

524: BOARD OF ELEVATOR REGULATIONS

524 CMR 13.00: MACHINE ROOMLESS ELEVATORS

Section

13.01: General

13.02: Approval

13.03: Massachusetts Requirements

13.01: General

All new machine roomless elevator (MRL) installations shall comply with the requirements of A 17.1- *Safety Code for Elevators and Escalators* in effect at the time of installation, and with 524 CMR 13.00.

13.02: Approval

(1) Preliminary Approval. Preliminary approval shall be obtained by way of a variance request for each new model MRL prototype designed by a manufacturer. All design specifications which do not comply with A17.1 shall be listed in the application. A variance shall be required prior to a permit for installation being issued by the Department of Public Safety Elevator Division.

(2) Final Approval. Final Approval must be obtained after installation is complete by way of an on-site review by the Board of Elevator Regulations, or its designee. No further variances will be required for future installations of the same model MRL by the same manufacturer as long as it is manufactured and installed precisely according to the specifications of the variance issued by the Board.

13.03: Massachusetts Requirements

(1) The control and hoistway of MRLs installed pursuant to 524 CMR 13.00 must be vented per 524 CMR 35.2.1.4- *Control of Smoke and Hot Gases*.

(2) The control room shall be fire rated construction in accordance with 780 CMR.

(3) No other equipment is allowed in the control room as per A17.1 section 2.7.2.1 and 524 CMR 35.2.7.2.1.

(4) The control room doors shall be a labeled self-closing door not less than 30 inches wide and not less than six feet eight inches high equipped with spring locks that can be opened from the inside per A17.1 section 2.7.3.4.1 and 524 CMR 35.2.7.3.4.1. A permanent sign shall be placed on the door that will read "MRL Elevator Control Room. No storage Allowed". The letters shall be a minimum of ¾ inch and shall be of a contrasting color with that of the background.

(5) It is impermissible to use a control space that uses an area shared with a public corridor or other non-elevator use to obtain electrical working clearance.

(6) A working clearance of at least three feet six inches shall be maintained in front of the elevator controller at all times with the control room door closed.

(7) A receptacle as required by 527 CMR 12.00 is required to be located within the control room.

(8) A main line disconnect switch or circuit breaker must be located inside the control door, but not more than 18 inches from the jamb to the operating handle at a height of not more than 66 inches above the finished floor. If more than one controller is located in a single control space, the switches shall be grouped together as closely as possible. In the event that a control room has double swing doors, the doors shall swing out and the switches shall be located adjacent to the hinged side of the most active door panel. The disconnecting means shall be designed so that it can be locked out and tagged out in the open position.

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13.03: continued

(9) A disconnect switch shall be installed in the hoistway within sight of the elevator driving machine and designed so that it can be locked out and tagged out in the open position. When activated, the disconnect switch shall cause power to be removed from the drive machine and break per A17.1 section 2.26.2. Further, it shall be designed to open a contact in the stop switch circuit and render the elevator inoperative. Adequate hoistway lighting shall be provided at the top of the hoistway to illuminate the machine area, controls, and switches. The control switch for the lighting shall be within close proximity of the main line disconnect.

(10) A separate branch circuit for car lights and receptacle auxiliary power lighting ventilation on each car shall be supplied with an overcurrent protective device located in the control space. The switch shall be clearly marked "CAR LIGHTS".

(11) The control room shall contain at least two lighting fixtures with a switch located between the mainline disconnect switch and the lock jamb side of the control room door.

(12) The control room shall be located directly adjacent to the hoistway whenever possible. In no event, however, shall the distance from the control room to the hoistway exceed ten feet. Two way communications shall be installed between the car and the control room. It must be possible to determine car position, movement, location and direction from the control room. If ventilation is accomplished by means of a horizontal duct, the duct shall have the same fire rating as the hoistway and contain an exhaust fan powered by a normal and emergency power source activated by a fire alarm initiating device and a thermostat in the control room.

(13) A fire alarm initiating device shall be located the control room and tied into the elevator's fire emergency service.

(14) The control room shall be maintained at a temperature not less than 50°F or more than 90°F either by natural air circulation or by an HVAC system. A make up air damper must have a fusible link/shutter or other similar method to close in case of fire, smoke detector activation, or power failure.

(15) A permanent sign shall be mounted on the head jamb the main floor elevator entrance, which will read "MRL-CONTROL ROOM LOCATED ON --- FLOOR." The sign shall be a minimum of ¾ inch high letters and shall be of a contrasting color with that of the background

REGULATORY AUTHORITY

524 CMR 13.00: M.G.L. c. 143, §§ 68 and 69.