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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 []; 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 door closing hardware products. 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. Door Closing Hardware:
 - a. Door closers.

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: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 01 References Section may establish the edition date of standards. This article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section. Retain only those reference standards to be used within the text of this Section. Add and delete as required for specific project.

1.02 REFERENCES

- A. American National Standards Institute/Builders Hardware Manufacturers Association (ANSI/BHMA):
 - 1. ANSI/BHMA A156.4 - Door Controls - Closers.



2. ANSI/BHMA A156.18 - Materials and Finishes.

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 manufacturer's complete product literature for specified hardware items, 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:

Specifier Note: Describe specific types and quantities of samples required to determine style, finish or other characteristics.

- 1. Submit samples upon request.
- 2. Identify each sample by label indicating applicable specification paragraph number, brand name and number, finish and hardware package number.
- 3. After approval, samples will be returned for incorporation into work.
- D. Templates: Submit templates detailing installation procedures, including layout, dimensions and placement of hardware.
- E. 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 experienced in performing work of this section who has specialized in installation of work similar to that required for this project.

Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in Conditions of the Contract and Division 01 Regulatory Requirements Section. Repetitive statements should be avoided.

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 and 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 and protected from weather until ready for installation.
- D. Waste Management and Disposal:

Specifier Note: ENVIRONMENT: The disposal of packaging waste into landfill site demonstrates an inefficient use of natural resources and consumes valuable landfill space.

1. Separate waste materials for [Reuse] [And] [Recycling] [_____] in accordance with Section [01 74 19 - Construction Waste Management and Disposal] [_____].
2. Remove from site and dispose of packaging materials 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. Manufacturer's Standard Warranty: [_____] year[s] from date of delivery to Project.

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 "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 DOOR CLOSING 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 Door Closers.

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

1. Surface Door Closers:
 - a. Applicable Standard: ANSI/BHMA A156.4.
 - b. Body: [Cast Iron] [Aluminum] [_____].
 - c. Cover: [Full plastic] [Traditional full plastic with pinion cap] [None].
 - d. Springs: Double heat treated steel, tempered springs; precision machined, heat treated steel piston; triple heat treated steel spindle; [One-piece seamless steel spring tube seals in hydraulic fluid] [_____].
 - e. Valves: Adjustable latching and sweep speed valve; [Adjustable backcheck valve]; [Delayed action valve] [_____].
 - f. Handing: Non-handed.
 - g. Arms and Brackets: Tri-pack - Regular, Top Jamb and Parallel Arms; [15% power adjustment in arm]; [Slide adjustable arm]; [_____].
 - h. Arms: [Cush-N-Stop] [Extra Heavy Duty] [Hold Open] [Extra Heavy Duty Hold Open].
 - i. Brackets: [Regular Arm Mount - Narrow Top Rail] [Parallel Arm Mount - Narrow Top Rail] [_____].
 - j. Fasteners: Self-tapping wood and machine screws; sex nuts and bolts.

Specifier Note: Optional door thicknesses range from 1 3/8 inches - 2 inches (35 - 51 mm).

- k. Door Thickness: [1 3/4 inches (45 mm)] [_____].

Specifier Note: Refer to Hager Companies product catalog for product finish designations. BHMA finish designations are available on the Hager Companies website.

- l. Finishes: To ANSI/BHMA A156.18, BHMA [_____], painted [Aluminum] [Bronze] [Dark Bronze] [Gold] [_____].

Specifier Note: Select or delete following sentences to suit chosen hardware. Refer to Hager Companies product catalog for description of part number and specify to suit project. Hager Companies door closer part numbers are: 5100 Series, 5200 Series, 5300 Series and 5400 Series.

- m. Acceptable Material: Hager Companies door closer Part Number [_____] Series.

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. Clean surfaces thoroughly prior to installation.
 3. 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 closing time based on expected usage.
- B. Adjust latch speed so door completely closes and latches.
- C. Adjust backcheck accordingly to prevent excessive opening speed.
- D. Adjust delay action accordingly to obtain desired delay time.
- E. Use 5/32 inch (4 mm) hex wrench to adjust door closer for corresponding door size.
- F. 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 operation, 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] [_____].

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- B. Upon completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

END OF SECTION