doors] [_____].
- p. Acceptable Material: Hager Companies Tubular Lock, Item Number 3600 Grade 2.

Specifier Note: Repeat the following article when more than one type of interconnected lock is required for a project. Refer to Hager Companies door hardware catalog when selecting and specifying surface bolts.

- 5. Interconnected Locks:
 - a. Grade: Grade 2, heavy duty residential, medium duty commercial.

Specifier Note: Interconnected lock functions are related to their end use or type. Hager Companies lists interconnected lock functions as Single Locking Entry and Double Locking Entry. Review Hager Companies product catalog information and specify lock function to suit project requirements.

- b. Function: [_____].
- c. Applicable Standards: ANSI/BHMA A156.12, ANSI A117.1, [_____].
- d. Exposed Trim:

Specifier Note: Hager Companies manufactures Apollo knobs and Archer, August and Withnell levers for interconnected lock systems. Review Hager Companies product catalog information and specify lever trim and type to suit project requirements.

- 1) Trim Material: [Wrought brass] [Bronze].

- 2) Lever: Cast zinc.
- 3) Type: [Split] lever type.
- 4) Acceptable Material: [_____] manufactured by Hager Companies.
- e. Lock Chassis: Zinc dichromated heavy gauge steel with thru-bolt mounting.
- f. Rose Diameter: 2 1/2 inches (63 mm).
- g. Escutcheon:
 - 1) Inside: 3 1/16 inches x 7 15/16 inches x 3/8 inches (78 x 202 x 10 mm).
 - 2) Outside: 3 5/16 inches x 7 15/16 inches x 3/8 inches (84 x 202 x 10 mm).
- h. Keys: [2] [_____] brass keys per lock.
- i. Cylinder:

Specifier Note: Review Hager Companies product catalog information and specify cylinder to suit project requirements.

- 1) Standard Core: [Brass 6-pin, keyed different (C keyway)] [Keyed 5-pin, standard].
- 2) Interchangeable Core: Brass [6] [7] pin, [combined] [uncombined].
- 3) Other Keying Options: [_____] .
- j. Door Thickness: [1 3/8 inches - 1 3/4 inches (35 - 45 mm)] [2 inches (51 mm)].
- k. Backset: [2 3/4 inches (70 mm)] [2 3/8 inches (60 mm)].

Specifier Note: Review Hager Companies product catalog information and specify latchbolt to suit project requirements.

- l. Latchbolt: Stainless steel, 1/2 inch (12.7 mm) throw.
 - 1) Deadbolt: [2 3/4 inches (70 mm) with [square] [round] corners] [2 3/8 inches (60 mm) with [square] [round] corners].
 - 2) Dead Latch: [2 3/4 inches (70 mm) with [square] [round] corner] [2 3/8 inches (60 mm) with [square] [round] corners].
 - 3) Spring Latch, Passage Only: [2 3/4 inches (70 mm) with [square] [round] corners] [2 3/8 inches (60 mm) with [square] [round] corners].
 - 4) Faceplate for 2 3/4 Inch (70 mm) Backset: 2 1/4 inch x 1 1/8 inch (57 x 29 mm).
 - 5) Faceplate for 2 3/8 Inch (60 mm) Backset: 2 1/4 inch x 1 inch (57 x 25.4 mm).
- m. Strike:

Specifier Note: Hager Companies Interconnected Locks are available with a variety of strikes. Review Hager Companies product catalog information and retain strike from list below to suit project requirements.

- 1) Square Corner T-Strike Plate With Plastic Dust Box: 1 1/8 inch x 2 3/4 inches (29 x 70 mm).
- 2) Square Corner Strike Plate With Dust Box: 1 1/8 inch x 2 3/4 inches (29 x 70 mm).
- 3) Full Lip Strike: 1 5/8 inch x 2 1/4 inch (41 x 57 mm).
- 4) Full Lip Strike, Round Corner: 1 5/8 inch x 2 1/4 inch (41 x 57 mm).
- 5) Strike Plate: 1 1/8 inches x 2 3/4 inches (29 x 70 mm).
- 6) Faceplate Adapter: 1 inch - 1 1/8 inch (25.4 - 29 mm) width.

Specifier Note: Refer to Hager Companies product catalog or website for product finish designations. BHMA finish designations are listed on the Hager Companies website according to U.S. Equivalent standards.

- n. Finish:
 - 1) To ANSI/BHMA A156.18, US [_____] .
 - 2) Options: [Tactile knurling] [_____] .

Specifier Note: Interconnected lock hardware has been tested up to 180 minutes.

- o. Fire Resistance Rating: As indicated on drawings, tested and listed by [UL/ULC for all functions up to 3 hours for "A" label single doors] [_____].
- p. Acceptable Material: Hager Companies Interconnected Lock, Item Number 3700 Grade 2.

Specifier Note: Repeat the following article when more than one type of surface bolt is required for a project. Refer to Hager Companies door hardware catalog when selecting and specifying surface bolts.

6. Surface Bolt:

Specifier Note: Retain or delete the following Subparagraphs to suit chosen hardware.

- a. Applicable Standards: ANSI/BHMA A156.16, [_____].
- b. Material: [Steel] [Brass].
- c. Bolt Length: [4 3/8 inches (111 mm)] [6 inches (152 mm)] [8 inches (203 mm)] [12 inches (305 mm)].
- d. Bolt Width: [7/16 inch (11.1 mm)] [3/4 inch (19 mm)] [1 5/8 inch (41 mm)]
- e. Bolt Throw: [9/16 inch (14.3 mm)] [31/32 inch (24.6 mm)] [1 inch (25.4 mm)].
- f. Surface Bolt Projection: 3/4 inch (19.1 mm).
- g. Strike: [Universal] [and] [Angle] [and] [Mortise] [_____] included.

Specifier Note: Refer to Hager Companies product catalog for product finish designations. BHMA finish designations are listed on the Hager Companies website according to U.S. Equivalent standards.

- h. Finish: To ANSI/BHMA A156.18, US [_____].
- i. Certification: [UL listed] [_____].
- j. Fasteners: [Flat head wood screw (FHWS)] [and] [Flat head machine screw (FHMS)].

Specifier Note: Refer to Hager Companies product catalog for descriptions of item numbers and specify to suit project. Hager Companies surface bolt item numbers are 275D, 276D, 278D and 279D.

- k. Acceptable Material: Hager Companies Surface Bolt Item Number [_____].

Specifier Note: Repeat the following article when more than one type of flush bolt is required for a project. Refer to Hager Companies door hardware catalog when selecting and specifying flush bolts.

7. Flush Bolt:

- a. Applicable Standards: ANSI/BHMA A156.16, ANSI A156.3, [_____].
- b. Type: [Slide] [Manual] [Automatic for Wood Covered Composite Doors] [Automatic for Metal Doors].
- c. Material: [Brass] [Bronze] [Steel].
- d. Face: [3/4 inch x 6 inches (19.1 x 152 mm)] [1 inch x 6 3/4 inches (25.4 x 172 mm)] [1 inch x 8 1/2 inches (25.4 x 216 mm)].
- e. Bolt Head: Flattened [round] [square], 1/2 inch (12.7 mm).
- f. Bolt Throw: 3/4 inch (19.1 mm).
- g. Rod Backset: 3/4 inch (19.1 mm).
- h. Guide: 1 inch x 2 inches (25.4 x 51 mm).
- i. Strike: [7/8 inch x 1 3/4 inches (22.2 x 45 mm)] [15/16 inch x 2 1/4 inches (23.8 x 57 mm)].
- j. Screws: [No. 8 combination] [No. 8 x 3/4 inch (19.1 mm) tapping].
- k. Face Plate: [1 inch x 6 3/4 inches (25.4 x 172 mm)] [1 inch x 8 1/2 inches (25.4 x 216 mm)] [2 bolts per set].
- l. Rod Length (Center of Face to Corner of Door): [12 inches (305 mm)] [_____].

Specifier Note: Refer to Hager Companies product catalog for product finish designations. BHMA finish designations are listed on the Hager Companies website according to U.S. Equivalent standards.

- m. Finish:
 - 1) To ANSI/BHMA A156.18, US [_____].
- n. Certification: [UL listed] [B, C, D, E, Label UL listing] [A label UL listing] [_____].

Specifier Note: Refer to Hager Companies product catalog for description of item number and specify to suit project. Hager Companies flush bolt item numbers are 281D, 282D, 283D, 291D, 292D.

- o. Acceptable Material: Hager Companies Flush Bolt Item Number [_____].

Specifier Note: Repeat the following article when more than one type of dustproof strike is required for a project. Refer to Hager Companies door hardware catalog when selecting and specifying dustproof strikes.

- 8. Dustproof Strike:
 - a. Applicable Standards: ANSI/BHMA A156.16, [_____].
 - b. Material: Brass.
 - c. Faceplate: 1 3/8 inches x 2 7/8 inches (35 x 73 mm).
 - d. Barrel: 1 inch (25.4 mm) diameter x 2 3/16 inch (56 mm) depth.
 - e. Screws and Anchors: No. 8 x 1 inch (25.4 mm) flat head wood screw (FHWS).

Specifier Note: Refer to Hager Companies product catalog for product finish designations. BHMA finish designations are listed on the Hager Companies website according to U.S. Equivalent standards.

- f. Finish:
 - 1) To ANSI/BHMA A156.18, US [_____].

Specifier Note: Refer to Hager Companies product catalog for description of item number and specify to suit project.

- g. Acceptable Material: Hager Companies Dustproof Strike Item Number 280X.

Specifier Note: Repeat the following article when more than one type of pocket door privacy latch is required for project. Refer to Hager Companies door hardware catalog when selecting and specifying pocket door privacy latch hardware.

- 9. Pocket Door Privacy Latch:
 - a. Standards: ANSI/BHMA A156.14, [_____].
 - b. Material: Brass.
 - c. Door Size: [1 3/8 inches - 1 3/4 inches (35 - 45 mm)] [1 3/8 inches (35 mm)] [1 3/4 inches (45 mm)].
 - d. Size: 2 3/4 inches x 2 1/2 inches (70 x 64 mm).
 - e. Finger Pull: Extends 1 3/8 inches (35 mm).
 - f. Strike Size: 1 inch x 2 1/4 inches (25.4 x 57 mm).
 - g. Fasteners: No. 6 x 5/8 inch (16 mm) flat head wood screws (FHWS).

Specifier Note: Refer to Hager Companies product catalog for product finish designations. BHMA finish designations are listed on the Hager Companies website according to U.S. Equivalent standards.

- h. Finish:
 - 1) To ANSI/BHMA A156.18, US [_____].

Specifier Note: Refer to Hager Companies product catalog for description of item number and specify to suit project. Hager Companies pocket door privacy latch numbers are 330D, 330L and 330M.

- i. Acceptable Material: Hager Companies Pocket Door Privacy Latch Item Number [330D] [330L] [330M].

Specifier Note: Edit Paragraph below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 01 Project Requirements (Product Substitutions Procedures) Section.

2.02 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted.

PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

Specifier Note: Article below is an addition to the CSI *SectionFormat* and a supplement to MANU-SPEC. Revise article below to suit project requirements and specifier's practice.

- A. Compliance: Comply with manufacturer's written data, including product technical bulletins, product catalog installation instructions, product carton installation instructions and Hager SPEC-DATA sheets.

3.02 EXAMINATION

- A. Site Verification of Conditions:
1. Verify that substrate conditions are acceptable for product installation in accordance with manufacturer's instructions.
 2. Verify that doors and frames have been prepared to receive hardware items in accordance with BHMA A115.
 3. Clean surfaces thoroughly prior to installation.
 4. Prepare surfaces using methods recommended by manufacturer for achieving best result for substrate under project conditions.

3.03 INSTALLATION

- A. Assembly: Install in accordance with manufacturer's instructions.

3.04 ADJUSTING

- A. Adjust locking components for optimum, smooth operation.
B. Lubricate where directed by manufacturer.

3.05 PROTECTION

- A. Protect installed products until completion of project.
B. Touch up, repair or replace damaged products before Substantial Completion.

3.06 FIELD QUALITY CONTROL

- A. Site Tests, Inspection: Inspect completed assembly for proper locknut screw-in depth after installation and prior to final acceptance. Report component damage to [Supplier] [_____].

3.07 COMPLETION & CLEANUP

- A. Proceed in accordance with Section [01 74 00 - Cleaning and Waste Management] [_____].
B. Upon completion and verification of performance of installation, remove surplus materials, rubbish, tools and equipment.

END OF SECTION