



L-SERIES: LTH2900 SPECIFICATIONS Tubular Composite Sliding Fire Door System

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

CONSULT MANUFACTURER FOR ADDITIONAL 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 sliding door systems.
- B. Operation of horizontal sliding fire rated door systems include the option of belt driven or chain driven operator as appropriate for the door size and weight.

1.3 SUBMITTALS

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

1.5 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.

1.6 WARRANTY

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

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: Single, bi-parting or tele-slide sliding fire doors shall be the LTH2900 Series composite fire door manufactured by Door Engineering and Manufacturing, LLC; 101 Power Dr. Mankato, MN 56001, (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. Doors shall bear the appropriate Underwriters Laboratories and Factory Mutual label for **4, 3, 1 ½ or ¾ hour (please indicate the label needed)**. Door carries a maximum temperature rise of 450° in 30 minutes. Sizes larger than 12' x 12' shall receive an oversized label from Underwriters Laboratories and Factory Mutual.
- B. Door thickness: Doors shall have a minimum thickness of 2-1/8".
- D. Core: Fiberglass insulated, R-values: 2 1/8" = 7.7; 4 1/8" = 15.4
- E. Face Sheets: Steel sheet shall be a minimum of 14 gauge cold rolled steel.
- F. Interior Framing: Interior framing shall be minimum 11 gauge steel tube
- G. 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 a galvanized or zinc plated finish. The hardware shall include box track, adjustable track brackets, adjustable wall brackets, end floor stops, adjustable concealed stay rollers, 6" x 6" wall washers and wall bolts. The box track shall be no lighter than 14 gauge. Include one (1) pair of four-wheel ball bearing hangers per door leaf.

B. Mounting Hardware: Shall include all necessary wall washers and through-wall bolts with nuts.

C. Automatic Closing System: A counterweight closing system connected to a triple fusible link through wall system.

D. Electro-mechanical release device (Optional): Provide an electro-mechanical release device to be activated by the fire alarm system or heat and smoke detectors located on both sides of the wall. Release device shall include an integrated battery backup power supply.

2.5 OPTIONS

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

B. (Option) Fire Rated Pass Doors: Shall be 1 ¾" 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. Maximum sizes shall be as follows:

- a. 45 minute rating: up to 2772 sq. in. visible lite
- b. 90 minute rating: up to 1296 sq. in. visible lite
- c. 3 hour rating: up to 100 sq. in. visible lite
- d. 4 hour rating: No glass allowed

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

E. (Option) Locking: Provide cane bolts or mortised sliding door lock as required.

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

G. (Option) Crush Plates: Recommended when wall material is not solid concrete.

2.6 OPERATOR (Optional)

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

Provide Leopard 2 sliding door operating system. Designed for high cycle, high capacity and custom/specialty applications.

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