SECTION 08 42 29 – SLIDING DOOR ENTRANCES

PART 1 GENERAL

* + - 1. RELATED DOCUMENTS
         1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
      2. SUMMARY
         1. This section includes the following types of automatic entrances:

Interior, single and bi-parting sliding interior automatic entrances.

* + - * 1. Related Sections:

Division 7 Sections for caulking to the extent not specified in this section.

Division 08 Sections for “Aluminum-Framed Entrances and Storefronts” for entrances furnished and installed separately in Division 8 Section.

Division 8 Section “Door Hardware” for hardware to the extent not specified in this section.

Division 08 Section “Glazing” for materials and installation requirements of glazing for automatic entrances.

Division 26 and 28 Sections for electrical connections including conduit and wiring for automatic entrance operators and access-control devices.

* + - 1. REFERENCES
         1. References: Refer to the version year adopted by the Authority Having Jurisdiction.

ANSI A117.1 - Accessible and Usable Buildings and Facilities.

ICC/IBC - International Building Code.

CUL – Approved for use in Canada.

NFPA 70 - National Electrical Code.

NFPA 101 - Life Safety Code.

* + - * 1. American National Standards Institute (ANSI) / Builders Hardware Manufacturers Association (BHMA).

ANSI/BHMA A156.10 American National Standard for Power Operated Pedestrian Doors.

ANSI/BHMA A156.38 American National Standard for Low Energy Power Operated Sliding and Folding Doors

ANSI Z97.1 Standards for Safety Glazing Material Used in Buildings.

* + - * 1. Underwriters Laboratories (UL).

UL 325 Standard for Safety for Door, Drapery, Gate, Louver and window Operators and Systems.

* + - * 1. American Association of Automatic Door Manufacturers (AAADM).
        2. American Society for Testing and Materials (ASTM).

ASTM B221 Standard Specification for Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire, Profiles and Tubes.

ASTM B209 Standard Specification for Aluminum and Aluminum Alloy Sheet and Plate.

* + - * 1. American Architectural Manufacturers Association (AAMA).

AAMA 611 Voluntary Specification for Anodized Architectural Aluminum.

* + - * 1. National Association of Architectural Metal Manufacturers (NAAMM).

Metal Finishes Manual for Architectural Metal Products.

* + - * 1. International Building Code (IBC)

IBC: International Building Code.

* + - 1. DEFINITIONS
         1. Activation device: Device that, when actuated, sends an electrical signal to the door operator to initiate the door operation.
         2. Monitored Safety Devices: A tested system that works in conjunction with the automatic door control that detects the presence of a person or an object within a zone where contact could occur and provides a signal to stop the movement of the door.
         3. AAADM: American Association of Automatic Door Manufacturers.
         4. For automatic door terminology, refer to BHMA A156.38 for definitions of terms.
      2. PERFORMANCE REQUIREMENTS
         1. General: Provide automatic doors that have been designed and fabricated to comply with specified performance requirements, as demonstrated by testing manufacturers corresponding systems.
         2. Compliance:

ICC/IBC International Building Code

ANSI/BHMA A 156.38 American National Standard for Low Energy Power Operated Sliding and Folding Doors.

UL 325 Listed

NFPA 70 National Electrical Code.

NFPA 101 Life Safety Code

CUL Approved for use in Canada

* + - * 1. Automatic Door equipment accommodates light to medium pedestrian traffic.
        2. Automatic Door equipment accommodates up to the following weights for active leaf door:

Single Slide Doors 175 lb.(80 kg) per active leaf.

* + - * 1. Entrapment Force Requirements:

Power-Operated Sliding Doors: Not more than 15 lbf (67 N) required to prevent stopped door from closing.

* + - 1. SUBMITTALS
         1. Comply with Division 01 – Submittal Procedures.
         2. Product Data: Manufacturer’s product data sheets including installation details, material descriptions, dimensions of individual components and profiles fabrication, operational descriptions and finishes.
         3. Shop Drawings: For automatic entrances. Include plans, elevations, sections, details, hardware mounting heights, additional accessories and attachments to other work.
         4. Samples: color samples of exposed finish as required.
         5. Informational Submittals: Manufacturers product information and applicable sustainability program credits that are available towards a LEED rated product certification.

Credit MR 4.1 and 4.2: Manufacture’s or fabricator’s certificate indicating percentage of post-consumer recycled content by weight and pre-consumer recycled content by weight for each product specified under this section.

* + - * 1. Manufacturers Field Reports: Submit manufacturer’s field reports from AAADM certified technician of inspection and approval of doors for compliance with ANSI/BHMA A 156.38 after completion of installation.
        2. Operating and Maintenance Manuals: Provide manufacturers operating, owners and maintenance manuals for each item specified as required in Division 01, Closeout Submittals.
      1. QUALITY ASSURANCE
         1. Manufacturer Qualifications: 10 years minimum of documented experience in manufacturing door equipment similar to that indicated within this specification with a proven record of successful service performance. A manufacturer with company certificate issued by AAADM.
         2. Installer Qualifications: Installers, trained by the primary product manufacturers, with a minimum 5 years documented experience installing and maintenance of units similar in material, design, and extent to that indicated in this specification and whose work has resulted in construction with a record of successful in-service performance. Manufacturer's authorized representative who is trained and approved for installation and maintenance of units by AAADM required for this Project
         3. Source Limitations for Automatic Entrances: Obtain automatic entrances from single source from single manufacturer.
         4. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
         5. Power-Operated Door Standard: ANSI/BHMA A156.38 Current year.
         6. Emergency-Exit Door Requirements: Comply with requirements of authorities having jurisdiction for automatic entrances serving as a required means of egress.
         7. Pre-installation Conference: Conduct conference at site or a mutually agreed site if required.
      2. PROJECT CONDITIONS
         1. Field Measurements: Verify actual dimensions of openings to receive automatic entrances by field measurements before fabrication.
      3. COORDINATION
         1. Coordinate hardware with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish. Coordinate hardware for automatic entrances with hardware required for rest of project.
         2. Electrical System Roughing-in: Coordinate layout and installation of automatic entrances with connections to power supplies and access-control system.
      4. WARRANTY
         1. Automatic Entrance Doors shall be free of defects in material and workmanship for a period of One (1) year from the date of substantial completion.
         2. During the warranty period a factory trained technician shall preform service and affect repairs. A safety inspection shall be performed after each adjustment or repair and a completed inspection form submitted to the owner.
         3. During the warranty period all warranty work shall be performed during normal working hours.

1. PRODUCTS
   * + 1. MANUFACTURER
          1. dormakaba • Reamstown, PA • 1-844-SPEC-NOW (1-844-773-2669) • Website: [www.dormakaba.us](http://www.dormakaba.us) • Email: [specnow.us@dormakaba.com](mailto:specnow.us@dormakaba.com)

Choose the substitution clause applicable for the project select item ‘B” or “C”

* + - * 1. **[Substitutions: Requests for substitution and product approval in compliance with the specification must be submitted in writing and in accordance with the procedures outlined in Division 1, Section “Substitution Procedures”. Approval of requests is at the discretion of the architect, owner, and their designated consultants.]**
        2. **[Substitutions: Not Permitted.]**

Choose type or multiple type of door configurations for the project. This is a single slide system two independent door systems would be connected together to achieve a Bi parting Slider.

* + - 1. SLIDING AUTOMATIC ENTRANCES
         1. Model: dormakaba, MAGNEO Single Slide automatic door. (Basis of Design)

Sliding Automatic Door Configuration:

Single slide active leaf door system.

Configuration: Single slide one sliding leaf.

Traffic Pattern: Two –Way

Header Mounting: **[On Wall] [In wall] [On Glass]**

Sliding Panel Mounting: **[Manet through Glass] [Clamp rail top edge of Glass]**

* + - * 1. Model: dormakaba MAGNEO Bi Parting Automatic Doors (Basis of Design)

Sliding Automatic Door Configuration:

Bi-Parting, Two (2) independent Single Sliding active leaf door systems,

Configuration: Two sliding leaves. (two systems)

Traffic Pattern: Two –Way

Header Mounting: **[On Wall] [In wall] [On Glass]**

Sliding Panel Mounting: **[Manet through Glass] [Clamp rail top edge of Glass]**

* + - * 1. Dimensions: Confirm door package dimensions as indicated on architectural drawings.
      1. DOOR OPERATORS
         1. Drive System: Linear Magnetic Drive (LMD) -  By using the attraction and repulsion of magnets, a computer controlled set of coils pushes and pulls the door, open and closed. This Technique allows the door to operate effortlessly without belts, pulleys gears or motors.

1. Operator Features:

Power opening and closing.

Adjustable opening and closing speeds.

Adjustable hold-open time between 0 and 30 seconds.

Obstruction recycle.

Intergraded access control capabilities.

Door Switches: Interior side mounted program switches consisting of:

Main Switch-Auto-Close-Open, operates door in automatic mode, turns door off, or keeps it fully open.

* + - * 1. Rollers: .75 inches (19 mm) diameter Delrin wheels with self-lubricating sealed ball bearing cores. Sliding door(s) stabilized on the track by top and bottom captured wheels

Consult SPEC NOW for additional glazing options or solid panel options.

* + - * 1. Glass: Glazing shall comply with ANSI Z97.1 thickness as indicated.

Glazing Active Door Panels **[3/8” (10mm)] to [ 1/2” (13 mm)]** tempered unless otherwise specified.

Glazing Sidelite Door Panels **[3/8” (10 mm)] to 1/2” (13 mm)]** tempered unless otherwise specified

Glazing Installation: Review Division 8 Section for glazing requirements.

* + - * 1. Handle Types (optional):

**[Recessed pull handle]**

**[1” Stainless Steel Back-to-Back vertical pull handles 13-3/4” overall (350mm)]**

**[1” Stainless Steel Back-to-Back vertical pull handles 28-3/8” overall (720mm)]**

* + - * 1. Solid Panel: Accommodates **[1 ½” (38mm) to 1 ¾” (44 mm)]** Solid Door.

**[Solid panel furnished by others]**

Choose appropriate door opening sizes

* + - * 1. Field adjustable clear opening widths based on operator header length**:**

**[Header and track size of 72” in length to obtain a clear door opening width of up to 34”]**

**[Header and track size of 82” in length to obtain a clear door opening width of up to 39”]**

**[Header and track size of 92” in length to obtain a clear door opening width of up to 44”]**

* + - 1. ACTIVATION AND SAFETY
         1. Provide controls complying with cited BHMA standard for condition of exposure and for long-term, maintenance-free operation under normal traffic load. Coordinate controls with door operation and door operators.

Select additional activation devices for the sliding door operations.

* + - * 1. Activation Device: **[Push-plate switch]** **[wireless touch plate]** **[wireless touchless switch]** **[on each side of door]** **[access control activator]** to activate door operator.

When sensor activation is selected in lieu of “knowing act”, revise specification to meet requirements of ANSI/BHMA A156.10

* + - * 1. **[Monitored Combination Motion/Presence Sensors: Self-contained units; consisting of both motion and presence sensors in a single housing; adjustable to provide detection field sizes and functions required by BHMA A156.38.**

**Motion Sensor: K-band-frequency, active infrared technology.**

**Provide capability for switching between bidirectional and unidirectional detection.**

**For one-way-traffic entrances, sensor on egress side shall not be active when doors are fully closed.]**

* + - 1. ELECTRICAL
         1. Electrical: 115VAC; 50/60 Hz.
      2. HARDWARE
         1. Automatic Locking for Sliding Door: Electrically controlled device mounted in header that automatically locks door against sliding when in closed position. Use battery back up to insure enhanced level of security.
         2. Threshold: No Track is required adjacent to wall or sidelite panels. Only a 2 ½” (63mm) wide guide bracket at the floor.

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* + - 1. ALUMINUM FINISHES
         1. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
         2. Anodized Finish:

**[Clear Anodic Finish: AAMA 611, AA-M12C22A31, Class II, 0.010 mm].**

**[Dark Bronze Anodic Finish: AAMA 611, AA-M12C22A44, Class I, 0.018 mm].**

**[Color Anodic Finish: AAMA 611, AA-M12C22A44, Class I, 0.018 mm]. [To match architects sample]**

* + - * 1. Painted Finish:

**[Powder coat painted to match architects sample] [Manufactures standard colors]**

**Kynar paint finish, [2 coat] [3 coat] [to match architects sample]**

* + - * 1. Clad Finish: Cladding shall be factory finished at manufacturers facility using .36 thick metalcladding panel surface utilizing tesa® 4965 tape. Heat and humidity resistant, the specialized adhesive tape is comprised of a polyester backing coated on both sides with a transparent modified acrylic adhesive and a tensile strength of 20 N/cm. tesa® 4965 is recognized per UL standard 969. UL file: MH 18055.

**[Stainless Steel with No. 4 Satin Finish]**

**[Stainless Steel with No. 8 Mirror Finish]**

**[Bronze with No. 4 Satin Finish]**

**[Bronze with No. 8 Mirror Finish]**

Consult SPEC NOW Center for customized finish options.

EXECUTION

1. EXECUTION
   * + 1. EXAMINATION
          1. Examine doors and frames with Installer present, for compliance with requirements for installation tolerances, wall and floor construction and other conditions affecting performance of automatic entrances.
          2. Examine roughing in for electrical source power to verify actual locations of wiring connections.
          3. Proceed with installation only after unsatisfactory conditions have been corrected.
       2. INSTALLATION
          1. General: Do not install damaged components. Fit frame joints to produce hairline joints free of burrs and distortion. Rigidly secure non-movement joints.
          2. Entrances: Install automatic entrances plumb and true in alignment with established lines and grades without warp or rack of framing members and doors. Anchor securely in place.

Install surface-mounted hardware using concealed fasteners to greatest extent possible.

Set headers, carrier assemblies, tracks, operating brackets, and guides level and true to location with anchorage for permanent support.

* + - * 1. Door Operators: Connect door operators to electrical power distribution system as specified in Division 26 Sections.
        2. Glazing: Install glazing as specified in Division 08 Section Glazing according to automatic door manufactures instructions.
        3. Signage: Apply signage on both sides of each door and each sidelight as required by BHMA/ANSI A 156.38.
      1. FIELD QUALITY CONTROL
         1. Manufacturer’s representative shall provide technical assistance and guidance for installation of automatic doors.

Factory trained and AADM certified representative shall test and inspect each automatic door to determine compliance of the installed system to BHMA/ANSI 156.38

* + - 1. ADJUSTING
         1. Adjust door operators, controls, and hardware for smooth and safe operation.
      2. CLEANING AND PROTECTION
         1. Clean glass and metal surfaces promptly after installation. Remove excess glazing and sealant compounds, dirt, and other substances. Repair damaged finish to match original finish.

Comply with requirements in Division 08 Section "Glazing" for cleaning and maintaining glass.

* + - 1. DEMONSTRATION
         1. Engage a factory authorized representative to train Owner's maintenance personnel to adjust, operate, and maintain safe operation of automatic entrances.

END OF SECTION