

# Fighting fire in a high-rise structure

[Engineering](#)



Usually, the high rise fire originates in the kitchens during cooking. When high rise structures, unfortunately, catch fire, both the residents/occupants and the crew face a number of challenges. Some of them are discussed below.

- 1- The most common challenge is to cope with the smoke. In a high rise structure building, the smoke circulates differently from that of the low rise building. The greater height of the building has a low air pressure that allows the smoke to move briskly. Most of the deaths during the fire occur due to the suffocation created by the smoke. When the smoke is inhaled, it can burn the lungs. The smoke obscures the eyesight of the occupants as well as the fire fighters. Both of them can not coordinate and the delay results in the death of the occupants or the collapse of the building on its occupants.
- 2- In the high rise structures the exit ways are very few. The scarcity of the exits is a serious challenge for the occupants as well as relievers because the removal of a great number of people through a few exits is very difficult. This leads to a greater death rate.
- 3- The high rise structures are availed by mixed types of occupancies like residences and commercials etc. which is again a challenge. The firefighters are supposed to adopt different strategies for different occupancies. This is a time-consuming procedure and encompasses great risks.
- 4- Fighting the fire in high rise structures is not an easy task. It requires a greater number of crews and equipment to extinguish the fire as compared to the low rise buildings. (U. S. Fire Administration, 2002)