Glass Fronted and Glass Floor Paneled Elevators

Lifting off April 9, 2008, the CN Tower introduced North America's first and the world's highest glass floor paneled elevators. Each of its glass-fronted elevators now offer a thrilling new perspective on the view 346m (1,136 ft) straight down through two glass panels in a portion of the elevator floor. Combined these two panels represent almost 6ft² of the total 39.25ft² elevator floor space.

The glass-fronted elevators that rocket guests to the top of the Tower in 58 seconds at a speed of 22km/15mph are an exciting part of the CN Tower experience.

An architectural and engineering Wonder of the Modern World, every aspect of the CN Tower’s construction and ongoing upgrades is extraordinary and the Tower’s enhanced elevators with glass floor panels are no exception:

- Both panels combined total 0.53m² (5.7 ft²) of the 3.64 m² (39.25ft²) floor space in each elevator.
  - The rear glass panel is 96cm x 21.3cm (39in x 8.4in) comprising a total 0.21m² (2.28ft²).
  - The front glass panel is 29cm x 109.2cm (11.4in x 43in) comprising a total 0.32 m² (3.42ft²).
- Each panel is a total 2 5/16 inch (5.08 cm) thick multilayered glass that is approximately three times stronger than the required weight bearing standard.
- Each panel consists of 3.81cm (1½ inch) thick special load-bearing glass that has been tempered for hardness and laminated together. Below that is a special privacy glass and then a ½ inch structural glass designed to protect the privacy glass from exposure to dirt and wind from below. The uppermost surface is a replaceable film that can be changed out to always provide the clearest view.
- Each panel is supported by a 15.2cm (6 inch) steel frame which sandwiches the elevator floor. The glass panels in the elevators were designed using the same technology, strength and durability standards of the CN Tower’s famous Glass Floor which has been walked on and experienced by millions of people since it was first installed in 1994. But can the elevator hold the weight of 35 moose like the Tower’s Glass Floor? We’ll never know because of course they’ll never fit in the elevator!
- One of the glass panel’s unique attributes is its clear, undistorted view even though its combined overall thickness is 5.08 cm (2 5/16 inch).
- Another unique feature of the glass panels is their ability to instantly change from clear to frosted white. Sandwiched between the two layers of glass, is a 0.8cm (5/16 inch) layer of innovative liquid crystal privacy glass. This layer of glass is programmed to frost when the elevator is not in motion at the top or bottom and instantly clears during ascent or descent. In its natural state, nanosphere particles in this glass layer cause it to appear frosted. During ascent or descent, a small electrical charge safely applied to this mid-layer diffuses the particles making the glass appear clear.

CN Tower
Defining the Toronto skyline, at a height of 553.33m (1,815 ft., 5 inches), the CN Tower is Canada’s National Tower, an Engineering Wonder and Toronto’s must see attraction visited by over 1.5 million people each year.