Rytec Powerhouse XL High Performance Rubber Door
Available from 24’ wide x 30’ high to 50’ wide x 35’ high
Architectural Specifications

SECTION 08373
HIGH-SPEED RUBBER DOOR

PART 1 – GENERAL

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

1.02 RELATED SECTIONS
- A. Field Painting.
- B. Electrical Connections.

1.03 REFERENCES
- A. NEMA – National Electrical Manufacturers Association.
- B. ASTM – American Society for Testing and Materials
- C. CUL – Underwriter’s Laboratories, Inc.

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, electrical equipment, operation instructions and information.
  3. Samples: Submit sample of door panel.
  4. Manufacturer’s Installation: Indicate installation sequence and procedures, adjustment and alignment procedures.

1.06 MAINTENANCE DATA
- A. Recommended preventive maintenance program for scheduled maintenance suggested, manufacturer data sheets, and equipment interconnection diagrams.

1.07 REGULATORY REQUIREMENTS
- A. Electrical components UL/CUL listed.
- B. Electrical enclosure NEMA approved.

1.08 PERFORMANCE REQUIREMENTS
- A. Panel to withstand high pressure and wind loads.
- B. Electric operator to be direct or chain drive—no counterbalance or springs on any size.

1.09 QUALITY ASSURANCE

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

1.10 FIELD MEASUREMENTS

A. Verify field measurements are indicated as shown on shop approval drawings.

1.11 COORDINATION

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

1.12 WARRANTY

A. Two (2) years parts, one (1) year labor on the door.
B. SBR fabric material for the life of the door, labor limited to one (1) year.
C. Two (2) years on electrical, labor limited to one (1) year.

PART 2 – PRODUCTS

2.01 PRODUCTS

A. Rytec Corporation Powerhouse XL high-speed rubber door.
B. No substitutions permitted.

2.02 MATERIALS

A. Door Panel

1. Fabric
   a. Styrene butadiene rubber (SBR) panel 1/4” (6.35 mm) thick, made of two 1/8” (3.17 mm) thick layers, 70 durometer; sandwiched with 1-ply, 110lbs (50kg) polyester cord center.
   b. End-to-end butt seams required to connect SBR panel sections on larger doors (over 24 feet wide) for strength and stability. Doors over 24 feet wide without butt seams will not be accepted.
   c. Panel includes dual durometer polyvinyl chloride (PVC) windlocks, providing normal resiliency and flexibility at temperatures ranging from -40° F to +180°F (-40°C to +85°C). Panels not using PVC windlocks for wind or pressure retention will not be accepted.
   d. Windlocks to be continuous to allow the door panel to hold effectively for wind or pressure retention. Rubber-backed polyester (PET) woven fabric must cover windlocks.

2. Wind and Pressure Resistance
   a. The door design allows for the curtain to remain in the side frame guide in high wind and pressure situations.

3. Other Characteristics
   a. Vertical stripes of polyester (PET) for visual safety awareness.
   b. Standard color black.
   c. Consult manufacturer for other panel materials and color options.

B. Door Header

1. Truss Design
    a. Reinforced truss design with angular frame made of steel.
2. Drum Roll
    a. Fabricate minimum 8.75" (222.25 mm) outside diameter steel tube with wall thickness of 0.38” (9.652 mm) steel to maximum 14.00" (355.6 mm) outside diameter steel tube with wall thickness of 0.50” (12.7 mm) steel. All complying with ASTM A513.
    b. Drive shafts within drum are constructed of 3.50” (88.9 mm) outside diameter steel shafts.
3. Idler Barrel
    a. Front or rear-mounted, single or dual fabric guiding (idler) barrel shall be constructed of minimum 6.50” (165.1 mm) outside diameter round tubing with a wall thickness of 0.25” (6.35 mm) and supported by 2.75” (69.85 mm) diameter steel shafts.
4. End plates
    a. Constructed of minimum ¼” (6 mm) hot-rolled steel laser-cut plates with heavy-duty, self-aligning bearings with cast iron housings.
    b. Bearings shall be load-rated at 21,500 lbs. (9752 kg) dynamic and 16,100 lbs. (7,302 kg) static.
5. Counterbalance System
    a. Direct-drive or chain-drive operators only—no counterbalance. Any doors utilizing counterbalance or torsion springs will not be accepted.

C. Side Frames
1. Frames
    a. The structural columns consist of 5 x 2 x ¼” structural steel tubing, welded to a reinforced “Z” mounting bracket (0.22” thick steel) and hinged cover (0.18” thick steel).
2. Wind Resistance
    a. The door design allows for the curtain to remain in the side frame guide in high wind and pressure situations.
3. Structural Reinforcements
    a. Steel mounting reinforcements on side frames. Reinforcements dependent on door and header size.
4. Paint
    a. Painted with a durable, chemical and corrosion-resistant coating
    b. Standard color is Rytec gray, special colors available upon request

D. Bottom Bar
1. Constructed of extruded aluminum or steel tube (dependent on door size) and will be of a sufficient width and weight to maintain the bottom edge of the curtain parallel to the door threshold at all times.
2. A minimum of 6” tall weatherproof rubber loop seal shall be made of EPDM and will be able to seal uneven finished floors.
3. Bottom bars with cords attached will not be accepted.

E. Wireless System

1. Wireless provides continuous and uninterruptible wireless signal which eliminates the need for cords on the bottom bar..
2. Two-way communication ensures functioning wireless system. Doors without two-way communication to ensure functioning wireless system will not be accepted.

F. Control System
1. Digital controller housed in a NEMA-4X or NEMA-4 rated enclosure with factory set parameters.
2. Full-featured or PLC (programmable logic controller) control system. Controller type dependent upon door size.
3. Programmable inputs and outputs accommodate special control applications without the need for electrical components.
4. Two-line vacuum fluorescent display (VFD) or light emitting diode (LED) backlight display provide quick and straightforward installation, control adjustments and error reporting.
5. Control panels that require a portable computer unit, additional components, or other devices for programming and/or troubleshooting will not be accepted.

G. Electric Operator(s)
1. Door shall be electrically operated by a single direct-drive or dual-drive system. Type of drive is dependent on the size of the door. The motor and gearbox shall be designed for high-cycle operation. Basic operation features a manual override for non-powered operation.
2. Operator dependent on door size.
3. If chain-drive, chain-break monitoring system is required.
4. Counterbalance System
    a. No counterbalance or torsion springs allowed in any size door.

H. Safety Features
1. Two (2) photoelectric sensing devices (photo eyes) on each side of the doorway for safety. If an object interferes with the beams, the door will reverse automatically.
2. Four (4) threshold warning light strips include amber and red LED lights located on the front and back of both the left and right side columns to indicate door closing for added safety at the threshold. All wiring for warning lights to be concealed within the door construction.
3. Bottom bar to include a failsafe electric edge that will automatically reverse the door upon bottom edge impact.
4. Bottom bar will contain a kill switch that ceases door movement when the door is impacted. Doors which movement continues after impact will not be accepted.

I. Speed
1. Door to operate at a variable speed up to 20 inches per second, maximum speed is dependent on the size of the door and the type of controller and operator.

PART 3 – EXECUTION

3.01 EXAMINATION

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

3.02 INSTALLATION

A. Install door assembly in accordance with manufacturer's instructions.

B. Use anchorage devices to securely fasten assembly to wall constructions and building framing without distortion or stress.

C. Fit and align assembly including hardware; level and plumb to provide smooth operation.

D. Coordinate installation of electrical service. Complete wiring from disconnect to unit components.

E. Touch-up paint on frame and other painted surfaces in accord with painting section.

1. Upon completion of installation, including work by other trades, lubricate, test and adjust doors to operate in accordance with manufacturer's product data. Final adjustments shall be made by manufacturer's authorized representative.
2. Protect finished installations until Date of Substantial Completion. Repair damage to door panel, hardware and operators.

3.03 ADJUSTING

A. Adjust door and operating assemblies.

B. Test and adjust door, if necessary, for proper operations.

3.04 CLEANING

A. Clean door and components.

END OF SECTION