

Section 08740 - Automatic Revolving Doors

PART 1: GENERAL

1.01 SECTION INCLUDES

- A. Provide complete access control revolving door assemblies which have been fabricated, assembled and tested for proper operation at the factory. Include circular enclosure walls, ceiling, access hatch, ceiling lights, door wings, locks, glass, operator and drive assembly, emergency collapsing mechanism, all as required for installation shown and specified.

1.02 RELATED SECTIONS

- A. Section [] - Shop Drawings, Product, and Samples
- B. Division 1600 - Electrical Supply (By Others)
- C. Section [] - Access Control Equipment
- D. Section [] - Preparation of Opening (By Others)
- E. Section 09720 - Sealants and Caulking
- F. Section [] - Final Cleaning

1.03 SUBMITTAL

- A. Submit shop drawings and product data in accordance with Section [].
- B. Indicate pertinent dimensioning, general construction, component connections and locations, anchorage methods and locations, hardware, and installation details.

1.04 SAMPLES

Submit samples in accordance with Section [].

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to job site in manufacturer's packaging undamaged, complete with installation instructions.
- B. Store off ground, under cover, protected from weather and construction activities.

PART 2: PRODUCTS

2.01 MANUFACTURED UNITS

Besam Automated Entrance System's EntréMatic series KDBC-4 as manufactured by Besam Automated Entrance Systems, Inc. (84 Twin Rivers Drive, Hightstown, NJ 08520, telephone (800) 752-9290). Factory assembled and tested 4-wing automatic access control revolving door.

2.02 MATERIALS

- A. All circular enclosure walls, doors and structural canopy members shall be manufactured from slim line aluminum extrusion with a minimum thickness of 0.125" (doors manufactured with wood or other non-metallic substrates shall not be allowed). Other sheet metal and glass stop material shall have a minimum thickness of 0.063". Segmented walls and/or canopies shall not be allowed.
- B. Finish
 - 1. Curved enclosures - curved walls and canopy shall be Class II Clear Anodized Finish (AA-C23-A31) minimum thickness of 0.4 to 0.7 mil complying with AAMA 607.1. (Optional color anodized, painted, powder coated and metal clad finishes are available).
 - 2. Rotating wings - rotation wings shall be Class II Clear Anodized Finish (AA-C23-A31) minimum thickness of 0.4 to 0.7 mil complying with AAMA 607.1. (Optional color anodized, painted, powder coated and metal clad finishes are available).
 - 3. Ceiling - shall be white coated laminate material.
- C. Ceiling panels must be removable and serve as access hatches to the motor drive and control panel unit.
- D. Ceiling lights (Optional) - provide six (6) flush mounted, Quartz Halogen, 12 volt ceiling light fixtures with activation control via the program selector switch or by remote location. Power to light control shall be 120volt AC, 20 amp and 60 HZ.

- E. Glass - shall be 1/4" thick flat clear tempered in the rotation wings and 7/16" thick bent clear laminated safety in the curved walls. Flat-segmented glass shall not be acceptable in the enclosure walls.

2.03 OPERATION

- A. Door package shall be the EntréMatic KDBC-4 (dimensions as indicated on architectural plans) 4-wing automatic, one or two way access control door with MS-DOS based computer monitoring system.
- B. Control unit must be capable of interfacing with all standard access control systems.
- C. Microprocessor based electronics with self diagnostics and digital display status indicator must be capable of providing information indicating "go or no go" status, source or probable cause, and remedy. The microprocessor shall include circuitry for the following functions: anti-tailgating, wrong way protection, security reversing, self diagnostic monitoring, remote control, voice annunciator, smoke/fire/emergency control, forward and reverse torque sensing, maximum and minimum speed control (forward or reverse) and access control systems acceptance. (Consult with Besam distributor for additional optional features).
- D. Weather Strip Horse Hair Brush continuous seal shall be provided during rotation and in non-rotating X position to insure limited air infiltration.
- E. Drive Assembly shall be worm gear reducer with DC permanent magnet motor. Power to motor control shall be 120volt AC, 20 amp and 60 HZ. The gear reducer disallows manual rotation, when there is no power to the motor. Standard is fail secure; optional fail safe. This feature retains security during loss of power or when the door is in the off position. Drive assembly shall not permit door speed to be over ridden beyond the set operating speed. Electro-mechanical brakes shall not be allowed.
- F. Load sensing access control floor mats shall be provided to sense direction and number of users. (This system distinguishes, in conjunction with authorized card access, between authorized users and intruders.)
- G. Activation shall be provided by owner's compatible access control system for one- or two-way operation. (The manufacturers standard directional motion sensor may be required for special one way applications).
- H. Dual Keyed Program Selector Switch with Directional Push Button shall be recessed into the bottom of the secure side of the cornice. The switch shall perform the following functions:
 - 1. Access control entry and exit
 - 2. No entry, access control exit
 - 3. No exit, access control entry
 - 4. Free entry, access control exit
 - 5. Free exit, access control entry
 - 6. Free entry and exit
 - 7. Automatic reverse
 - 8. Automatic forward
 - 9. Manual forward
 - 10. Manual reverse
 - 11. On and off
 - 12. Lock and unlock
 - 13. Reset of emergency stop function
 - 14. Reset of emergency breakout function

2.04 Safety

- A. Emergency Stop Button shall be provided to stop door rotation and initiate the manual release of the emergency breakout function.
- B. Provide two compressible safety switches on the drum edges, if compressed, shall stop and reverse rotation of the door. When obstruction is removed, normal operation may continue.
- C. Provide Force-Sensitive door leafs. When an obstacle prohibits or slows rotation of the door higher than the pre-set resistance value of the door rotation will cease.

Part 3: Execution

3.01 Installation

- A. Inspection
Installer must examine the location and advise the Contractor of any conditions not suitable for proper installation and timely completion. Installation shall not proceed until conditions have been corrected.
- B. Erection
Install revolving doors in accordance with manufacturer's printed instructions and recommendations. Set units level, plumb, and true to line, with uniform hairline joints. Securely anchor in place by bolting to the fixing rings and silicone to adjacent materials. Use only factory trained and authorized erectors.
- C. Adjustment
Installer shall adjust door and hardware for smooth operation, proper engagement of weather-stripping, and test all functions of the door system for specified performance.
- D. Instruction
Training, of Owner's Maintenance personnel, shall be scheduled for routine service requirements, cleaning, lubrication, adjustments and inspection of major components.
- E. Cleaning
Clean metal surfaces promptly after installation, exercising care to avoid damage to finishes. Clean glass surfaces after installation and remove excess glazing and/or sealant compounds, dirt, labels, etc.

Part 4: Guarantee

4.01 Limited Warranty

Besam's automatic door components are warranted to be free of defects in materials or workmanship under normal use for a period of one year from the date of shipment from Besam's factory when the components have been installed by an authorized Besam distributor. Abuse, misuse, modification or improper repair or service by unauthorized technicians negates this warranty. During the period of this warranty Besam, at its sole option, will repair or replace any Besam automatic door component or parts thereof found to be defective in material or workmanship if any necessary return charges are prepaid. Components repaired or replaced under this warranty are warranted only for the remainder of the period covered by this warranty. For expanded warranty terms see Besam's warranty certificate.

Besam reserves the right to make product improvements and change specifications without notice.

END OF SECTION

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