SECTION 08300
HIGH-SPEED BI-PART SLIDING DOORS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Insulated high-speed door. Bi-parting operation.

B. Wiring from electrical disconnect to operator to control station.

1.02 RELATED SECTIONS

A. None

1.03 REFERENCES

A. NEMA - National Electrical Manufacturers Association.
B. UL - Underwriters Laboratories.
C. CSA - Canada Standards Association.

1.04 SYSTEM DESCRIPTION

A. Electrical Motor operated unit.

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, operation instructions, cleaning instructions and general 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. Maintenance Data: Scheduled Maintenance Program to be included indicating lubrication requirements and frequency, periodic adjustments required, scheduled maintenance suggested, manufacturer’s data sheets, and equipment inter-connection diagrams.

1.07 REGULATORY REQUIREMENTS

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

1.08 QUALITY ASSURANCE

A. Furnish insulated high-speed sliding doors and all components and accessories through 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. One year parts, one year labor on mechanical and electrical components. 5-year accident forgiveness on Turbo-Slide door panel. If door panel will not properly seal due to panel damage then it will be replaced with a new panel, parts only. Refer to manufacturer's full written warranty for additional details.

PART 2 - PRODUCTS

2.01 PRODUCTS

A. Rytec Corporation Model Turbo-Slide Bi-Part.

B. No substitutions permitted.

2.02 MATERIALS

A. Door Panel: Insulated, frameless Flex-Panel® technology panels with closed cell foam core and fiber reinforced thermoplastic skin laminated to core. Minimum R-Value of 17 (standard) and up to an R-Value of 40. Flexible and abrasion resistant polyurea/polyurethane elastomer perimeter seal completely encases the perimeter of each panel. Flexible panels and pivoting carriage allow door to withstand impact of forklift. Panel suspension designed for even weight distribution to reduce component stress. Panels include composite reinforced header cap integrated within the top edge of the panel for structural integration with suspension system.

B. Door Mounted Seals: Leading edges incorporate dual-interlocking seals with EVA closed cell foam cores encased in 18 and 40 ounce reinforced vinyl. The leading edge seals are attached to the door panel with industrial grade hook and loop which allows for easy replacement. The bottom seal

incorporate a 0.045 inch cloth reinforced EPDM rubber sweep seal coupled with 18 ounce reinforced vinyl which is attached to the door panel with industrial grade hook and loop allowing easy adjustment and replacement. These panel mounted seals, when coupled with wall mounted bulb type seals, provide for a tight, effective full-perimeter closure.

C. Wall Mounted Seals: Perimeter door bulb seals with reinforced Nitrile belting attached to thermally insulating composite backing are wall mounted at the sides and top of the door opening. 110V single phase, 10 watt/per ft heat trace is installed in the bulb seals as standard equipment to be connected to 110V power source via a 20 amp GFI circuit for Freezer applications. The seals are screwed into galvanized sheet metal angles that are mounted to the wall surface to create a thermal break. These seals are replaceable.

D. Head Assembly: Modular design for fast and easy installation, no welding required. Galvanized steel head assembly with powder coated steel components is fully assembled and tested at factory.

E. Door Track: Integral head assembly tracks keeps panel off the ground and away from compression seals when door opens, reducing wear. Track's continuous “in & down” slope conveniently moves the panel into place while closing - effectively securing full-perimeter seal. Each panel has two roller carriages and each carriage features (4) urethane rollers for smooth, durable operation. Panel-to-carriage interface pivots to maintain roller surface contact and minimize damage in the event the door is impacted by a forklift.

F. Stay Rollers: Floor mounted, powder coated steel base supporting adjustable polymer wheel. Stay rollers interface with wedge blocks mounted on trailing edge of door panel to complete perimeter seal of the door in the closed positon.

D. Defrost System: Panel defrost system is NOT required. Closed heat system located in the wall mounted, stationary bulb seal assemblies provided by 110v self-limiting heat trace keeps the seal material pliable and reduces frost build up around the perimeter of the door panel.

G. Drive System: 1 HP, 3 phase, 100 Hz, 230 VAC inverter-duty motor with gearbox and brake. Three phase, variable-speed AC Drive provides soft acceleration and deceleration. Independent opening and closing speeds provide flexibility to meet any application. Motor and all electrical components pre-wired at factory. In the event of a power failure, the door can be manually opened. Motors using a clutch or brake to start or stop door movement will not be accepted.

H. Travel Speed: Variable-speed AC-Drive is pre-set at the factory to open door at up to 120 inches (10 feet) per second and close at 40 inches (3 1/2 feet) per second.

I. 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, within factory parameters.

4. Depending on number required, 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.

J. Door to use absolute rotary encoder to regulate door travel limits. Limits to be adjustable within factory parameters, without the use of tools, from floor level at the control panel. Doors using mechanical limits switches, or doors that require tools or access to the operator in order to adjust limits, will not be accepted.

K. All components factory finished.

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.

END OF SECTION