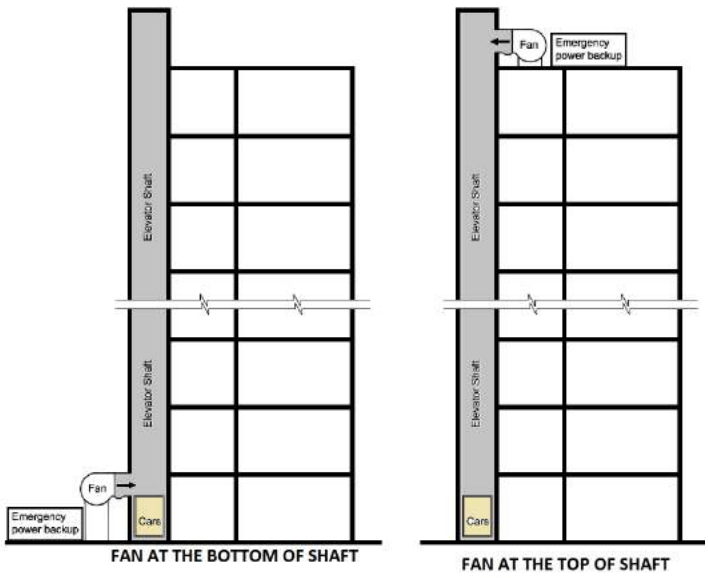
2.19. Lift Hoistway Pressurization System

2.19.1. Lift Hoistway pressurization systems shall comply with **Table 10.17.**, relevant specifications of **Section 2.6.,** Stair Pressurization and the general requirements for smoke control systems as per **Section 2.5.**

Table 10.17.: Lift Hoistway Pressurization Requirements

ITEMS	REQUIREMENTS
1. GENERAL	i. Lift hoistway pressurization systems shall be designed to operate within a pressure difference range. This range is between the minimum design pressure difference and the maximum design pressure difference. ii. The minimum pressure difference is intended to prevent smoke from entering the lifts. The minimum pressure difference shall be 12.5 Pa. iii. The maximum pressure difference across lift doors is based on concern about lift doors jamming shut in the closed position. The maximum pressure difference shall not exceed 75 Pa. However, this value shall be reviewed and agreed by the lift supplier in every project, where lift hoistway pressurization is provided. iv. If elevators are to be used for evacuation, the lift hoistway pressurization should be accompanied with “Smoke Tight Lift Lobbies”. v. Conveyors, elevators, dumbwaiters, and pneumatic conveyors serving various stories of a building shall not open to an exit enclosure.
2. SINGLE AND MULTIPLE INJECTIONS	i. Single injection for lift hoistway pressurization shall be limited to a maximum of 30 floors. ii. Lift hoistway serving more than 30 floors in height (Super highrise buildings) shall be provided with a multiple-injection system. iii. For lift hoistways pressurization systems in super highrise buildings special design provision shall be made taking into consideration the stack effect and the piston effect influence on the pressure profile within the hoistway. This shall be determined either by analytical calculations, network modeling or CFD simulations.
3. STAND BY FAN	i. Back-up (Stand-by) fans shall not be required for Lift hoistway pressurization systems.
4. STAND BY POWER	i. The lift hoistway pressurization system fan shall be provided with an emergency power.



Schematic 10.37.a.: Lift Hoistway Pressurization System