

**Section 08300 Architectural Specification**  
**R-Bac Industries, LLC**  
**UltraFreeze High Speed Cold Storage Freezer Door**

**SECTION 08300**  
**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. UL – Underwriters Laboratory Incorporated.

1.04 SYSTEM DESCRIPTION

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

1.05 SUBMITTALS

- A. Submit the following:
  - a. Shop Drawings: Indicate pertinent dimensioning, anchorage methods, hardware locations and installation details.
  - b. Product Data: Provide general construction, component connections and details, electrical equipment and operation instructions.
  - c. Samples: Submit color samples of door panels for selection by owner.
  - d. Manufacturer's Installation: Indicate installation sequence and procedures, adjustment and alignment procedures.

1.06 REGULATORY REQUIREMENTS

- A. Electrical components UL listed.
- B. Electrical enclosure NEMA approved.

1.07 QUALITY ASSURANCE

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

## 1.08 FIELD MEASUREMENTS

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

## 1.09 COORDINATION

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

## 1.10 WARRANTY

- A. One year parts and labor limited warranty.
- B. Lifetime counterweight warranty.
- C. No springs allowed.

## **PART 2 – PRODUCTS**

### 2.01 PRODUCTS

- A. R-Bac Industries UltraFreeze high speed freezer door.
- B. No substitutions permitted.

### 2.01 MATERIALS

- A. Door Panel:
  - a. 2-Ply woven monofilament polyester PVC impregnated.
  - b. Material to be laterally stiff and vertically flexible.
  - c. Standard colors are Yellow and Blue, optional colors available.
- B. Windows:
  - a. Two Replaceable 17" X 17" low temperature PVC windows.
- C. Side Frames and Head Member:
  - a. Fully bolt together. All structural materials to be made of extruded aluminum.
  - b. Front columns to be finished and powder coated safety yellow.
  - c. Front column wall thickness to be a minimum of 0.25" to minimize damage if impacted.
  - d. Head member to be minimum 5" x 6" boxed extruded aluminum.
  - e. Side frames to have double weather seal. Seal must be on both the front and back side of the door panel.
  - f. Head frame must be provided with double weather seal along the entire top of the door.
  - g. Door must have no visible air gaps along the side or top of the door when the door panel is in the closed or down position.
- D. Drive System:
  - a. Minimum 1.5HP in line hollow shaft worm drive with three phase variable speed AC drive.

E. Control Panel:

- a. UltraSmart controller housed in a NEMA 4 / 12 enclosure.
- b. Control Panel must be provided with fusible rotary disconnect mounted on the control panel. No exceptions.
- c. Controls must include a variable frequency drive system capable of infinitely variable speed control in both the up and down directions. Fused 24V AC power for the door controller and optional activators.
- d. All interior control panel components must be touch-safe (protected from high voltage when control panel door is open). NO EXPOSED HIGH VOLTAGE CONTACTS.
- e. All door operational parameters must be set on the outside face of the control panel. No fixed or rotary limit switches. No exceptions.
- f. Controller comes with factory set parameters, a two line display that shows functional information during normal operation and will advise if maintenance is required for abnormal situations.
- g. Controller and panel must be fully modular. Separate modules for activation, safety, drive, controls, operation and all other options. Must be expandable to accommodate additional modules for desired inputs and outputs.
- h. Controls must be fully self diagnostic.
- i. Door must be provided with an absolute encoder.

F. Bottom Bar:

- a. Fully padded bottom bar.
- b. Releases from side frames in either direction upon impact.
- c. Upon impact, door operation is stopped. Controller must indicate problem encountered and instruct operator on what steps should be taken to fix the problem.
- d. Bottom bar must be self-repairing. Door must automatically reset itself after impact by pressing a button on control panel, no tools required.
- e. Door to be provided with failsafe electric safety edge. No pneumatic edges allowed.
- f. Bottom bar and door operation must be totally wireless. No coil cords allowed. All faults registering from the wireless device must be displayed on the control panel.
- g. Wireless controller must not be exposed in any way on the surface of the door. Must be integrated inside the bottom bar.
- h. Bottom bar wireless system battery life must be more than three years.

G. Safety Features:

- a. Door to be provided with BacLight Safety Light Curtain System. Light curtains must exist on both sides of the door panel.
- b. Light curtains to be located no more than 5" from the door panel material and cover area up to a height of no less than six feet.
- c. Light curtain system must have a minimum of 96 infrared thru-beam optical sensors.
- d. The rear light curtain must be fully integrated into the side column of the aluminum extrusion.
- e. Control panel must indicate in written visible English each time the light curtain is broken.
- f. Door must be provided with a BacOut Safety System allowing the door panel to open manually without the use of hand cranks in the event of a power outage. Counter-balance design must allow the door to be opened in event of power failure.
- g. Door to be provided with failsafe electric safety edge. Door controller must indicate if the safety edge is not operable.
- h. Door must be provided with a full width padded bottom bar.

H. Speed:

- a. Door to operate at a variable speed up to 100" per second in the up direction. Door must operate at a variable speed in the down direction.

I. Defrost System:

- a. Door to be provided with fully adjustable heated blower system to keep moisture and condensation off of the floor and door panel.
- b. Blower and heat cycling must be programmable.
- c. Blowers to be fully adjustable and rotate up to 90 degrees.
- d. Must have defrost system in side columns and top beam.

J. All components furnished by factory.

**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 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 door, if necessary, for proper operations.

3.04 CLEANING

- A. Clean door and components.

END OF SECTION