Version 5.22.13

N-SERIES: NBR2300 SPECIFICATIONS
Tubular Composite Bottom Rolling Door System

OPTIONS ARE LISTED IN RED, PLEASE MODIFY THESE AREAS AS NEEDED BASED ON YOUR PROJECT

CONSULT MANUFACTURER FOR ADDITONAL OPTIONS OR MODIFICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications, apply to this section.

1.2 SUMMARY

A. This section includes horizontal, bottom rolling door systems.

B. Operation of bottom rolling door systems may include overhead mounted electro-mechanical chain drive operator or a steel drive wheel operator mounted within the door panel.

1.3 SUBMITTALS

C. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.

D. Product Data for each type of product specified consisting of manufacturer's technical Product Data and installation instructions for each type of door required, including data substantiating that products comply with requirements.

E. Submittal Drawings showing fabrication and installation of top hung, sliding doors including plans, elevations, sections, details of components, hardware, operating mechanism and attachments to the other units of Work. Include wiring diagrams for coordination with electrical trade.

1.4 QUALITY ASSURANCE

A. Doors shall be designed to withstand external or internal horizontal wind loads of 20 pounds minimum per square foot. The maximum allowable deflection shall not exceed 1/120 of the spam. Fiber stresses in main members shall be limited to 27,000 pounds per square inch. Steel frames shall be designed in accordance with the AISC "Steel Construction Manual".

1.4 DELIVERY, STORAGE AND HANDLING

A. Store delivered materials and equipment in dry locations with adequate ventilation, free from dust and water, and so as to permit access for inspection and handling.

B. Handle materials carefully to prevent damage.

1.5 WARRANTY

A. The door manufacturer shall provide a written standard limited warranty for material and workmanship.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Manufacturer: Single, bi-parting or tele-slide sliding doors shall be the NBR2300 Series bottom rolling door manufactured by Door Engineering and Manufacturing, LLC; 400 Cherry Street, Kasota, MN 56050, (800) 959-1352. Equal products by other manufacturers approved in advance.

2.2 MATERIALS

A. Steel Tube: ASTM A513 and ASTM A500/A500M

B. Steel Sheets: Steel sheets of commercial quality, complying with ASTM A1011/A1011M hot-rolled steel sheet.

C. Hardware: Manufacturer’s standard components, galvanized or zinc plated.

2.3 DOOR PANEL CONSTRUCTION

A. Door thickness: Doors shall have a minimum nominal thickness of 4 1/8" to 8 1/8” as required for specified size and loads.

B. Core: Fiberglass batt insulated.

C. Face Sheets: Steel sheet shall be a minimum of 16 or 14 gauge hot rolled, cold rolled or A-60 galvannealed steel.

D. Interior Framing: The face sheets shall be welded to a steel frame consisting of minimum 14 gauge tube steel members on maximum 36” centers. All exposed welds shall be ground to a smooth.

E. Factory finish:

Option 1: Manufacturer's standard structural primer, field painting specified in section XXXXX.

Option 2: All exposed steel shall be finished with manufacturer's standard epoxy primer and polyurethane top coat. Customer to select from Manufacturer's standard color chart.

H. Multiple Panels: Shall be field assembled using factory fabricated through-bolt splice plate.

2.4 HARDWARE

A. All hardware for the door shall have galvanized, zinc plated or primer finish. The hardware shall include angle guide top tracks, ASCE bottom rails, top guide rollers, bottom wheel assemblies and mounting hardware.

2.5 OPTIONS

A. (Option) Gasketing: Provide brush-type seals at head, jambs and sill.

B. (Option) Pass Doors: Shall be 1 3/4" x 3'0" x 7'0" and have 1 ½ pair heavy duty hinges, track bar closer and a mortised latch set or panic device.

C. (Option) Vision Panels: Provide vision panels of the type, size, shape and location as noted on the drawings.

D. (Option) Track Hoods: Provide track weather-hood formed from galvannealed steel sheet.

E. (Option) Monorail Notch: Provide monorail notch as required. Include weatherseals to be trimmed in the field to seal around the monorail beam.

F. (Option) Crush Plates: Required when wall material is not solid concrete.

2.6 **OPERATOR SYSTEM (OPTION)**

A. Operator System, choose from the following **(Please consult factory):**

Option 1: Provide Leopard 2 sliding door operating system. Designed for high cycle, high capacity applications. Operator shall include a manual disconnect to disengage the panel from the drive chain

Option 2: Provide an in-panel mounted operator including motor, gearbox, drive chain and steel wheel with sprocket. The operator shall include a manual disconnect to allow the drive wheel to spin freely when disengaged.

B. Electric motor shall be of sufficient size to operate doors under normal operating conditions at no more than 75 percent of rated capacity.

C. Electric Controls: Controls shall be furnished by the door manufacturer and shall be complete for each door, and built in accordance with the latest NEMA standards. **Incoming electrical shall be (Choose One): 120VAC single phase, 208VAC single phase, 208/230VAC 3-phase, 480VAC 3-phase.**

1. Controls shall include a variable frequency drive, along with a self diagnostic logic controller with digital message display or LED indicators. Controller shall include programmable close time delays and maximum open and close runtime timers.

2. Motor starters shall be magnetic reversing, factory wired with overload and under voltage protection, and equipped with mechanical interlocks. All control components shall be enclosed in one enclosure with a wiring diagram placed on the inside of the cover.

3. Enclosures shall be NEMA 4 with disconnect switch.

4. Pushbuttons for each door shall include one (1) momentary pressure three-button push-button station marked "OPEN", "CLOSE" and "STOP". Push button enclosure shall be NEMA 4.

5. Limit switches and/or digital encoder shall stop the door in the full open and close positions

6. Safety Edges: Provide electric safety edges on leading edge of all doors to reverse door upon contact with obstruction.

7. Photo Eyes: Provide one interior and one exterior mounted photo eye (sender/receiver type) with mounting brackets. Photo eyes shall be NEMA 4X.

8. **(Option) Loop Detectors: Provide 'open' and/or 'safety' loop detectors as required. Control panel shall have an Auto/Manual switch for activating and deactivating the 'open' loop function.**

9. **(Option) Radio Controls: Where required, provide (1) radio receiver and (xx) single button remote controls.**

10. Wiring: Door manufacturer shall supply controls only. Electrical contractor shall install controls and furnish and install conduits and wiring for jobsite power and control wiring.

PART 3-EXECUTION

3.1 INSTALLATION

A. Install bottom rolling sliding doors in strict accordance with the approved drawings by qualified door erection crews. All door openings shall be completely prepared by the general contractor prior to the installation of the doors. Permanent or temporary electric wiring shall be brought to the door opening

before installation is started and shall be completed so as not to delay the inspection test.

B. Door shall be set plumb, level and square, and with all parts properly fastened and mounted. All moving parts shall be tested, adjusted and left in good operating condition.

3.2 ADJUSTING AND CLEANING

A. Inspection of the doors and a complete operating test will be made by the installer in the presence of the general contractor or architect as soon as the erection is complete. Any defects noted shall be corrected. After door approval in the above test, the general contractor must assume the responsibility for any damage or rough handling of the door during construction until the building is turned over to the owner and final inspection is made.

B. Clean surfaces and repaint abraded or damaged finished surfaces to match factory-applied finish.

END OF SECTION