SECTION 08 71 13
AUTOMATIC DOOR OPERATORS

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes low-energy door operators for swinging doors.

B. Related Sections: Section 08 41 13 Aluminum Framed Entrances and Storefronts for entrance systems.

1.02 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For automatic door operators. Include plans, elevations, sections, details, and attachments to other work.

C. Field quality-control reports.

D. Maintenance data.

E. Sample warranty.

1.03 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation and maintenance of units required for this Project.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a testing agency, and marked for intended location and application.

C. Exit-Door Requirements: Comply with requirements of authorities having jurisdiction for doors with automatic door operators serving as a component of a required means of egress.

1.04 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of automatic door operators that fail in materials or workmanship within specified warranty period.
   1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Besam Automated Entrance Systems, Inc.; an ASSA ABLOY Group company.
   2. Horton Automatics; a division of Overhead Door Corporation.
   3. KM Systems, Inc.
   4. LCN Closers; an Ingersoll-Rand company.
   5. SARGENT Manufacturing Company; an ASSA ABLOY Group company.
   6. Stanley Access Technologies; Division of The Stanley Works.

2.02 MATERIALS

A. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated, complying with standards indicated below:
   1. Sheet: ASTM B 209.
   2. Extrusions: ASTM B 221.

B. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent materials.

2.03 AUTOMATIC DOOR OPERATORS, GENERAL

A. General: Provide operators of size recommended by manufacturer for door size, weight, and movement; for condition of exposure; for long-term, maintenance-free operation under normal traffic load for type of occupancy indicated; and complying with UL 325. Coordinate operator mechanisms with door operation, hinges, and activation devices.
   1. Wind Load: Provide door operators on exterior doors that will open and close doors and maintain them in fully closed position when subjected to wind load indicated in Section 08 41 13 Aluminum Framed Entrances and Storefronts.

B. Electromechanical Operating System: Self-contained unit powered by permanent-magnet dc motor; with closing speed controlled mechanically by gear train and dynamically by braking action of electric motor, connections for power and activation-device wiring, and manual operation including spring closing when power is off.

C. Cover for Surface-Mounted Operators: Fabricated from 0.125-inch- thick extruded or formed aluminum; continuous over full width of door opening; with enclosed end caps, provision for maintenance access, and fasteners concealed when door is in closed position.

D. Brackets and Reinforcements: Manufacturer's standard, fabricated from aluminum with nonstaining, nonferrous shims for aligning system components.

2.04 LOW-ENERGY DOOR OPERATORS

A. Standard: BHMA A156.19.

B. Performance Requirements:

1. Opening Force if Power Fails: Not more than 15 lbf required to release a latch if provided, not more than 30 lbf required to manually set door in motion, and not more than 15 lbf required to fully open door.
2. Entrapment Protection: Not more than 15 lbf required to prevent stopped door from closing or opening.

C. Configuration: Operators to control single swinging door and active leaf of pair of swinging doors.
1. Traffic Pattern: Two way.
2. Operator Mounting: Surface.

D. Operation: Power opening and spring closing. Provide time delay for door to remain open before initiating closing cycle as required by BHMA A156.19. When not in automatic mode, door operator shall function as manual door closer, with or without electrical power.

E. Microprocessor Control Unit: Solid-state controls.

F. Features:
1. Adjustable opening and closing speed.
2. Adjustable opening force.
3. Adjustable backcheck.
4. Adjustable hold-open time from zero to 30 seconds.
5. Adjustable time delay.
6. Adjustable acceleration.
7. Obstruction recycle.
8. On-off/hold-open switch to control electric power to operator; key operated.

G. Exposed Finish: Finish exposed components with Class II, clear anodic finish.

2.05 ACTIVATION DEVICES

A. General: Provide devices in accordance with BHMA standards, for condition of exposure and for long-term, maintenance-free operation under normal traffic load for type of occupancy indicated. Coordinate devices with door operation and door operator mechanisms.

B. Push-Plate Switch: Momentary-contact door control switch with flat push-plate actuator with contrasting-colored, engraved message.
1. Configuration: Round push plate when mounted on wall, rectangular push plate when mounted on storefront framing.
2. Mounting: Recess-mounted.
3. Push-Plate Material: Stainless steel.
4. Message: International symbol of accessibility.

C. Electrical Interconnection: Unless units are equipped with self-protecting devices or circuits, provide electrical interlocks to prevent activation of operator when door is locked, latched, or bolted. Provide interconnection with access control system provided by the Owner.
1. Operator to open door upon activation of push button during business hours.
2. Operator to open door upon swipe of ATM card, followed by operation of push button during non-business hours.

3. Inner and outer vestibule doors to operation simultaneously upon activation of any push button.

2.06 FABRICATION

A. Factory fabricate automatic door operators to comply with indicated standards.

B. Fabricate exterior components to drain water passing joints and condensation and moisture occurring or migrating within operator enclosure to the exterior.

C. Use concealed fasteners to greatest extent possible. Where exposed fasteners are required, use countersunk Phillips flat-head machine screws, finished to match operator.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine roughing-in for electrical systems to verify actual locations of power connections before automatic door operator installation.

3.02 INSTALLATION

A. General: Install complete automatic door operators according to manufacturer's written instructions, including activation devices, control wiring, and remote power units if any; connection to the building's power supply; and signage.

B. Activation Devices: Install devices and wiring according to manufacturer's written instructions and cited BHMA standard for type of operator and direction of pedestrian travel.

C. Access-Control System: Connect operators to access-control system provided by the Owner.

D. Inspection: Engage Installer's certified inspector to test and inspect automatic door operators and prepare test and inspection reports.
1. Certified inspector shall test and inspect each automatic door operator to determine compliance of installed systems with applicable BHMA standards.
2. Inspection Report: Certified inspector shall submit report in writing to Architect and Contractor within 24 hours after inspection.
3. Work will be considered defective if it does not pass tests and inspections.

E. Adjusting: Adjust automatic door operators to function smoothly and for weathertight closure, and lubricate as recommended by manufacturer; comply with requirements of applicable BHMA standards.
1. Readjust automatic door operators after repeated operation of completed installation equivalent to three days' use by normal traffic (100 to 300 cycles).

F. Demonstration: Engage a certified inspector to train Owner's maintenance personnel to adjust, operate, and maintain automatic door operators.

END OF SECTION 08 71 13