Standard Specifications

**1 Bi-parting Freight Doors:**

Bi-parting freight doors to be supplied by EMS Group, Inc. or pre-approved equal.

1. Panels are to be constructed of minimum #12-gauge steel sheet set into structural angle frame with vertical angle reinforcing 16” maximum on center. Upper edge of lower door shall be reinforced for specific rated load and class of loading. Lower edge of upper panel shall have a fire resistive non-shearing, non-crushing meeting edge to close distance between rigid door sections, which must be maintained at not less than ¾”. All construction must comply with latest version of ASME A17.1 and local codes and as specified in manufacturers Underwriters Laboratories Fire Door Construction Procedures.
2. Door tracks shall be minimum #7 gauge formed steel fastened to entrance jambs. Door stops to transmit panel sill loads to the building sill structure.
3. Panel guide shoes shall have milled grooves and be adjustable, ductile iron and completely replaceable. Nylon or other composite material guide shoes with or without sheet metal shell are not permissible. Minimum of four guide shoes per door panel with a minimum of 2 ½” lateral contact per shoe.
4. Doors which are no more than 13’6” wide and 12’0” high shall bear Underwriters laboratories 1 ½ hour (B) labels. Larger doors (no more than 16’10 ½” wide or 15’0” high) are to bear an Underwriters laboratories “Classified Oversize Door” label. Still larger doors must be built to the same rigid U.L. standards and certified by the manufacturer.
5. Pull chain unlocking device under hinged lockable cover to be provided for all floors.
6. Manual doors are to be arranged for future power operation.
7. All doors are to have a 4” X 10” clear wire glass vision panel at approximately 5’0” above floor, as permitted by door construction. Vision panel glass is to be covered with perforated steel plate containing ¾” holes on 1” centers.

**2 Vertical Lift Car Gate:**

1. Gate panel shall be 6’0” high #10-gauge woven steel wire with structural steel frame and reinforcing. Panel to slide vertically to open on steel tracks. Panel guide shoes shall have milled grooves and be adjustable, ductile iron and completely replaceable. Nylon or other composite material guide shoes with or without sheet metal shell are not permissible. Panels to be hung on steel roller chain and fully counterweighted for ease of operation. If a single counterweight is used to support the car gate, then a minimum of two chains must connect independently and directly to the gate counterweight. Each chain is to be individually adjustable for length at connection to car gate panel. If required by restricted overhead, gate to be furnished with double panel sections.
2. Power operated gates are to have both reopening devices (2.B.a & 2.B.b) which causes gate to stop and reopen if it should meet with an obstruction while closing, as well as sequence gate and door operation.
	1. Shall provide a fully enclosed infrared light beam mounted vertically inside the car gate track
	2. Shall provide a reversing edge safety device on gate
3. Manually operated gate is to be arranged for future power operation.

**3 Control (Power Operated):**

1. A control panel shall be furnished to govern the opening and closing of doors and gates as well as retiring cam operation, reopening device function and sequence operation.
2. Control shall be factory wired to operate for an input voltage ranging between 208VAC to 600VAC, 3 phase, 50/60 cycle and come equipped with transformer integrated into door control cabinet. Control shall be automatically operational upon application of power.
3. Control shall monitor the position of doors and gates at all times throughout the entire door and gate travel. Deceleration points shall be automatically adjusted by the control so that final open and final closed positions are reached smoothly without shock or jarring of doors or gate and without stopping ‘short’ of fully open or closed position.
4. Initial setting and adjusting of full open and closed positions shall be established through operation of ‘open’, ‘close’, and ‘stop’ push buttons inside car or toggle switches on the control. After automatic safety shut down, control shall restart upon pressing ‘Door Stop’ push button in car.
5. To vary operation, opening and closing speeds for doors & gate are to be independently and fully adjustable to allow any closing speed up to A17.1/B44 Code maximums. Factory set door closing speed shall be a minimum of 0.8 f.p.s to a maximum of 1.0 f.p.s. Factory set gate closing speed shall be a minimum of 1.6 f.p.s. to a maximum of 2.0 f.p.s.
6. Control shall be designed to provide Fireman’s Phase I, II and Fireman’s hold door operation in accordance with national and local codes. ‘Constant Pressure’ close, ‘Momentary Pressure’ close or ‘Timed Automatic’ closing shall be field selectable.
7. Hold down feature to re-open the doors if they should try to bounce closed during trucking across the lower door panel shall be field activated by simple code sequence.
8. Retiring cam operation is to be silent, without bounce and without the use of dampening devices. Cam ‘drop’ is to be powered down with cam motor, not by gravity alone.
9. All control components are to be commercially available and nonexclusive to control supplier.
10. Control is to be completely front wired, to have clear sight line to terminal strips for field connections and mounted in NEMA 1 cabinet with hinged swing door. Control assembly to bear label of approved testing facility such as Underwriters Laboratories or Canadian Standards Association.

**4 Operation:**

1. Opening is to be automatic upon car arrival or in response to momentary pressure push button. Closing is to be by momentary pressure push button. An audible alarm must sound five seconds prior to the start of closing and during the closing cycle, as well as “sequence” closing. Release of push button while doors are closing will cause doors to stop and reopen.
2. Alternate closing: (Field selectable)
	1. By constant pressure push button.
	2. By automatic timer or other automatic means.
		1. Automatic closing timer to be adjustable between 30 and 300 seconds
3. A “stop”, “open” & “close” push button must be provided in the car, and an “open” & “close” must be provided at each hoistway landing.

**5 Finishes:**

1. Surfaces of the hoistway doors, car gates, and car enclosures shall be thoroughly cleaned and degreased. Each surface (except sliding surfaces of door and gate guides) to receive one coat of factory applied baked powder coat finish.
2. Cab Enclosures:
3. Shell: Flush wall construction with 14ga. standard steel walls. Formed panel construction with site guards at each panel connection. Walls to be thoroughly cleaned, degreased, and receive one heavy coat of factory applied baked powder coat finish.
4. Ceiling: Construction with 14ga. standard steel and to have a heavy gauge tube or angle header at cab entrance. Ceiling to be fitted with a hinged exit hatch with latch and electric contact to prevent movement of the car when hatch is open. Ceiling to be thoroughly cleaned, degreased, and receive one heavy coat of factory applied baked powder coat finish.
5. Lighting: LED light fixtures are to have lamps that are easily accessible from inside the car. Fixture cutouts are to be provided as required for the car operating panel.