

Specifications for an Emergency Evacuation Chair

1.1 Model Type

The emergency evacuation chair shall be a Garaventa Evacu-Trac CD7.

1.2 Descent Speed Control Mechanism

The emergency evacuation chair shall be equipped with a hydraulic speed governor that controls the descent speed to a range that is safe for the passenger and the operator. Descent speed may vary slightly based on passenger weight and stair angle. As a standard measurement, on a stair slope of 35 degrees and with a passenger of 220 lbs. (100kg), the speed control mechanism shall limit the descent speed to a maximum of 3.6 ft/sec. This descent speed control mechanism shall limit the maximum speed regardless of the operating environment or strength and size of the operator.

1.3 Rubber Track Design

The emergency evacuation chair shall have rubber crawler tracks to grip the stair noses. The tracks shall have lugs or teeth to ensure positive traction with the stair noses. The rubber crawler tracks shall have integrated steel wires that minimize the likelihood of stretching or breakage.

1.4 Carrying Capacity and Stair Angle

The emergency evacuation chair shall be able to carry passengers weighing up to 300 lbs (136kg) and capable of stopping on the stairway at full weight capacity. The device should be capable of operating on a stair slope of up to 40 degrees.

1.5 Passenger Size Accommodation

The emergency evacuation chair shall be designed to not unduly limit the physical dimensions of passengers that can be carried. The seating sling shall be open on the sides and shall not be designed with bars that surround or restrict the seating area.

1.6 Passenger Restraining Straps

The emergency evacuation chair shall be equipped with three (3) safety straps to ensure the passenger will be securely restrained in the chair. The safety straps shall secure the passenger's legs, mid-section, and chest and arms.

1.7 Parking Brake and Stability on Flat Surfaces

When occupied by a passenger, the evacuation chair must be able to remain stable and stationary when left unattended on flat surfaces. The evacuation chair shall include a brake system that will prevent it from rolling when unattended in the parked position.

1.8 Emergency Brake and Stability on Stairs

The emergency evacuation chair shall be equipped with a secondary, fail-safe, emergency braking system, in addition to the main speed control system. While a passenger occupies it, the chair must be able to come to a complete stop on the stairway without any special effort being exerted by the operator. The brake must operate in a failsafe manner, activating if the operator was to accidentally let go of the handle. It shall be capable of remaining in the stopped position unattended (if required). The evacuation chair shall be able to go from a speed of 3.6-ft per/sec (1.1 m/sec) to a complete stop within 1 second, without assistance from the operator.

1.9 Ease of Transfer

The emergency evacuation chair must be designed so that in the majority of instances, one person trained in proper transferring procedures can single-handedly transfer the passenger into it from a wheelchair. The evacuation chair's seating position shall not be higher than 12 inches from the floor to the lowest point of the seat sling. The evacuation chair shall be designed with open-sides (without sidebars) to make the transfer of the passenger easy.

1.10 Usability and Operator Size / Strength Requirements

The emergency evacuation chair shall be operable, down stairs and across landings with a passenger in place, by one person who has a smaller physical size than the passenger. Size and strength of the operator shall not be a factor in safe operation of the chair.

1.11 Weight of Evacuation Device

The weight of the chair shall not exceed 46 lbs (20.7 kgs).

1.12 Seating Material

The seating material shall be composed of fire retardant fabric.

1.13 Storage Cabinet (Optional)

Each evacuation chair shall be supplied with a steel cabinet that will be used to store the evacuation chair when not in use. The storage cabinet shall include labeling identifying the contents. The storage cabinet shall be 45.3 inches (1151 mm) high, 20 inches (508 mm) wide, and 11 inches (279 mm) deep.

1.14 Warranty

Product shall be warranted against defects in design and workmanship for a period of one year from the date of delivery and installation in the facility.

This specification has been prepared by Garaventa Lift to provide design and operational criteria for emergency evacuation chairs.

Please address any questions or comments to:

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