

SECTION 083000
HIGH-SPEED ROLLING DOORS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. High-speed roll up doors.
- B. Wiring from electric circuit disconnect to operator to control station.

1.02 RELATED SECTIONS

- A. None

1.03 REFERENCES

- A. NEMA – National Electrical Manufacturers Association.
- B. LED – Light Emitting Diode.

1.04 SYSTEM DESCRIPTION

- A. Electrical Motor operated unit with manual override in case of power failure.

1.05 SUBMITTALS

- A. Submit the following:
 - 1. Shop Drawings: Indicate pertinent dimensioning, anchorage methods, hardware locations, and installation details.
 - 2. Product Data: Provide general construction, component connections and details, and electrical equipment, operation instructions, and information.
 - 3. Samples: Submit color samples of door panels for selection by owner.

4. Manufacturer's Installation: Indicate installation sequence and procedures, adjustment, and alignment procedures.

1.06 MAINTENANCE DATA

- A. Scheduled maintenance program available to include lubrication requirements and frequency, periodic adjustments required, scheduled maintenance suggested, manufacturer data sheets, and equipment interconnection diagrams.

1.07 REGULATORY REQUIREMENTS

- A. Electrical components NEMA approved and UL listed.

1.08 QUALITY ASSURANCE

- A. Furnish high-speed roll doors and all components and accessories by one manufacturer.

1.09 FIELD MEASUREMENTS

- A. Verify field measurements are as indicated on shop drawings.

1.10 COORDINATION

- A. Coordinate the work with installation of electric power and locations and sizes of conduit.

1.11 WARRANTY

- A. Five-year limited warranty on motor assembly
- B. Five-year limited warranty on 3-ply multifilament Rylon™ material
- C. Two-year limited warranty on mechanical and electrical components
- D. Lifetime warranty on door counterweight and tension spring
- E. One year for labor

PART 2 – PRODUCTS

2.01 PRODUCTS

- A. Rytec Corporation Model FS1000.
- B. No substitutions permitted.

2.02 MATERIALS

- A. Door Panel: .10 inches thick, 3-ply Rylon™ material. Rylon material to be multi-layered, woven, dimensionally stable, puncture resistant, polymer impregnated, multifilament polyester fabric. Material to be vertically flexible, but laterally stiff. Fabrics that are flexible both vertically and laterally will not be accepted.
- B. Side Frames: Reinforced side frames with front & rear wind bar guides and front & rear full-height weather seals to seal against the panel material. Two sets of thru-beam safety photo eyes to be factory-installed.
- C. Bottom Bar: Break-Away™ bottom bar, capable of breaking away when hit from either direction without damaging or bending bottom bar, safety astragal, or side covers. Bottom safety edge to allow door to reverse to its full open limit when coming into contact with an obstruction above floor line during downward travel. Include “kill” switch to automatically shut off motor when door is impacted. Break-away and reversing edge signal is carried to the door controller via radio frequency. Doors without reversing edge, or doors that use coil cord to transmit signal, will not be accepted.
- D. Counterweight and Tensioning System: Separate counterbalance and fabric tensioning. Guided counterweights to be custom-sized for proper balancing of door. Independent tensioning system maintains constant panel tension. System to include polyester belting and UHMW spools. Doors using springs or doors without a separate counterbalance and tensioning system will not be accepted.
- E. Provide roller and motor guards, ground level manual brake release and operating capability when side covers are removed or damaged.
- F. Drive System: Three-phase, variable-speed AC Drive provides soft acceleration and deceleration. Independent opening and closing speeds provide flexibility to meet any application. Motor and electrical components are factory wired to junction boxes in the head assembly. Motors using a clutch or brake to start or stop door movement will not be accepted.

- G. Travel Speed: Adjustable; factory-set to open at 50 inches per second.
- H. Electrical Controls
 - 1. Rytec controller housed in a UL/cUL Listed NEMA 4X-rated enclosure with factory set parameters.
 - 2. Parameter changes and all door configurations can be made from the face of the control box, no exposure to high voltage. Control panels that require opening of the control box and reaching inside to make parameter changes will not be accepted.
 - 3. Controls include a variable speed AC drive system capable of infinitely variable speed control in both directions.
 - 4. Programmable inputs and outputs accommodate special control applications (traffic lights, horns, actuation devices, timing sequences, etc.) without the need for additional electrical components.
 - 5. Self-diagnostic scrolling two-line vacuum fluorescent display provides expanded informational messages for straightforward installation, control adjustments and error reporting.
 - 6. Complete history of door, at least two years, is logged and encrypted onto a USB flash drive. All errors have a time and date stamp for reference. Control panels not logging up to two years of door history will not be accepted.
- I. Door to use absolute rotary encoder to regulate door travel limits. Limits to be adjustable, without the use of tools, from floor level at the control panel. Doors using mechanical limits switches, or doors that require access to the operator in order to adjust limits, will not be accepted.
- J. Door to have strapped wind bar, if necessary, which travels in its own guide rather than be integrated into door panel. Doors using integrated wind bars will not be accepted.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify that opening sizes, tolerances, and conditions are acceptable.

3.02 INSTALLATION

- A. Install door unit assembly in accordance with manufacturer's instructions.
- B. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.



- C. Fit and align assembly including hardware; level to plumb to provide smooth operation.
- D. Coordinate installation of electrical service. Complete wiring from disconnect to unit components.

3.03 ADJUSTING

- A. Adjust door and operating assemblies.
- B. Test and adjust doors, if necessary, for proper operation.

3.04 CLEANING

- A. Clean door and components.

END OF SECTION