

## LIFT & ELEVATOR INFORMATION SHEET

**NOTE:** Specifications and figures are provided from:

Accessible Design for the Built Environment, Registered trade-mark of Canadian Standards Association, 2004; Canadian Standards Association, 5060 Spectrum Way, Suite 100 Mississauga, Ontario L4W 5N6.

Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities, U.S. Architectural and Transportation Barriers, Compliance Board, 1331 F Street N.W., Suite 1000, Washington, D.C. 20004-1111

Measurement Scale used: 25.4 mm = 2.54 cm = 1 inch

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### Preamble:

All elevator and lift installations must comply with the requirements of local building authorities, as well as the Canadian Standards requirements for residential elevators and lifts. It is also recommended to have a supplementary power supply for emergency situations such as power failures.

When selecting stairway platform or chair lifts, extensive investigation must be taken to ensure that the particular device will meet the needs of the occupant living with the disability. Weigh the options and consult with others before you decide.

### Lift Devices

A **stair glide** consists of a seat with or without armrests permanently attached to a rail, which is in turn attached to the wall beside the staircase. A cable runs to a motor, which pulls or lowers the seat along the rail as the controls are operated. A stair glide is recommended for individuals who cannot climb stairs yet has the ability to transfer from the stair glide's seat to a mobility device such as wheelchair at the top or at the bottom of the stairs. A straight staircase is the simplest installation; however special designs are now available for winding or angled staircases at a higher cost.

A **vertical platform lift** is a non-portable, permanently installed elevating device for transporting people with physical disabilities on a platform that moves vertically between permanent levels. A metal platform carries the individual and when not in use it remains flat on the floor or some models can be folded against the wall. You can locate the shaft in a set of closets above each other if they are in a supporting wall; otherwise, choose an exterior wall or corner.

**The In Community  
LIFT & ELEVATOR INFORMATION SHEET**

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A **stair platform lift** is a non-portable, permanently installed elevating device for transporting people with physical disabilities between two or more levels by means of a guided carriage moving substantially in the direction of a flight of stairs or ramp.

A **vertical platform lift and a stair platform lift** may be equipped with the following types of carriages:

- Standing platform, a platform designed to accommodate and support one person with a disability standing;
- Wheelchair platform, a platform designed to accommodate and support one person with a physical disability sitting in a wheelchair;
- Wheelchair and attendant platform, a platform designed to accommodate and support one person with a physical disability sitting in a wheelchair or standing on the platform, accompanied by an attendant.; or
- Special adaptation platform with usage limited to two persons.

**Elevator Devices**

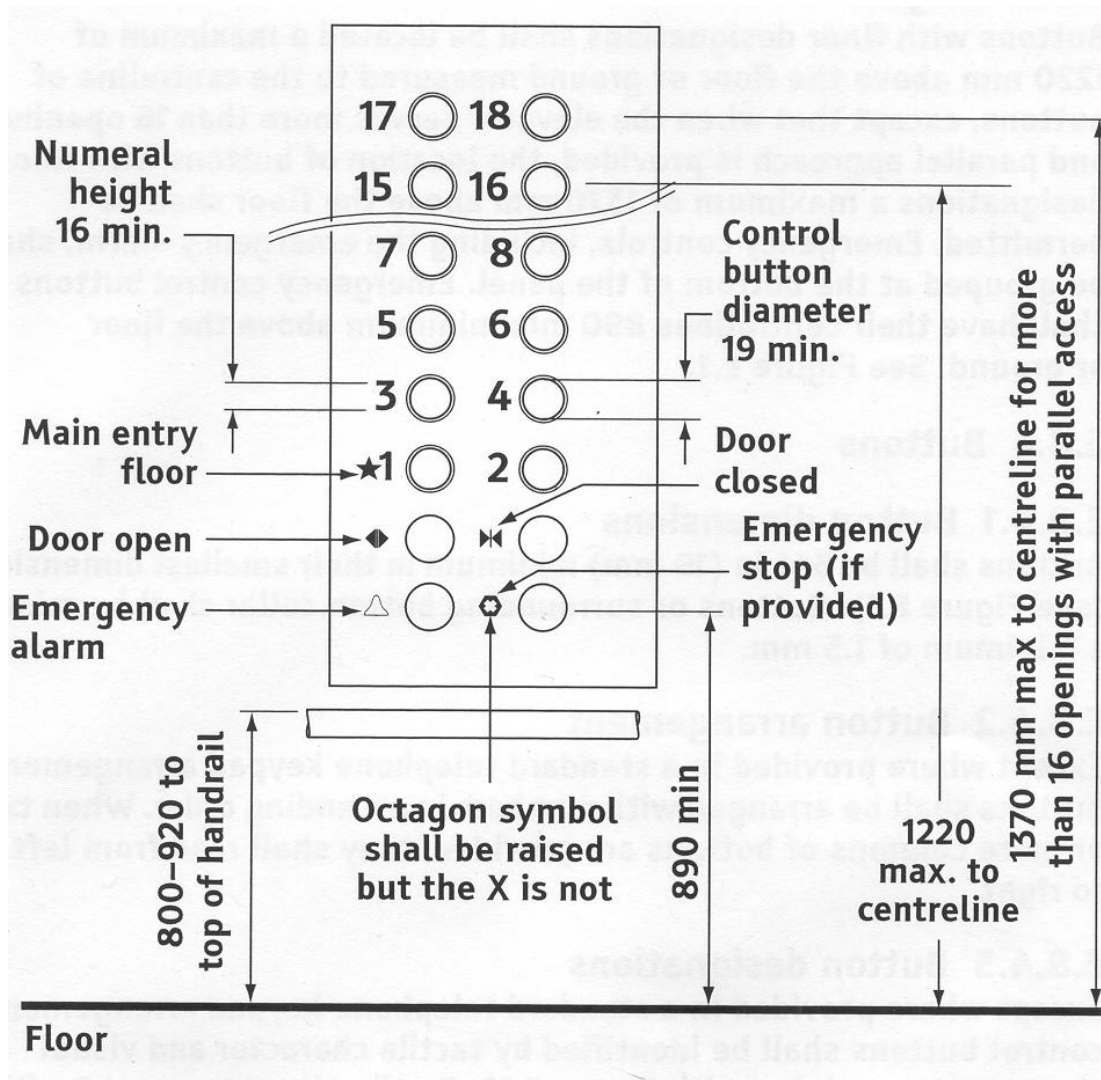
<b>Table 1 – Minimum Dimensions of Elevator Cars (mm)</b>				
<b>Door Location</b>	<b>Door Clear Width, mm</b>	<b>Inside car, Side to side, mm</b>	<b>Inside car, Back wall to front return, mm</b>	<b>Inside car, Back wall to inside face of door, mm</b>
Centred	1065	2030	1295	1370
Side (off-centre)	915*	1725	1295	1370
Any	915*	1370	2030	2030
Any	915*	1525	1525	1525
<b>Minimum Diameter of LU/LA (Limited Use / Limited Application Elevators.</b>				
Any	815	1065	1370	Not Specified
<b>* A tolerance of minus 16 mm shall be permitted.</b>				

Some general guidelines for elevators are:

- The elevator should be automatic and be provided with a two-way automatic leveling device to maintain the floor level to  $\pm 13$  mm ( $\frac{1}{2}$  inch);
- The elevator doors should be a power-operated horizontally sliding which open and close automatically;
- The elevator should have a sensory mechanism that prevents the door closing on an individual or any obstruction
- The elevator should have a door delay system with a minimum period of 5 seconds before the door begins to close.

- The floor should have a firm and slip resistant surface that allows easy movement for persons using wheelchairs.
- Handrails should be provided on all non-access walls at a height between 800 mm (31½ inches) to 920 mm with a space of 35mm (1<sup>2</sup>/<sub>5</sub> inches) to 45 mm (1<sup>4</sup>/<sub>5</sub> inches) between the rails and wall.
- The floor area of the elevator shall provide sufficient space for wheelchair users to enter the car, maneuver within reach of the controls and exit the car.
- There should be a colour contrast between the car sill and the building floor and between the doorframe and the wall.

**Elevator Controls**



**Figure 1 - Elevator Car Controls (CSA Figure E.1)**

- The emergency controls and door operating controls should be grouped together at the bottom of the control panel. The centreline for the emergency stop button should not be less than 890mm (35 inches) from the floor. The centreline of the highest button should be no higher than 1370 mm (54 inches) from the floor.

## The In Community LIFT & ELEVATOR INFORMATION SHEET

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- The operating buttons should be no less than 19mm ( $\frac{3}{4}$  inch) in size and may be raised, flush or recessed. If recessed they should not exceed 10 mm ( $\frac{2}{5}$  inch).
- Arabic numerals should be adjacent on the left of the operating buttons on a contrasting background.
- The markings should be a minimum of 16mm ( $\frac{2}{3}$  inch) in height and raised a minimum of .75mm.
- Braille should be added to all of the interior and exterior call buttons for those individuals with visual impairments that require this feature to travel independently
- As the car passes or stops at a floor, an audible signal should sound inside the elevator at a minimum of 20dB at a frequency no higher than 1500Hz.

### Location of Control Panel

- It is recommended that controls shall be located on a front wall of the elevator if there are centre opening doors (as shown in Figure 2 below).

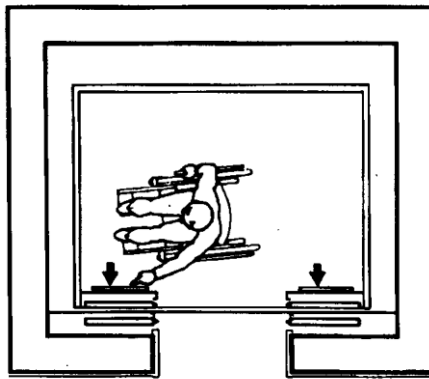


Figure 2 - Location of panel with front opening door (ADA)

- It is recommended that controls shall be located at the side wall or the front wall next to the door of the elevator if there are side opening doors (See 3. below).

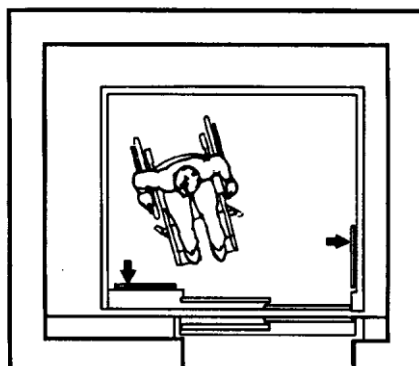


Figure 3 - Location of Panel with side opening door (ADA)