PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Molded fiberglass composite sliding door.
2. Stainless steel frame.
3. Automatic Door Operator

1.2 RELATED DOCUMENTS

A. Related Sections:
a. Division 1 – General Conditions, Supplementary conditions
b. Division 4 – Unit Masonry
c. Division 8 – Finish Hardware
d. Division 8 – Glass Glazing

1.3 REFERENCES

A. All reports to be made available by manufacturer upon request for each of the standards and certifications listed below.

B. UNDERWRITERS LABORATORIES (UL):
1. UL 325 – Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems.
2. UL c10 – Standard for Positive Pressure Fire Tests of Door Assemblies.

C. American National Standards Institute (ANSI) / Builders' Hardware Manufacturing Association (BHMA):
1. ANSI/BHMA A156.10: Standard for Power Operated Pedestrian Doors.

D. American Society for Testing and Materials (ASTM).

E. American Association of Automatic Door Manufacturers (AAADM)

1.4 SUBMITTALS

A. Product Data: For each type of product indicated, include construction details, material descriptions, core descriptions, and finishes.

B. Shop Drawings: Include the following:

1. Elevations of each door design.
2. Details of doors, including vertical and horizontal edge details.
3. Frame details for each frame type, including dimensioned profiles.
4. Locations of reinforcement and preparations for hardware.
5. Details of each different wall opening condition.
6. Details of anchorages, joints, and connections.
7. Details of accessories.
8. Details of conduit and preparations for power, signal, and control systems (by others).

C. Schedule: Provide a door schedule prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with door hardware schedule in Section X

1.5 QUALITY ASSURANCE

A. Preinstallation Conference: Conduct conference at Project site or virtually.

B. Quality Assurance: Hardware and accessories for all Molded Fiberglass Composite door and stainless steel frames shall exactly adhere to the Architects specification.

C. Quality Assurance: Glass for windows shall be furnished per the Architects instructions and specifications. All glazing will be factory installed by door manufacturer.

D. Manufacture Qualifications: A company that specializes in manufacturing Molded Fiberglass Composite doors and Frames with extensive industry experience.

E. Source Limitations: Molded Fiberglass doors and frames should be fabricated from one source from a single manufacturer. This ensures complete uniformity of physical properties and consistency in the manufacturing process.

F. Source Limitations: Glass for windows in doors shall be furnished and installed by door manufacturer in accordance to related section, Division 8, Glazing.

G. Regulatory Requirements

1. Fiberglass surface tested to ASTM D256 Izod impact test, ASTM D790 Flexural Strength, ASTM D638 Tensile strength, ASTM D543 Evaluation of Plastics to chemical reagents, ASTM D570 Water absorption, ASTM D1308 effect of chemicals
2. Fire rated doors and frame construction conforms to fire standards of American UL10C
3. Hinges certified to ANSI 157-1 & 7, UL10C & cUL10C which include testing for Static load, shear, Endurance, Corrosion, Fire door and Burglary.
4. Door Closers tested to EN1154 & BS 476 part 22, production surveillance ISO9002 & CERTIFIRE and SS 332:2007 durability testing 500’000 test cycles
5. Polyisocyanurate CFC/HCFC free rigid foam insulation has been tested to ASTM E 84 and has a flame spread index of under 35 AAMA 1503-09 Thermal Performance U value of 0.18.
6. Concrete fire core is certified under CE marking ETA-11/0458, A1 class fire rating under EN13501-1, Thermal conductivity UB T1 275 & UB T1 289
7. Resin is tested to Class 1 fire rating BS476 Part 7 & part 6 and M1 rating also French M1 rating to NFP 92-501 fire testing. Tensile strength / Modulus and Elongation are tested to BS EN ISO 527-4:1997, Flexible strength / modulus is tested to BS EN ISO 14125:1998: Notched Izod Impact is tested to BS EN ISO 180:2001. Heat deflection temperature to BS EN ISO 75 and 306. Compression strength and Modulus BS EN ISO 604. BARCOL - ASTM D-2583

H. Warranty

Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door and hardware that fail in materials or workmanship within specified warranty period.

The fiberglass door leaf to include five (5) years free from defects in material and workmanship from date of shipment and lifetime from corrosion from date of shipment, provided that the structural integrity of the fiberglass doors have not been violated or compromised, subject to terms and conditions.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver doors palletized, wrapped, or crated to provide protection during transit and Project-site storage. Do not use non-vented plastic.

B. Doors and frames can be individually packaged in recyclable cardboard cartons or palletized. Cartons & pallets will be clearly labelled with project information and will include fixing/fasteners and installation instructions, if required. Only remove cardboard cartons upon arrival if cartons are wet or damaged.

C. Deliver and store doors and frames at the job site in such a manner as to prevent damage; out of weather and/or extreme temperatures. The doors that are individually packaged shall only be stored in the horizontal position and not more than 4 doors high with nothing left on top of them.

D. All damaged or otherwise unsuitable doors and frames, when so ascertained shall be immediately removed from site.

1.7 PROJECT CONDTIONS

A. Field Measurements: Verify that actual dimensions of openings correspond to approved submittal drawings by taking field measurements of openings.

1.8 COORDINATION

A. Coordinate installation of anchorages for stainless-steel frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 MOLDED FIBERGLASS COMPOSITE SLIDING DOOR

A. Acceptable Manufacturers:

Only products that are manufactured by

Dortek Inc. www.dortek.com,

2.2 PERFORMANCE REQUIREMENTS:

1. Door Panel must provide chemical resistance against all standard cleaning agents including:
   a. vaporized hydrogen peroxide
   b. Spor-Klenz

B. The Molded Fiberglass Sliding Door:

1. The Molded Fiberglass Composite that envelope all 6 sides of the door are produced as one unbroken piece around the core. This produces a single, solid, homogenous, void free door panel. The Molded Fiberglass Composite shall be manufactured using a corrosion resistant resin gelcoat system. The resin shall be reinforced with glass fiber 50% average weight for enhanced strength. The thickness of the Molded Fiberglass Composite laminate shall be a minimum of 0.078 inches thick.

2. Door Fabrication:
   a. Leading, hanging, top & bottom edges of fiberglass door to have a smooth rounded finish.
   b. Total door leaf thickness to be a nominal 1.75 inches thick.
   c. The Molded Fiberglass Composite door requires no stiles or rails as the door is produced in one solid void free homogenous piece.
   d. Door to be completely seamless across all edges and faces of the door.
   e. Recycled Aluminum reinforcement is placed wherever fixings are required into the door.
   f. The door color will be manufactured as per the architect or clients specification.
   g. No organic material is permitted in any part of the door panel.
   h. Door leaf to have stainless steel surround profile to house sealing gasket
   i. Gasket at sides, head and sill to be gray vinyl, non-marking, blade type, capable of holding a seal under positive/negative pressures.

3. Core Construction: Polyisocyanurate foam core
   a. The R value shall be 1.53m^2K/M
   b. The Polyisocyanurate foam core shall be CFC & HCFC free
   c. A 1.41 inch thick rigid block of Polyisocyanurate shall be molded with the face sheets of all non fire rated doors.

4. Hardware Preparations
    a. Doors shall be reinforced with recycled inorganic aluminum in accordance with the hardware schedule, hardware manufactures instructions and templates
    b. Holes will be drilled & tapped for any hardware fastened to door
    c. The special nature of this material requires that all related hardware as specified must be furnished and installed by the door manufacturer to maintain product quality and function as well as to ensure sufficient support/reinforcement, precision tooling and proper sealing methods are provided.

5. Door Accessories
    a. Transoms: All transom panels will be identical to the doors in construction, materials, thickness, color and reinforcement.
    b. Protection: Stainless steel edge capping to provide additional protection and durability for door panel. Minimum 20 gauge stainless steel type 304 edge capping to be attached on all four sides.
    c. Header and rail assembly to be extruded and anodized aluminum construction.
    d. Entire header and rail assembly to be enclosed by a 16 gauge stainless steel shroud, with a sloped top.
    e. Door to be automated.
    f. Door to be automated by operator compliant to UL325 Standards.

6. Glazing:
    a. All glazing to be flush mounted and shall ensure that the glass is hygienic without any voids or edges for bacteria to lodge and is weather sealed as not to permit moisture.
    b. Option: Fully sealed window with interstitial operable blind - Vistatek. Must provide option for full blackout, red tint and x-ray rated. Handle machined from 316 grade stainless steel.

2.3 FRAMES

A. Stainless-Steel Frame Fabrication:

1. Frames to be stainless steel construction, 16 gauge. When attached to the wall, bolt heads, nuts, or fastener covers will not be visible. (Frames requiring these items will not be accepted.)
2. Option for adjustable 304 or 316 grade 2 piece wrap around stainless steel 1/8’ thick that will surround block work removing the requirement for any finishing to the reveal of the wall.
3. Closed cell foam used to fill void during installation.
4. Option for Stainless Steel frame to provide option to have sloping edge design available to reduce dirt traps.

2.4 AUTOMATION

A. Door movement: Shall be driven by a sealed, low voltage class II, 1/8 horsepower 30v DC motor and gearbox and nylon reinforced drive belt. The motor current shall be limited to a maximum of 3 amps. The sealed motor gearbox assembly shall be capable of driving door leaves of up to 220 lbs.(100kg) A second motor gearbox can be utilized on the same application giving a capability of moving door panels weighing up to 450 lbs. The motor gearbox assembly shall be mounted directly to the header extrusion by means of three (3) each M5 x ¼” threaded standoff bolts

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B. The master control shall be capable of being programmed by either the S.M.A.R.T. panel installed as standard on all 7000 series sliding doors or by a hand held programmer. Both the S.M.A.R.T. panel and the hand held programmer will be capable of programming all swinging, sliding and folding doors within the record product offering. The master control shall have only digitally adjustable parameters (for repeatability purposes, potentiometers as a method of setting parameters shall not be allowed).

The master control shall be a microprocessor capable of being programming, but not limited to control settings:

1. Opening and Closing speeds
2. Acceleration
3. Door open time delay
4. Remote door open time delay
5. Partial opening size
6. Reverse adjust sensitivity
7. Fire alarm signals
8. Directional traffic flow
9. Locking

The microprocessor shall also have the capability of, but not limited to:

Detect faults and deal with them according to method of programming including sending data to the S.M.A.R.T. panel, indicating that there is a fault, what the fault is from one of the 90+ stored error screens, it will also provide a user programmed telephone contact on the display. Updates to the software can be uploaded and updated, using the hand held programmer

C. All sliding doors will be supplied with a battery back up in case of emergency
In case of a power failure, emergency opening is ensured by a back-up battery that opens the door once.
D. Door can be manually overridden in case of emergency

2.5 ACTIVATION

A. Activation options to be confirmed dependent on facility use, access control and space constraints.

Options include:

a. Handwave touchless sensor
b. Overhead Sensor
c. Card reader

2.6 ELECTRICAL REQUIREMENTS

A. The Automatic sliding door shall consume no more than 100W of electricity at full load power.
B. Section 16 Contractor to provide 120V, 1 phase, 5 amp dedicated circuit per automatic sliding entrance
C. 120V service to be roughed into header of sliding door package (see standard drawing for detail)
D. Electrical rough in to be finished at time of installation
E. Refer to install manual for wiring diagrams

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of laminated fiberglass reinforced doors and stainless-steel frames.

B. Examine roughing-in for embedded and built-in anchors to verify actual locations of stainless-steel, door-frame connections before frame installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Installer shall examine the substrate and conditions under which Molded Fiberglass Composite work is to be installed and notify the general contractor of any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the installer

3.3 INSTALLATION

A. General:

1. Doors and frames will be delivered in individual cartons with identifying mark number listed on each carton. Alternatively large amount of doors may be delivered on pallets with identifying mark numbering on each door & frame on the pallet.
2. Install Molded Fiberglass Composite doors, frames and accessories in accordance with manufactures instructions and final shop drawings.
3. Provide clearance for doors of 0.078 inch at jams and head.

B. Glazing: All glazing to be factory fitted by door manufacturer.

3.4 ADJUSTING AND CLEANING

A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition.

B. At substantial completion, adjust all operable components to ensure proper installation. Doors shall function smoothly and swing freely without binding. Doors without closers shall remain open at any angle without being affected by gravitational influence.

C. Remove dirt and excess sealant from exposed surfaces. Follow the manufacturer's recommended cleaning techniques and procedures for cleaning all surfaces. Only use cleaning products that will not scratch or damage the surfaces and are recommended by the manufacturer.

D. Stainless-Steel Touchup: Immediately after erection, smooth any abraded areas of stainless steel and polish to match undamaged finish.

END OF SECTION

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